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A comparison of termination of pregnancy procedures: Patient choice, emotional impact and satisfaction with care

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ABSTRACT

Objectives: To investigate: (1) whether women self-report an ability to choose their preferred termination of pregnancy (TOP) procedure, (2) what factors influence this choice, and (3) what effect this choice has on emotional responses and satisfaction with care.

Study design: A mixed-method prospective comparative study in which women requesting a TOP between five and eighteen weeks gestation for social reasons (as opposed to medical indications), were invited to complete a semi-structured pre-TOP interview and questionnaire, and a post-TOP questionnaire four weeks after the procedure.

Main outcome measures: Quantitative data was collected using the Patient Health Questionnaire, Generalised Anxiety Disorder Scale, Positive and Negative Affect Scale, Impact of Event Scale – Revised, and Client Satisfaction Questionnaire.

Results: Pre-TOP emotion-based factors did not differ between groups. Most women felt that they were able to choose their preferred method of TOP. Their decisions were based on factors categorised as procedure-related, lifestyle or social circumstance-related, emotional, or other factors. When no choice was perceived, common reasons reported were that: (1) gestation was too far along for there to be another option, or (2) an appointment was not available within the required timeframe. When women felt that the method of TOP performed was not their choice they found the procedure more stressful. All women reported high satisfaction with care.

Conclusion: A better understanding of the patient experience can inform service development, enabling staff to ensure that the services provided meet women's needs. The perception that one is able to choose their preferred TOP procedure is important for reducing procedure-related stress and ensuring high satisfaction with care.

Introduction

In England and Wales, approximately 190,400 women opt to have a termination of pregnancy (TOP) each year [1]. A woman's decision to seek a TOP is not easy; the decision can be influenced by social, economic and religious factors. These may also influence how women cope leading up to the procedure and afterwards. Research has highlighted the importance of patient involvement in the choice of method used, concluding that the experience of a medical TOP (MTOP) was perceived more positively by those who actively opted for it [2]. Where there was random allocation, except in very early terminations, women evaluated the surgical TOP (STOP) (also known as a suction termination) more favourably. Whether having choice of method affects emotional outcomes was not evaluated, although further research suggested that the choice of method was important to women [3]. Kero et al. [4] found that the decision-making process preceding TOP is of decisive importance for reactions post-TOP, with those having ambivalent feelings, and making their decision after a lot of conflict, experiencing more distress.

Slade et al. [5] conducted a prospective comparative study to evaluate whether women were offered a choice of MTOP or STOP, the factors influencing the procedure chosen, and the effect of choice on emotional responses and satisfaction with care. Results demonstrated that most women having a STOP under general anaesthetic (GASTOP) would choose the same method in the future. When they did change their hypothetical choice, they would opt for a local anaesthetic STOP (LASTOP) because this avoided general anaesthetic and was perceived to take a shorter time. In contrast, a large proportion of those who had experienced a MTOP reported that they would choose a different option, primarily because of distress associated with the process and

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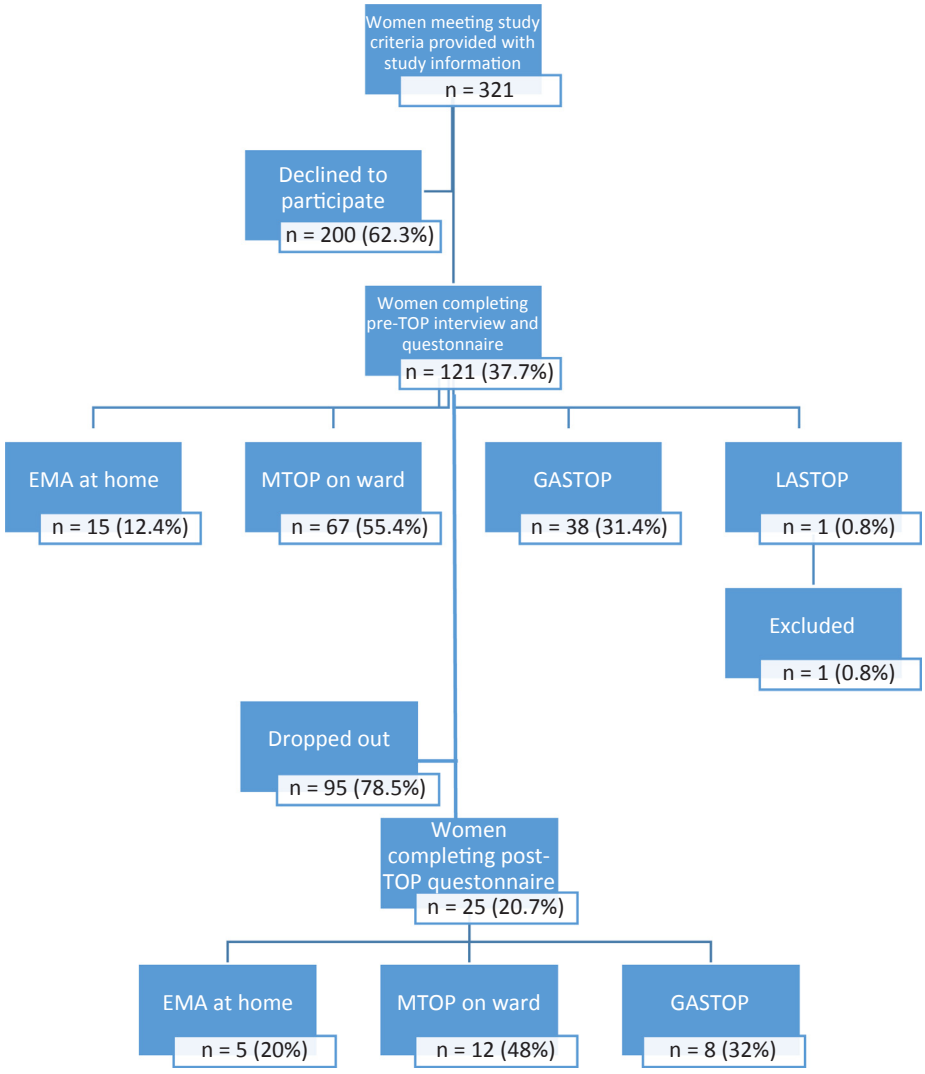

Fig. 1. Recruitment and attrition.

seeing the foetus, and the expectation of less pain during other methods.

The option of a LASTOP appeared to offer a combination of factors with considerable appeal: a single appointment, a process of short duration, no sight of the foetus, lower levels of pain, without the need for general anaesthetic. Slade et al. [5] concluded that women considered being able to choose their method of TOP important but, despite these findings, there has since been an upward trend for MTOP, with 62% of all TOPs being carried out medically. This is in contrast to 30% in 2006 and 4% in 1991 when Mifegyne was licensed for use in the UK [1]. The upward trend for MTOP may be due to restricted access to STOP when services do not have the level of staffing required to enable more women to choose STOP procedures. This is because training in surgical abortions is restricted to doctors, with current law assuming that "nurses and midwives are unable to perform surgical abortion procedures", although they can "provide the medication prescribed by the doctor for medical abortions and assist in the provision of surgical procedures" [6].

Since the study by Slade et al. [5], the implementation of LASTOP, as well as the option of completing an early medical abortion (EMA) at home, has provided many women with the ability to choose the method of termination that best suits them. More recent research has also highlighted the importance of involving women in decision making regarding their choice of termination method [7]. With service-level factors influencing the availability of different TOP procedures, it is important that patients' experience of choice is not illusory. Investigation of whether decisions regarding termination method are made based on waiting time rather than preference for method is important. In practice, a dichotomy of care may emerge due to the length of gestation, with women at less than nine weeks being channelled toward MTOP, and STOP being reserved for those between seven and 12 weeks of gestation in this unit [5].

In terms of the emotional impact of TOP, several studies conclude that TOP has a neutral effect on mental health [8–10]. Other studies have shown that only a minority of women experience lasting sadness or regret following termination, with risk factors for this including ambivalence about the decision, level of social support, and whether or not the pregnancy was originally intended [8]. Munk-Olsen et al. [10] found that the overall rate of psychiatric morbidity among women undergoing TOP was higher than that in the general population, suggesting that women undergoing this procedure may be at risk of increased negative psychological consequences. More recently, it has been found that TOP for non-medical indications was associated with a significant overall reduction in anxiety and improvement in quality of life [11]. This research also found that high baseline anxiety, history of psychiatric morbidity, and smoking were risk factors for persistently high levels of anxiety and poor quality of life post-TOP. As correlates of post-TOP mental health problems are variables identified as general risk factors for mental disorders, more robust, definitive research is required, which examines the way factors such as unstable

relationships, adverse life events, and psychiatric history affect post-TOP mental health [12].

The aims of this study were to investigate the validity of the anticipated benefits of LASTAP reported by Slade et al. [6] for women opting to have a TOP for social reasons (as opposed to medical indications, such as foetal abnormality). As the service in which the research was conducted also offered the option of EMA at home, it was important to investigate whether women perceived that they were able to choose their preferred method of TOP, and whether women having MTOPs (EMAs at home or MTOPs on the ward) or STOPs (under general or local anaesthetic) differed in terms of emotional distress pre- or post-TOP. Within this study, there was investigation of: (1) whether women reported that they were able to choose their preferred procedure, (2) what factors influence this choice, and (3) what effect self-reported choice has on emotional responses and satisfaction with care.

Methods

Participants

Women aged at least 16 years, between five to 18 weeks gestation (the gestation limit at the service), who met at least one of the grounds of the Abortion Act 1967, were recruited over an eight month period during 2016–2017 from a TOP service at a NHS University Hospital. Non-English speaking women, those pregnant as a result of sexual assault, or when the TOP was because of foetal abnormality, were excluded from the study. Recruitment and participant attrition are illustrated in Fig. 1.

Procedure

Women attending the service for a pre-TOP assessment, who were eligible to participate, were provided with the study information leaflet by nursing staff (n = 321). When women returned to the service to undergo a TOP, nursing staff introduced those willing to participate to the service's Assistant Psychologist (AP) or Counsellor. For women undergoing a STOP, this was on the day of surgery. For those having a MTOP in hospital, this was on their day of admission for the second stage of the procedure. For those undergoing an EMA at home, this was on the day they attended for administration of prostaglandins.

Informed consent to be included in the study was obtained from women via a written consent form by the AP or Counsellor. Women who provided consent completed a semi-structured pre-TOP interview and questionnaire pack. Four weeks post-TOP, another questionnaire pack was either completed over the telephone or disseminated by post (depending upon patient preference). Sixty-two percent of the women who were approached declined to participate in the research (n = 200).

The pre-TOP assessment

An interview (mean length = 16.5 min, range = 12–30 min) by the AP or Counsellor covered details including the duration of gestation, social circumstances, support available, and time scale of appointments. The issue of choice was addressed by considering whether alternative procedures were described, whether the woman felt she had chosen the method of TOP, and the nature of the determining factors. The pre-TOP questionnaire pack completed consisted of the Patient Health Questionnaire [PHQ [13]] to measure symptoms of depression, the Generalised Anxiety Disorder scale [GAD [14]] as a measure of anxiety, and the Positive and Negative Affect Scale [PANAS [15]] to assess any subjective distress and unpleasurable or pleasurable engagement with their environment.

The post-TOP assessment

The PHQ, GAD and PANAS were repeated, alongside the Impact of Event Scale – Revised [IES-R [16]], which measures a person's subjective response to a specific traumatic event in the responses sets of intrusion, avoidance, hyperarousal and total subjective stress. The Client Satisfaction Questionnaire [CSQ [17]] was also used to assess general satisfaction with the service provided. Subjective ratings of procedure-related stress, levels of pain intensity, and distress caused by pain were measured, and separate ratings were made for the pain 'on average' and 'at its worst' on the day of the TOP. Assessments of the duration and heaviness of bleeding, pain, and disruption of activities after termination were also made. Finally, women were asked to report which procedure they would choose from the options of EMA at home, MTOP in hospital, or STOP under local or general anaesthetic, if they were to require a TOP in the future.

Ethical approval and considerations

Ethical approval for the study was provided by the Yorkshire and Humber NHS Research Ethics Committee – REC Ref: 15/YH/0345. It was important to consider the emotional burden of participation in this research for the women involved and also the researchers. Whilst participation in stage one of the study was face-to-face, participants were offered a choice as to how they would participate in stage two, as such flexibility can improve engagement and openness, particularly in research that focuses on a sensitive subject. Although, it was also important to be mindful that the depth and quantity of the information gathered using different interview methods could vary [18].

Analysis

Statistical analysis of quantitative data was carried out using SPSS (version 22). Pre-TOP comparisons between each of the procedures were made using the non-parametric Kruskal Wallis H test as the data was not normally distributed. As the distribution of scores on emotion-based measures were similar, median values of central tendency were used. Statistical comparisons of pre- and post-TOP emotion-based outcomes, and between-group post-TOP satisfaction with care, could not be made due to high participant attrition.

Qualitative information regarding patient choice was analysed using content analysis by the second and third authors. Content analysis classifies text responses into categories that can be quantified with the aim of identifying meaning across text [19]. Key advantages of content analysis are that it is a systematic and replicable method that can deal with large volumes of data [20]. The process of analysis involved the second and third authors reviewing the qualitative data together looking for common response categories. Categories were generated inductively by the authors and consisted of: (1) procedure-related decisions, (2) life or social circumstance-related decisions, (3) emotional decisions, and (4) decisions based on any other factor. The second author categorised the data and then discussed this with the third author. The second author's categorisations of factors influencing women's choice of TOP method were replicated on 97% of occasions (136 of 140 comments) by the third author. This was indicative of a good level of reliability during the analysis process.

Results

Demographics

One-hundred and twenty women (aged 19–46 years; mean age = 26 years; SD = 5.74) were included in this study. This represents 37.4% of all women invited to participate during the study period. Only one woman recruited opted for a LASTOP; therefore, her data has not been included. Demographic information collected pre-TOP is presented in Table 1.

Table 1
Pre-TOP sample characteristics.

n =	EMA at home 15	MTOP on ward 67	GASTOP 38
Age (mean)	25 (SD = 6.51)	25 (SD = 6.10)	26 (SD = 4.82)
Ethnicity			
White British	9 (60%)	54 (81%)	27 (71%)
Other White Background	1	3 (4%)	–
Black African	–	1	–
Black Caribbean	1	1	1
Other Black Background	–	2 (3%)	2 (5%)
White & Black Background	–	1	–
Other Mixed Background	–	–	1
Indian	–	–	3 (8%)
Pakistani	–	1	–
Chinese	–	–	1
Other Asian Background	1	1	1
Not Stated	3 (20%)	2 (3%)	2 (2%)
Relationship Status			
Single with Partner	12 (80%)	43 (34%)	16 (42%)
Single No Partner	2 (13%)	15 (22%)	14 (37%)
Single (Partner Status Unknown)	–	2 (3%)	4 (10.5%)
Married	1 (7%)	7 (10%)	4 (10.5%)
Education level (mean)			
1 = no qualifications to 7 = doctorate or higher	4.00 (SD = 1.31)	3.82 (SD = 1.09)	3.97 (SD = 0.94)
Employment status			
Full-Time Employment	5 (33%)	18 (27%)	15 (40%)
Part-Time Employment	2 (13%)	13 (19%)	7 (18%)
Self-Employed	–	2 (3%)	2 (5%)
Full-Time Parent	3 (20%)	11 (16%)	3 (8%)
Student	4 (27%)	10 (15%)	4 (11%)
Unemployed	–	7 (10%)	6 (16%)
Looking for Work	1 (7%)	3 (4%)	1 (3%)
Health problems or long-term medication	13%	22%	18%
Living with…			
Parents/Family	5 (33%)	12 (18%)	9 (24%)
Partner	2 (13%)	–	4 (11%)
Partner and Children	3 (20%)	14 (21%)	6 (16%)
Housemates	3 (20%)	9 (13%)	4 (11%)
Children	2 (13%)	19 (28%)	10 (26%)
Level of support (mean)			
1 = not at all supported to 5 = extremely supported	4.60 (SD = 0.63)	4.52 (SD = 0.77)	4.42 (SD = 0.68)
Number of previous pregnancies (mean)	1.20 (SD = 1.57) (median = 1)	1.61 (SD = 1.80) (median = 1)	1.84 (SD = 1.81) (median = 1)
Gestation at TOP (mean/weeks)	6.53 (SD = 0.58)	8.68 (SD = 2.26)	8.98 (SD = 1.16)
Waiting time (mean)			
Weeks from referral to termination	1.75 (SD = 1.13)	1.95 (SD = 1.13)	2.41 (SD = 1.02)
Weeks from referral to first appointment	1.10 (SD = 0.51)	1.18 (SD = 0.70)	1.11 (SD = 0.81)
Weeks from first appointment to TOP	0.66 (SD = 0.74)	0.77 (SD = 0.88)	1.30 (SD = 0.77)

Pre-TOP comparisons between groups

No significant differences were found between groups prior to the termination. Table 1 indicates that a higher proportion of women undergoing a MTOP on the ward were white British, and that they also reported more health problems or long-term medication use than those choosing other procedures. A higher proportion of women choosing an EMA at home were single with a partner and living with parents/family, and a higher proportion of women choosing a GASTOP were in employment. Also, in contrast to Slade et al. [5], who found that those optin for a MTOP were more likely to have obtained higher educational levels, this study found that the mean level of education was lowest in those opting for a MTOP.

Table 2
Comparison of median scores for pre-TOP emotion measures.

n =	EMA at home 15	MTOP on Ward 67	GASTOP 38	χ^2 (degrees of freedom)	*p*
PHQ	8.00	12.00	11.50	4.352 (2)	.113
GAD	6.00	7.00	7.00	0.697 (2)	.706
PANAS −	21.00	25.00	25.00	1.599 (2)	.450
PANAS +	18.00	16.00	16.00	0.443 (2)	.801

Comparison of pre-TOP emotion-based measures

Median pre-TOP PHQ scores were not significantly different between groups ($\chi^2(2) = 4.352$, $p = .113$), nor were median pre-TOP GAD scores ($\chi^2(2) = 0.697$, $p = .706$), or median pre-TOP PANAS scores for negative and positive affect ($\chi^2(2) = 1.599$, $p = .450$; $\chi^2(2) = 0.443$, $p = .801$, respectively). There was a non-significant trend towards lower levels of depression in the women choosing an EMA at home. Median scores are presented in Table 2.

Factors influencing the type of TOP chosen

Factors influencing the choice of method were varied and categorised into themes that were: (1) procedure-related, (2) life or social circumstance-related, (3) emotional, and (4) based on any other factor. Table 3 presents the frequency with which factors from each category were reported by women undergoing the different TOP procedures. Often, multiple factors from one category as well as factors from more than one category would be chosen by women.

Women choosing an EMA at home tended to report factors related to life or social circumstances as influencing their decision (67%), particularly relating to not wanting to stay in hospital because of children at home. Procedure-related factors were also influential for 53% of women choosing this option as they perceived it to be less invasive and more natural/like a miscarriage. The majority of women choosing a MTOP in hospital stated procedure-related factors as being important (66%); these included, feeling safer in hospital and not wanting a surgical procedure with anaesthetic. Life or social circumstances, such as it being quicker to receive an appointment for a MTOP than a STOP, were also influential for 43% of those women. The majority of women choosing a STOP (68%) also stated procedure-related reasons for their choice, such as wanting to be asleep, wanting intrauterine contraception fitted at the same time, and because of the perceived negative aspects of MTOP (such as seeing blood, feeling unwell or MTOP being more painful). These women also cited emotional factors (50%) as being important, such as STOP being perceived to be less traumatic due to not seeing foetus or having to witness or acknowledge being part of the TOP procedure.

Comparison of post-TOP emotion-based measures

Due to an attrition rate of 79.2%, a sample size of 25 at follow-up was too small for between group statistical analyses. Of the 120 women who participated pre-TOP, two women continued with their pregnancies, two women withdrew from the study (but consented to their pre-

Table 3
Frequency of themes relating to each procedure.

Themes	Subthemes	EMA at home (n = 15)	MTOP on ward (n = 67)	GASTOP (n = 38)
Procedure-related	Risks (perceived)	–	9	1
	Invasiveness	3	8	–
	More natural/like a miscarriage	3	4	–
	Wanting/not wanting anaesthetic	2	14	7
	Previous experience	–	3	8
	Appointment availability	–	6	–
	Contraception at the same time	–	–	3
	Less pain/bleeding (perceived)	–	–	7
	Total	*8*	*44*	*26*
Life/Social circumstance	Quickest method	–	23	2
	Childcare	1	2	1
	Convenience/ease	1	1	9
	Privacy/not told anyone	1	1	1
	Rather be at home	7	1	–
	Work/University	–	1	1
	Total	*10*	*29*	*14*
Emotional factors	Anxiety	1	4	2
	Mental health issues	–	1	5
	Support/lack of support	1	5	1
	Seeing foetus	1	4	11
	Total	*3*	*14*	*19*
Other factors	Needle phobia	1	2	0

Frequencies represent the number of women who gave at least one response categorised into each theme. Many women provided multiple responses recorded in the same category as well as responses recorded in different categories.

Table 4
Comparison of emotion measures at four weeks post-TOP.

Median (SD) *n* =	EMA at home 5	MTOP on ward 12	GASTOP 8
PHQ	3.00 (3.83)	3.50 (6.68)	7.00 (7.85)
GAD	4.00 (3.21)	1.50 (4.86)	7.00 (5.61)
PANAS −	18.00 (5.68)	12.00 (10.13)	21.50 (10.19)
PANAS +	27.00 (4.22)	24.00 (11.65)	25.50 (11.76)
IES-A	11.00 (4.72)	5.50 (8.19)	21.50 (9.43)
IES-I	7.00 (6.19)	1.50 (11.58)	8.00 (5.90)
IES-H	6.00 (3.87)	0.50 (5.91)	5.50 (6.27)
IES Total	19.00 (13.55)	10.00 (23.97)	39.00 (18.73)

TOP data being analysed and included), and 91 women did not answer the post-TOP questions. Table 4 presents median scores and standard deviations for the post-TOP PHQ, GAD, PANAS, and IES measures.

Women in the GASTOP group scored higher on the PHQ, GAD, PANAS negative affect, IES-A, IES-I and IES Total score. Thus, women in this group appeared to have been experiencing higher levels of depression, anxiety, negative affect, avoidance and intrusion at four weeks post-TOP, when compared to women having other procedures. With the exception of scores on the PHQ, all other post-TOP scores were lowest for women who had a MTOP on the ward.

Table 5 presents mean data relating to how stressful, painful, and distressing the procedure was perceived to be by women. Those choosing an EMA at home rated the procedure as more stressful and more painful, and experienced more distress because of their pain. This procedure was also reported to be the most disruptive to daily activities. However, women opting for a MTOP on the ward perceived heavier

Table 5
Post-TOP questionnaire data.

n =		EMA at home 5	MTOP on ward 12	STOP 8
How stressful was the procedure?				
Likert-type Scale: 1 = not at all to 4 = extremely		2.40 (0.55)	2.25 (0.75)	1.63 (0.92)
How much pain did you experience during the procedure?				
Visual Analogue (VA) Scale: 0 = no pain to 10 = severe pain		3.60 (3.51)	3.54 (2.48)	1.88 (1.81)
How much distress did the pain cause?				
VA Scale: 0 = no distress to 10 = worst distress		4.20 (4.60)	2.71 (2.34)	1.00 (1.77)
On the day of the termination, how much pain did you feel on average?				
VA Scale: 0 = no pain to 10 = severe pain		6.70 (2.39)	3.42 (2.47)	1.94 (1.70)
On the day of the termination, how much pain did you feel when it was at its worst?				
VA Scale: 0 = no pain to 10 = severe pain		7.80 (2.05)	4.38 (2.87)	2.38 (1.92)
How much pain did you experience after the procedure?				
VA Scale: 0 = no pain to 10 = severe pain		5.60 (1.14)	2.75 (2.42)	3.19 (2.56)
Did you take any form of pain relief during or after the procedure? (frequencies presented)				
During:	Yes	5	7	3
	No	–	5	4
After:	Yes	5	4	3
	No	–	6	4
Data missing		–	2	2
How long did you experience bleeding for? (days)		8.80 (7.73)	14.75 (11.44)	16.13 (13.67)
How heavy was the bleeding? Likert-type Scale: 1 = very light to 5 = very heavy		2.20 (2.05)	2.42 (1.31)	2.38 (1.06)
Did the procedure cause a disruption to your daily activities? (frequencies presented)				
Yes		5	4	2
No		–	8	6
If you, a friend or relative, required a termination of pregnancy in the future, which procedure would you choose or recommend? (frequencies presented)				
MTOP on ward		1	8	1
EMA at home		2	–	–
STOP with LA		–	1	2
STOP with GA		1	2	4
Either STOP option		1	–	1
None of the options		–	1	–

Values presented as Mean (SD) unless otherwise indicated.

bleeding, and those who had a STOP reported that they bled for longer after the procedure. The group most likely to choose the same procedure in future were those who had chosen a MTOP on the ward, which is in contrast to the findings of Slade et al. [5], who found that only 53% of those opting for a MTOP would choose the same procedure again compared to 77% of those choosing a GASTOP.

Patient choice

When women were asked whether they had been able to choose their preferred method of termination, 109 women (90.8%) believed that they had. Of those receiving an EMA at home, 100% agreed that they had been able to choose their preferred option, although they were the group least likely to choose the same option if needed in the future. For women having a MTOP on the ward, 57 (85%) indicated that it was their choice, and for the GASTOP, 37 (97%) indicated that it was their choice (one woman [3%] reported that she was unsure). For MTOPs on

the ward, 10 women (15%) felt that they had no choice and one woman was unsure. The most common reasons reported for women feeling that they had not been able to exercise choice was that, (1) gestation was too far along for them to be given any other option (n = 4), or (2) an appointment for STOP was not available before the cut-off gestation (n = 6). When women felt that the method of termination performed was not their choice, they rated the procedure more stressful (mean = 2.50, SD = 0.71) than those who felt that they did have choice (mean = 2.04, SD = 0.83). Ratings were made on a four-point scale from 1: not stressful at all to 4: extremely stressful.

Satisfaction with care

Women in all groups were highly satisfied with the service they had received. With a maximum CSQ score of 32, women opting for a STOP rated their satisfaction mostly highly (mean = 30.75, SD = 2.38), next was those choosing an EMA at home (mean = 29.00, SD = 0.71), followed by those having a MTOP on the ward (mean = 27.92, SD = 3.29). On average, women who felt that the method of TOP was their choice were more satisfied with their care (n = 23, mean = 29.46, SD = 0.47) than those who felt that they did not have a choice (n = 2, mean = 25.5, SD = 0.51).

Discussion

This study aimed to ascertain whether women having different TOP procedures differed in their emotional distress before or after the procedure. The study also aimed to evaluate whether women reported that they were able to choose their preferred TOP procedure, what factors influence a woman's decision to choose a particular procedure, and whether the perception of having a choice impacts upon their emotional response following the TOP and their satisfaction with the care they received.

Whilst the study replicated the research processes of Slade et al. [5] it differs in that new methods of abortion delivery (LASTOP and EMA) were included that were not previously assessed. Unfortunately, during the data collection period there were insufficient women opting for LASTOP preventing this data from being included. However, the EMA data provides new information regarding this procedure showing a trend towards lower levels of pre- and post-TOP depression than MTOP and GASTOP procedures, indicating that the introduction of EMA is a favourable alternative to other abortion methods.

The study produced no evidence to suggest that pre-TOP emotion-based factors influence choice of TOP. However, in contrast to Slade et al. [5] where 77% of women undergoing GASTOP would choose the method again compared to only 53% of women undergoing medical abortion, this study demonstrated that women opting for a GASTOP had the least favourable outcomes post-TOP. When making the choice of which procedure to undergo, women consider procedure-related factors, their lifestyle or social circumstances, and emotional factors. Generally, women were of the opinion that they were able to choose their preferred termination procedure and self-reporting having had that choice was related to greater satisfaction with care.

In consideration of the research aims, three shortcomings must first be noted. First, only 37.4% of women approached consented to take part in the study and, secondly, the high attrition rate prevented statistical examination of post-TOP outcomes. Thirdly, only one woman was recruited who had opted for a LASTOP; therefore, this arm of the planned study could not be investigated.

The low rate of participation could be because, for some women, the burden of participation was perceived to be too high. In an already demanding situation, women were not only asked to decide whether they would complete a pre-TOP interview and questionnaire, but also whether they would answer further questions four weeks after the procedure. Slade et al. [5] reported that women undergoing a TOP are often unwilling to have further contact with the hospital and this can cause problems for recruitment and retention in research projects such as this. Kero et al. [4] also found that a significant proportion of participants did not want to participate in their follow-up study. Unlike the study by Slade et al. [5], within this study, participants were offered a choice of how they could provide the post-TOP data: by post or by telephone. Interestingly, all though two thirds of women chose to be contacted by post, retention in the study was better for those who had opted to participate by telephone. Of those who opted for telephone follow-up, 27.5% remained in the study. This is opposed to 17.5% of those who opted to participate in this phase by post. Strategies that may assist future recruitment in sensitive research are discussed later.

The third issue of difficulty recruiting women opting for LASTOPs relates directly to one of the areas under investigation: women's perceived ability to exercise choice when service constraints can limit procedure availability. In this study, six women were not able to have the surgical procedure of their choice, either because of limited access to appropriately trained medical staff for a LASTOP, or limited theatre space for a GASTOP. A recent review of the relevant law and clinical evidence supporting the assumption that LASTOPs (vacuum aspiration) must be performed by doctors in order to be lawful concluded that it would be lawful for appropriately trained nurses or midwives, acting as part of a multidisciplinary team, to carry out these procedures [21]. Should this interpretation of the law be accepted, it would offer the potential for services to develop more streamlined, cost-effective TOP pathways, which would be both safe and highly acceptable to women [21].

Often, women were able to access a MTOP more rapidly than a STOP. Many women choosing to have a MTOP indicated that this factor was important in their choice. Therefore, rapid access may override an initial choice based upon personal acceptability of a method and, in such cases, differential waiting times mean that women do not have equal access to all options which precludes choice [22]. In the service in which this study took place, choice of method was also not possible when women presented at more than 12 weeks gestation, only a MTOP was available to these women. These two reasons undoubtedly contributed to the higher proportion of women undergoing a MTOP who reported that they had no choice of method.

If earlier access to treatment was excluded as a reason for feeling that there was no choice, women choosing a STOP typically did so because they wanted to avoid the experience of the physical process of a MTOP and have contraception fitted at the same time. On the other hand, those having a MTOP tended to want to avoid having a general anaesthetic and surgical procedure. Women choosing both STOPs and MTOPs on the ward most often reported procedure-related factors as being influential in their decision-making. Other studies have reported similar findings [5,23]. Those choosing an EMA at home typically reported lifestyle/social circumstances, such as childcare issues. Such findings suggest that LASTOP might be an appropriate alternative for women but, as noted earlier, theatre space and staffing levels often prevent this from being an option offered within an acceptable period of time. Nevertheless, most women in this study reported that they were able to choose the procedure that they preferred. This study also demonstrated that, overall, women were highly satisfied with the care that they received. On average, satisfaction was higher for women who perceived that they had a choice over the method of TOP they underwent, rather than this decision being influenced by service constraints.

When examining the pre-TOP emotion-based characteristics between groups, there were no significant differences. However, there was a non-significant trend towards lower levels of pre-TOP depression symptoms in women choosing to have an EMA at home, which may warrant further investigation in a larger sample. Analysis of differences post-TOP were not possible due to the high attrition rate, although it appears that women undergoing a MTOP (either as an EMA at home or a MTOP on the ward) may fair better emotionally at four weeks post-TOP. It appears, as reported originally by Slade et al. [5], that there may be a tendency for the STOP group to show more avoidance of

reminders of the termination. The significance of this is difficult to interpret and warrants further consideration as this may have implications for longer-term adjustment in this group of women.

Debates over post-TOP emotional responses have tended to focus on the potential for harm to women [24], but it is important that the emotions regarding an unwanted pregnancy are separated from those regarding the termination [25]. Following a termination, women's responses are varied and located within both the personal and social context, dependent on factors such as their conceptualisation of the foetus, social support, and beliefs about judgement from others [26]. It is the case that, for all three groups, post-TOP responses to the PHQ, GAD, and PANAS were more favourable than at pre-TOP (with the exception of those having a GASTOP scoring the same on the GAD). This supports previous research suggesting that women are able to make the complex decision to have a termination without suffering any subsequent negative effects [4,11].

Given that women are well informed and, in this study, the majority of them reported that they were able to choose their preferred procedure, perhaps they were able to effectively manage the process, particularly when feeling supported outside of the clinical setting. The relatively low post-TOP anxiety and depression reported by those choosing an EMA at home, despite increased reported stress and pain, may be evidence of the importance of social support, as this was the group that rated the highest level of support with the majority living at home with parents/family. This may also be evidence that the option of EMA at home can be empowering for women, allowing them the option of increased privacy, control, and personal integrity [7,27].

Failure to recruit women opting for a LASTOP prevented the study from assessing the validity of the previously reported anticipated benefits of this option [5]. It is also important to note that all women were recruited from one NHS service and the return rate of post-TOP data was low (even though women were given the option of responding by post or by telephone), preventing analysis of the impact of the TOP procedures. One reason for the low post-TOP response could be that women thought being asked to reflect on their experience after the event would cause or increase distress [28]. This could be particularly true for those who had a STOP scoring high on avoidance. Although this study was not able to investigate the effect of TOP on women's well-being, in line with other findings [4], the limited data reported here suggests that the method of TOP does not appear to have great influence over emotional adjustment at four weeks post-TOP.

Implications for practice

It could be argued that the results suggest the women with the least favorable outcomes are those choosing a GASTOP. On average, this group also had the longest waiting times from referral to TOP. Clinicians should be mindful of risk factors related to increased distress, which include long waiting times and lack of information [29]. If services are able to identify such distress, or other indictors of distress such as avoidance, then it is recommended that support offered to women should be targeted and consider unanticipated feelings of guilt, spiritual distress, coping mechanisms, and education to help women to understand their termination experience [30].

Services should continually audit whether women are able to access their preferred procedure. If access is found to be prevented or delayed, due to limited access to appropriately trained medical staff, this may support the case that service pathway improvements should be made. Such improvements could be made by having appropriately trained nurses or midwives, acting as part of a multidisciplinary team, carry out STOP procedures, enabling more choice and shorter waiting times for women. It is recommended that judicial clarification is sought before any service reorganisation takes place [21].

Future research would benefit from consideration of how participant attrition might be reduced. When research focuses on a sensitive topic, the method through which information is collected can be particularly important to participants [18]. Personal data is most likely to be disclosed when assurances of privacy, confidentiality and a non-condemnatory attitude are provided [31]. Researchers conducting similar investigations should take steps to make participants feel comfortable enough to share their experiences [32]. Disclosure might be facilitated by offering more choice as to how participants take part when using both quantitative and qualitative methods [18]. Alternatively, increased transparency throughout the research process, ensuring that participants appreciate the true purpose of the research, and understand why the research is being conducted in the way that it is, may facilitate participation and participant retention. Another important element is the use of patient and public involvement (PPI). Although a PPI group did contribute to the design and methods used in this research, consideration of different methods of data collection (e.g. email or Skype) with a PPI group could inform future researchers how to better engage potential participants.

Conclusion

This study found no evidence to suggest that pre-TOP emotion-based factors influence choice of TOP. However, it could be argued that women with the least favorable outcomes post-TOP may be those choosing a GASTOP. When women were able to choose a particular procedure, they considered procedure-related factors, their lifestyle or social circumstances, and emotional factors in their decision making. Generally, women were of the opinion that they were able to choose their preferred termination procedure and self-reported choice was related to greater satisfaction with care and a perception of the procedure as less stressful. A better understanding of the patient experience can inform service development, enabling staff to ensure that services provided meet women's needs.

Declaration of interest

Joanne Fletcher is the Head of Service within the unit in which this research was conducted. The other authors declare no conflicts of interest.

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