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RESEARCH ARTICLE



## Abortion-related worries, fears and preparedness: a Swedish Web-based exploratory and retrospective qualitative study

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### ABSTRACT

**Objective:** A survey was conducted to explore worries, fears and preparedness relating to the recollecting experience of having an induced abortion.

**Methods:** The Web-based survey was carried out in Sweden among 185 women. Respondents answered open-ended questions and gave retrospective self-reported ratings about their abortion-related worries, fears, preparedness and satisfaction with information obtained from health professionals and the Web. Data were analysed using qualitative content analysis and descriptive statistics.

**Results:** Worries and fears included the abortion process, physical reactions and psychosocial aspects. The abortion was associated with unexpected events, including the abortion process, poor health professional treatment and support, and side effects and complications. Respondents described a lack of preparatory information, leading to uncertainties due to insufficient information. Many searched for Web-based information, but respondents experienced difficulties finding high-quality sources. Respondents also recounted that the preparatory information received did not reflect the actual abortion experience.

**Conclusion:** There is room for improvement with regard to informing, preparing and supporting women who seek an abortion. The results emphasise the importance of health professionals' giving sufficient preparatory information to enable preparedness and lessen the impact of possible unexpected events. There is a need for the development of a trustworthy Web-based service that contains honest and high-quality information.

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### KEYWORDS

Consumer health information; fear; induced abortion; preparedness; worry



### Introduction

For many women, undergoing an induced abortion is a stressful event that involves psychological distress both prior to and during the procedure [1]. According to research investigating second-trimester abortions following a prenatal diagnosis of fetal anomaly, many women have complex thoughts and feelings, including existential issues such as questions about their own autonomy in relation to matters concerning life and death [2]. Research indicates that a substantial proportion of women who terminate a pregnancy in the second trimester experience fears [3] and uncertainties before the procedure [4]. Fear has been found to be a decisive factor in choosing between a medical and a surgical abortion, illustrating the importance of timely, evidence-based information to facilitate informed decision making [1,5]. There is a need for more studies that specifically explore abortion-related expectations, worries and fears [5].

Little attention has been directed towards longer-term recollections of induced abortion when women have had some time to reflect on their experience. Web-based surveys have the potential to access hard-to-reach populations, such as women with previous experience of abortion [6], which may offer additional hypothesis-generating insights that could complement the results of studies using other methods [7].

Preparatory information offered by health professionals to help women seeking an abortion feel prepared for the procedure is acknowledged to be a key aspect of high-quality abortion care [8]. The literature suggests that appropriate preparatory information before a medical procedure has the potential to decrease psychological distress and improve the ability to cope psychologically [9]. Indeed, women waiting for an induced abortion value timely, clear and unbiased information about the intervention, in order to feel empowered to make an informed decision and be prepared to undergo the procedure [10]. Moreover, health professionals who work in abortion care commonly offer detailed information to their clients as a means of reducing emotional stress [11,12]. Studies indicate, however, that women who seek an induced abortion receive insufficient preparatory information from health professionals [2,13,14] and feel ill prepared for the procedure [3,14]. Research acknowledges that there is room for improvement in the counselling and communication skills of health professionals who work in abortion care [15], but much is still unknown about patient experiences and preferences in this regard.

There is a need for additional exploratory research that investigates how to further improve pre-abortion care [16]; furthermore, there is a scarcity of studies that specifically address patient information as well as expectations, fears

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and needs among women seeking an abortion [5]. As far as we know, few studies have explored these aspects. Further in-depth knowledge about abortion-related preparedness and experiences of preparatory information may result in new insights into how women seeking an abortion may be appropriately supported. The use of Web-based methods for recruitment and data collection may generate valuable insights into women's perceptions of their abortion experience. The aim of this study was therefore to explore recollected worries, fears and preparedness relating to the experience of induced abortion.

## Methods

### Study context

According to Swedish legislation, induced abortion may be performed at a woman's request up to 18 completed weeks of gestation. Beyond that, approval needs to be granted from the National Board of Health and Welfare [17]. National statistics concerning induced abortions show that the large majority (93%) are medical abortions and 7% are surgical abortions. According to current clinical practice, medical abortions are performed in all trimesters, while surgical abortions are performed only in the first trimester of pregnancy. Since the early 1990s, the proportion of abortions performed during the first trimester has been increasing. Currently, over 90% of induced abortions are performed before 12 completed gestational weeks [18].

### Data collection

In this study, respondents were recruited and data were collected using the Web. A convenience sampling strategy was employed via Swedish public discussion boards and social media, and the respondents completed a Web-based survey. The survey was carried out between October 2017 and July 2018. Publicly available Swedish discussion boards about reproductive health were identified through systematic searches on Google, the most widely used search engine [19]. Two strings of search terms were used to identify discussion boards: 'discussion board abortion' and 'discussion board termination of pregnancy'. To screen for inclusion, the first 50 hits of each search string were accessed and read. In total, 10 discussion boards were identified and included in the study. In each of these 10 discussion boards, threads were posted with information about the study and a link to the Web-based survey. In addition, the Swedish Association for Sexuality Education (RFSU) posted a link to the survey on its Facebook social media account. SurveyMonkey, an online tool for distribution of anonymous surveys ([www.surveymonkey.com](http://www.surveymonkey.com)), was used to collect the data.

In total, five open-ended questions accompanied by self-reported rating-scale questions were asked in the survey. One question concerned worries and fears before the abortion (answered by 156 respondents), accompanied by two rating-scale questions concerning self-reported retrospective abortion-related worry (1 = calm, 10 = worried) and fear (1 = no fear, 10 = strong fear), inspired by the Fear of Birth Scale [20]. Two open-ended questions concerned whether the respondent's expectations corresponded to

her actual abortion experience (answered by 121 respondents) and whether anything happened that she had not expected (answered by 111 respondents), accompanied by a rating-scale question concerning how ill prepared for the abortion she felt (1 = completely prepared, 10 = not prepared at all). In addition, respondents were asked in two open-ended questions to share their experiences of information received from health professionals (answered by 91 respondents) and information found on the Web (answered by 41 respondents), accompanied by rating-scale questions about satisfaction/dissatisfaction with the information (1 = very good information, 10 = very poor information). The questions were not randomised or alternated, and were distributed over two pages (the total number of items was 8 and 5 per page).

Respondents were able to change their answers by going through their responses with the aid of a back button before finalising their submission. They were free to only answer some of the questions and leave other questions blank if they wished. Respondents were considered to have participated if they answered at least one question in the survey; those who consented to participate but did not answer any questions were excluded. To avoid duplicate answers, respondents were asked only to answer the survey once. However, in order to allow several participants to answer the survey from the same device, such as computers in libraries or other public spaces, no cookies, Internet provider checks or log files were used.

### Data analysis

Quantitative data, i.e., rating-scale answers, were analysed with descriptive statistics using RStudio, version 1.0.143 (RStudio, Boston, MA, USA). Responses to open-ended questions were analysed using qualitative content analysis, inspired by the outline presented by Graneheim and Lundman [21]: meaning units were identified and defined as words, sentences or paragraphs that referred to a specific experience and context. These units were grouped into sub-themes and themes, defined as interpretations of the overarching threads and underlying meaning that illustrated the experiences described by the respondents. Our intention was to make the themes and sub-themes as distinct and exclusive as possible. However, because of the intertwined nature of human experiences, themes and sub-themes were not considered externally heterogeneous, meaning that one meaning unit could fit into several themes [22]. The meaning units in each sub-theme were sorted into categories, defined as collections of the manifest representations found within each sub-theme. One male researcher and specialist nurse-midwife with previous experience of conducting qualitative content analysis (TC) was responsible for carrying out the primary analysis. SK and ES, both female registered nurses with previous experience of qualitative content analysis, scrutinised the meaning units, thematisation and categorisation. NVivo for Mac (QSR International, Melbourne, VIC, Australia) was used to group the meaning units into themes, sub-themes and categories.

## Ethical considerations

The study was reviewed by the regional ethics board in Uppsala, Sweden. The board had no objections to the study and dismissed the need for formal ethics approval owing to the anonymity of the collected data (approval number 2016/366).

## Results

The survey was answered by 185 anonymous respondents with experience of first-trimester medical abortion ( $n = 95$ , 51.4%), surgical abortion ( $n = 40$ , 21.6%), second-trimester medical abortion ( $n = 19$ , 10.3%) and multiple types of abortion ( $n = 31$ , 16.8%). The completion rate was 73%. The medians of the self-reported ratings ranged from 4 to 7 and the interquartile ranges showed high variability, illustrating that some respondents experienced considerable fears and worries, felt unprepared, and were unsatisfied with the information they had received (Table 1).

### Theme 1: worries and fears

Three sub-themes, outlined below, and 17 categories were identified related to worries and fears (Figure 1).

#### Worries and fears related to the abortion process

Respondents described worrying about what would happen during the abortion and what the medical treatment would be like. Some described being afraid of seeing fetal remains or blood. Another fear was having to share a room with other women in a similar situation. Not knowing what kind of treatment to expect resulted in fear of the abortion process. Those having a surgical abortion reported fearing being placed under general sedation, while those having a home-based medical abortion worried about making

mistakes and the possibility of complications. Respondents also worried about practical issues, including the required time for the abortion, that they had waited too long to request an abortion, how they would handle the fetal remains, how they would get home, whether they would need to take sick leave and whether they would continue to bleed afterwards. One respondent worried about the possibility of the fetus feeling pain during the surgical abortion.

My worry and fear was that I didn't know what to expect; the horrible wait for it all to begin.

(Respondent 101, second-trimester medical abortion  $\geq 5$  years ago; fear = 10, worry = 10)

#### Worries and fears related to physical reactions

Worries and fears related to physical reactions included medical complications, physical pain, how the abortion would feel, what type of reactions to expect afterwards and what type of vaginal bleeding to expect. Fears of medical complications included unsuccessful or incomplete abortion, need for surgery because of incomplete medical abortion, not waking up from the sedation, that the abortion would cause haemorrhage, infection or infertility or that they would die. For some, the fears and worries continued for years.

I worried that I wouldn't be able to get pregnant again once I had straightened out my life. However, I still don't know if the abortion in any way affected my chances to have children.

(Respondent 78, second-trimester medical abortion 4 years ago; fear = 10, worry = 10)

Fears were described related to physical pain during the abortion and how the abortion would feel. Respondents had heard from others in their social networks that abortions caused considerable pain and were thus worried how

**Table 1.** Background characteristics and retrospective ratings among 185 respondents with experience of first-trimester medical abortion ( $n = 95$ ), surgical abortion ( $n = 40$ ), second-trimester medical abortion ( $n = 19$ ) and multiple types of abortion ( $n = 31$ ).

Variable	First-trimester medical	Surgical	Second-trimester medical	Multiple types	Total sample
Time since abortion					
<1 year, $n$ (%)	12 (13)	1 (3)	3 (16)	8 (26)	24 (13)
1 year, $n$ (%)	14 (15)	1 (3)	0 (0)	5 (16)	20 (11)
2 years, $n$ (%)	10 (11)	1 (3)	2 (11)	3 (10)	16 (9)
3 years, $n$ (%)	5 (5)	2 (5)	2 (11)	1 (3)	10 (5)
4 years, $n$ (%)	11 (12)	1 (3)	2 (11)	2 (6)	16 (9)
$\geq 5$ years, $n$ (%)	38 (40)	30 (75)	9 (47)	8 (26)	85 (46)
No response	5 (5)	4 (10)	1 (5)	4 (13)	14 (8)
Highest educational level					
Junior high school, $n$ (%)	2 (2)	0 (0)	0 (0)	0 (0)	2 (1)
Senior high school, $n$ (%)	28 (29)	8 (20)	8 (42)	8 (26)	52 (28)
University, $n$ (%)	65 (68)	32 (80)	11 (58)	23 (74)	131 (71)
Country of birth					
Sweden, $n$ (%)	92 (97)	35 (88)	19 (100)	28 (90)	174 (94)
Another country, $n$ (%)	3 (3)	5 (13)	0 (0)	3 (10)	11 (6)
Age in years, median (IQR)	32 (8)	42 (17)	40 (19)	31 (8)	32 (12)
Retrospective self-reported ratings					
Fear <sup>a</sup> , median (IQR)	5.0 (4.0)	5.5 (5.0)	8.0 (7.0)	5.0 (6.0)	5.0 (5.0)
Worry <sup>b</sup> , median (IQR)	6.0 (5.0)	7.0 (4.3)	8.0 (5.0)	5.0 (5.0)	7.0 (5.0)
Ill-preparedness <sup>c</sup> , median (IQR)	4.0 (5.0)	5.0 (5.5)	8.0 (4.0)	5.0 (3.5)	5.0 (6.0)
Health professional information <sup>d</sup> , median (IQR)	4.0 (4.0)	5.0 (7.0)	5.0 (4.0)	5.0 (4.0)	5.0 (5.0)
Web-based information <sup>d</sup> , median (IQR)	4.0 (4.0)	6.0 (3.5)	3.0 (2.0)	4.0 (2.0)	4.0 (3.0)

IQR, interquartile range.

<sup>a</sup>1 = no fear, 10 = strong fear.

<sup>b</sup>1 = calm, 10 = worried.

<sup>c</sup>1 = completely prepared, 10 = not prepared at all.

<sup>d</sup>1 = very good information, 10 = very poor information.

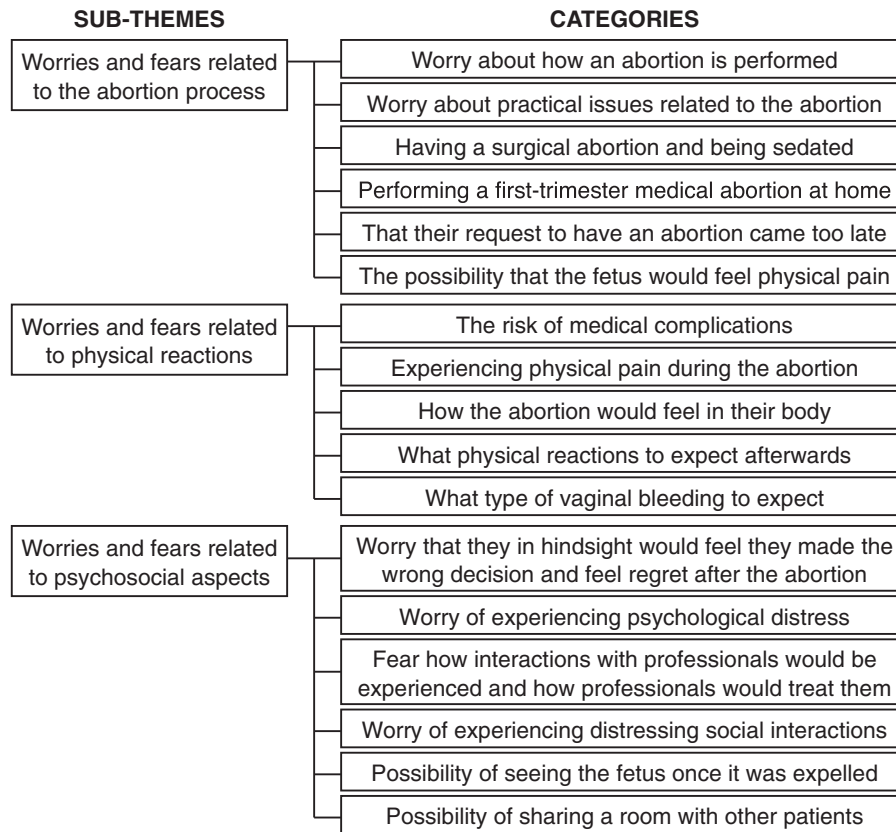


Figure 1. Identified sub-themes and categories related to worries and fears.

their own abortion would feel. Related to this, some also described a fear of having insufficient pain relief. Not knowing what type of physical reactions to expect made respondents feel even more worried and anxious.

I was afraid that I would feel that the analgesia/sedation would not work.

(Respondent 160, surgical abortion  $\geq 5$  years ago; fear = 9, worry = 9)

### *Worries and fears related to psychosocial aspects*

Respondents described being afraid of their psychological reactions during the abortion, including breaking down, losing control, feeling alone, and feeling at the mercy of health professionals. Respondents described worries related to how they would experience interactions with health professionals carrying out the abortion, how they would find the treatment during their hospital stay, and what type of questions they would be asked by health professionals. Some were afraid that health professionals would be disrespectful and judgemental, communicating their own opinions about abortion and making them feel that their legitimacy to decide to terminate the pregnancy was being questioned. Respondents also feared feeling ashamed that they had requested an abortion.

I was afraid of being judged by health professionals (I was/am married, I was 37 years old and I already had children). I was worried and embarrassed about the examination. I was afraid of breaking down during the hospital stay, experiencing difficulties and also not wanting to articulate what I was feeling. I felt considerable shame and grief over deciding to have the abortion done, even though it was the right decision.

(Respondent 30, first-trimester medical abortion  $\geq 5$  years ago; fear = 8, worry = 8)

Respondents described fears of psychosocial aspects after the abortion, including long-term psychological distress and depression. The possibility of regretting the decision to terminate the pregnancy was mentioned by a quarter of respondents. Nevertheless, many felt that they had made the right decision and they did not regret it. Some respondents were afraid of feeling shame and guilt after the abortion. Fear of negative reactions from people in their social networks was also expressed. Some did not want others to know that they had been pregnant and were having an abortion, and consequently feared that others would notice or be told about it.

Worry that I would change my mind, even if the decision felt right; that I had made the wrong decision.

(Respondent 93, first-trimester medical abortion 2 years ago; fear = 10, worry = 10)

### *Theme 2: unexpected events and complications due to unpreparedness*

Three sub-themes, outlined below, and 37 categories of unexpected events were identified in relation to the abortion process, poor health professional treatment and support, and side effects and complications (Figure 2).

#### *Unexpected events related to the abortion process*

Respondents did not expect the emotional distress they experienced up to several years after the abortion. Unexpected feelings after the abortion included grief, depression, disconnection, loneliness, fear, shame, emptiness and panic. One woman who had had a surgical abortion under local anaesthesia described psychological



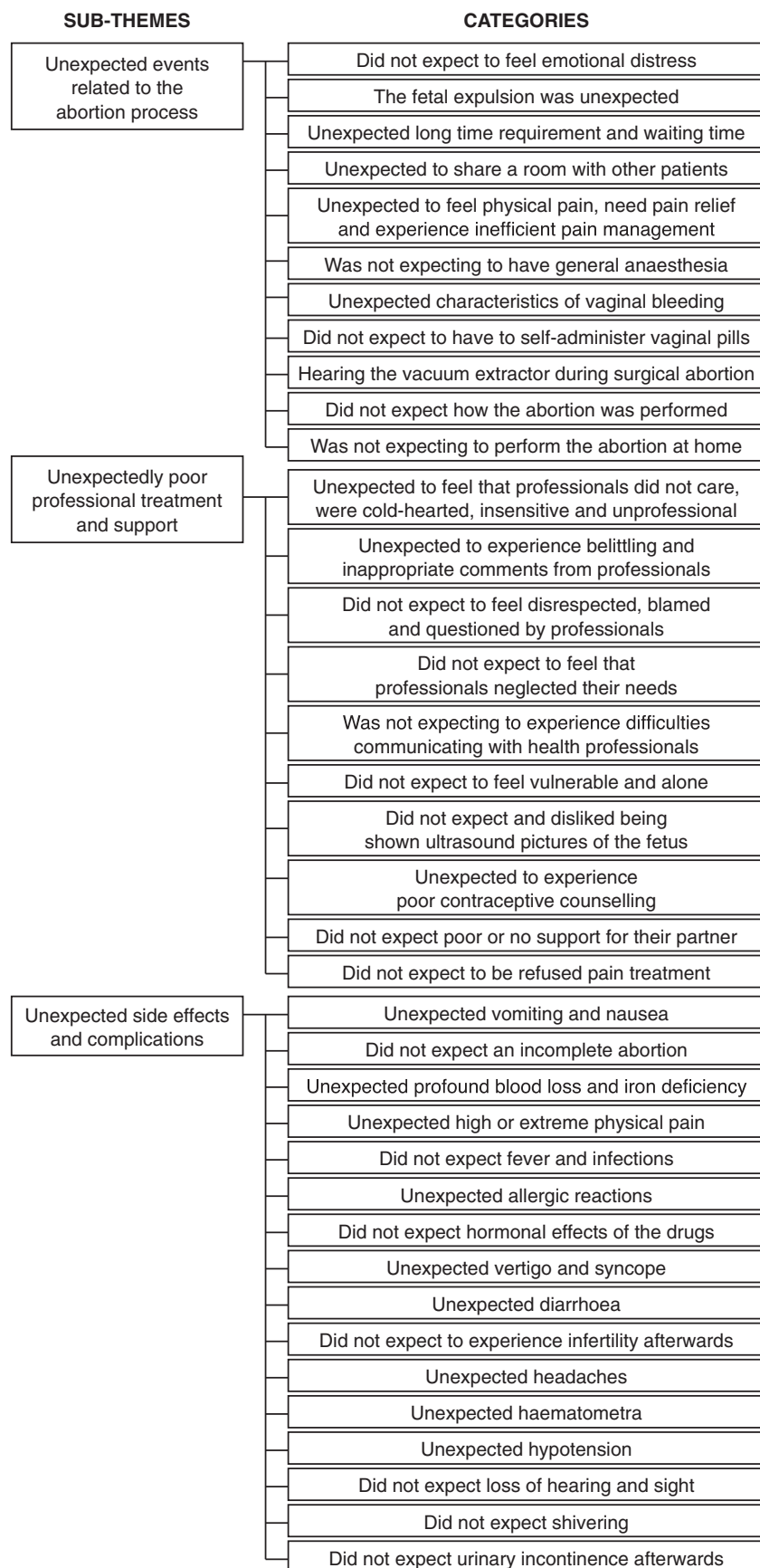


Figure 2. Identified sub-themes and categories related to unexpected events and complications due to unpreparedness.

distress during the procedure and that the extraction felt very unpleasant. Another felt that it was unexpectedly cruel and disheartening to have the medical abortion performed on a delivery ward, hearing newborn babies in the room next door. By contrast, nine women experienced relief during the abortion and less distress than they had expected.

Unexpected practical issues included the required time for the abortion process itself, the long waiting time before the abortion could take place, sharing a room, performing the medical abortion at home, self-administering vaginal pills, hearing the vacuum extractor and having to pay for the abortion.

I wasn't prepared for how emotional I was for a long time afterwards (months). A feeling of loss, even though it was a wise decision [to terminate the pregnancy].

(Respondent 22, surgical abortion  $\geq 5$  ago; ill-preparedness = 8, dissatisfaction with health professional's information = 3)

Feeling contractions and intense physical pain was unexpected, and two women felt unprepared to be placed under general anaesthesia. Some were not prepared to need strong pain control and to experience insufficient pain control. Vaginal bleeding and fetal expulsion taking place during medical abortion were for some an unexpected and distressing event that they remembered vividly. Women who experienced a traumatic expulsion felt lonely and emphasised the importance of psychosocial support. Women also felt unprepared for the physical reactions in connection with the expulsion and the fact that it felt similar to childbirth.

I wasn't prepared at all to see parts of the fetus (as far as I could tell) coming out together with the blood. No one had told me about that. For me, it was like the baby I had killed came out in my sanitary pad. It was very traumatic for me, a memory that has been etched in my mind and that makes me uncomfortable even today, 10 years later.

(Respondent 135, first-trimester medical abortion  $\geq 5$  years ago; ill-preparedness = 8, dissatisfaction with health professional's information = 5)

### **Unexpectedly poor health professional treatment and support**

More than one-third experienced unexpectedly poor health professional treatment and support, including feeling that the behaviours of health professionals suggested they did not care. These respondents felt that the health professionals were cold-hearted, insensitive and unprofessional. Some found the pelvic examinations particularly unsettling, while others described a lack of psychosocial support. Women described feeling exposed during the abortion process and that the behaviours of health professionals did not accommodate their vulnerable situation. Some respondents experienced belittling and inappropriate comments from health professionals. While some health professionals had shown much-appreciated compassion and empathy, others were considered to have shown very poor behaviour which made women feel disrespected, blamed and questioned.

She [the gynaecologist] made personal and negative comments about my age, relationship status and educational level, and made me feel embarrassed for being there. I was too shocked to be able to protest. Among other things, she said that statistics say that those who have had an abortion at a young age do not go on to study at university.

(Respondent 120, first-trimester medical abortion  $\geq 5$  years ago; ill-preparedness = 4, dissatisfaction with health professional's information = 9)

Respondents had not expected to have difficulties communicating with health professionals, including difficulties in contacting health care services after the abortion and experiencing a lack of professional attendance during the hospital stay. Some felt that health professionals neglected their needs during and after the abortion, including not offering psychosocial support. We received descriptions

from respondents of being refused adequate pain relief despite experiencing a high level of pain. Another unexpected event that respondents did not appreciate was being shown ultrasound pictures of the fetus, described as 'uncomfortable' and 'pure torture'. Some women also described unexpectedly poor contraceptive counselling.

I have always been negative towards hormonal contraception and did not want a prescription for that. I said I did not think hormones are good for the body, and they replied that an abortion is not good for the body either. I was completely shocked.

(Respondent 109, first-trimester medical abortion  $\geq 5$  ago; ill-preparedness = 5, dissatisfaction with health professional's information = 2)

### **Unexpected side effects and complications**

Unexpected side effects and complications of the abortion were described, including vomiting, nausea, incomplete abortion, blood loss, iron deficiency, pain, fever, infections, allergies, hormonal effects, vertigo, syncope, diarrhoea, infertility, headaches, haematometra, hypotension, loss of hearing and sight, shivering and urinary incontinence.

I didn't think I would be so nauseous. I couldn't eat for 3 days because of the nausea.

(Respondent 90, first-trimester medical abortion  $< 1$  year ago; ill-preparedness = 3, dissatisfaction with health professional's information = 2)

### **Theme 3: insufficient and low-quality information resulting in uncertainty about the abortion process**

Three sub-themes, outlined below, and 18 categories of information were identified related to insufficient information resulting in uncertainties, experiencing difficulties finding high-quality Web-based information, and information incongruent with the actual abortion experience (Figure 3).

#### **Insufficient information resulting in uncertainties**

Respondents experienced vague or a lack of preparatory and post-abortion information, which resulted in uncertainties. Insufficient information was given about physical pain and pain relief, characteristics of contractions, onset and characteristics of vaginal bleeding, general sedation, vaginal expulsion, administration of vaginal pills, possible side effects and complications, having to share a room with other women, seeing fetal remains, possible psychological distress, length of time required, what kind of emotional reactions to expect afterwards and where to find psychosocial support, having to pay for the abortion and future contraception. Respondents described a lack of information about the choice between a surgical or a medical abortion. Some tried to ask questions, but felt they were not given answers to these questions. Others felt that there were too many health professionals involved, that there was a lack of written information and recommendations for suitable websites, and that health professionals had the wrong focus when providing information.

I don't understand why health professionals don't give adequate information to women who are about to have an



Figure 3. Identified sub-themes and categories related to insufficient and low-quality information resulting in uncertainty about the abortion process.

abortion, and then let them decide [which type of abortion to have]. It follows us for the rest of our lives.

(Respondent 8, experience of multiple types of abortion  $\geq 5$  years ago; ill-preparedness = 6, dissatisfaction with health professional's information = 10)

### Experiencing difficulties finding high-quality web-based information

In total, 99 women reported searching the Web for information about abortions. Virtual communities and blogs were used to read about abortion-related experiences and to communicate with peers. While some appreciated reading realistic stories from peers, others became afraid when reading others' 'horror stories'. Some women found that certain information websites included misinformation, propaganda against abortions and biased information. By contrast, others found that Web-based information helped

them reach an informed decision and found it to be more honest than the information given by health professionals.

The information I received from health professionals was that it [the abortion] would be a 'little painful' and be like 'mini contractions/a mini delivery'. When I got home and was going to initiate the abortion, I searched for Web-based information about the medication and found out that it could be very painful, I could bleed a lot, and so on. I would have been terrified when the powerful contractions started, had I not known that it could happen thanks to the information on the Web.

(Respondent 86, experience of multiple types of abortions 3 years ago; ill-preparedness = 9, dissatisfaction with health professional's information = 7, dissatisfaction with Web-based information = 9)

Respondents who searched the Web described that it was difficult to identify high-quality and trustworthy websites that provided answers to their questions. The searches were further complicated because of their emotional



distress. Thus, respondents articulated a need for a comprehensive and trustworthy Web service developed by the national health care system. Respondents wanted this resource to include information and the possibility to put questions to health professionals.

A lot of poor information turns up, if you don't sort it all out by yourself: propaganda against abortions and horror stories, which are unnecessary and offensive.

(Respondent 91, first-trimester medical abortion <1 year ago; ill-preparedness = 2, dissatisfaction with health professional's information = 1, dissatisfaction with Web-based information = 8)

### **Information incongruent with the actual abortion experience**

Some recounted that the preparatory information they had received did not reflect their own experience of abortion. Some found that the physical pain was worse than expected based on the health professional information they had received, including that the pain had been wrongfully likened to dysmenorrhoea and that they would receive plenty of pain relief, which they were later refused. One was told that it was inadvisable to take the first abortion pill at the end of the week, but later encouraged by another health professional to do the complete opposite. Another respondent was told that she would have a copper intrauterine device inserted during the surgical abortion, but much later found out that it had not been done. One respondent was informed that the abortion would be over quickly, but found that it actually took a long time.

The physician who informed me about the abortion told me that it was possible to receive enough morphine so that the abortion would pretty much be painless. That was not correct according to the midwives who took care of me. They told me that it was only possible to receive a small dose to relieve the pain.

(Respondent 17, second-trimester medical abortion <1 year ago; ill-preparedness = 9, dissatisfaction with health professional's information = 6)

## **Discussion**

### **Findings and interpretation**

Retrospective assessments showed that respondents experienced various worries and fears before the abortion and felt moderately to poorly prepared. Various events that occurred during the abortion were unexpected, illustrating general unpreparedness and lack of sufficient preparatory information. Many searched the Web for information but found it difficult to identify high-quality information; contact with low-quality information further hindered uptake of sufficient and appropriate preparatory information.

### **Strengths and weaknesses**

Some methodological limitations of the study should be considered when interpreting the findings. This was an exploratory study with a convenience sample recruited through Web-based means, i.e., public discussion boards and social media. It is possible that the sample deviated

from clinical samples. Web-based recruitment is associated with selection bias and limited external validity because of the non-representativeness of Internet users who visit the platforms used for recruitment and the risk of self-selection of respondents, also referred to as the volunteer effect [7]. Use of the Web is widespread in Sweden [23] and we recruited respondents *via* different discussion boards and social media. Nevertheless, this was an exploratory study and we acknowledge the limited transferability due to the Web-based recruitment. It is possible that the women who participated in the study had difficult abortion experiences, which potentially could explain the results in relation to other studies that have indicated overall high satisfaction with abortion care [15]. On the other hand, the Web-based recruitment strategy might have given voice to women who are otherwise hard to reach and unheard in research because they are not followed up. It is important to explore the views of women with problematic abortion experiences; thus, the findings of this study may be considered complementary to larger quantitative studies illustrating high satisfaction with abortion care.

A large proportion of the sample had received a university education and most were born in Sweden. While there was some variation with regard to abortion type, a higher proportion of respondents had a surgical abortion or a second-trimester medical abortion compared with the wider Swedish population [18]. Thus, the transferability of this study may be limited with regard to abortion type, and the findings should primarily be considered hypothesis generating. Research indicates that sociodemographic characteristics are associated with experience of abortion, including educational level [24]. We acknowledge that more exploratory studies are needed among immigrants or women with lower educational levels.

This study explored retrospective descriptions; almost half the sample underwent the abortion  $\geq 5$  years prior to study participation. It is possible that the recollections in some cases differed from the actual experiences or that some clinical routines have changed over time. Thus, participants' recollections may not fully reflect their experiences of the abortion at the time, since memory effects and biases could have played a role. The findings of this study should be interpreted as complementary to studies that investigate abortion-related experiences closer in time to the abortion. On the other hand, the elapsed time since the abortion might have resulted in a higher degree of reflection about the experience; indeed, many participants provided vivid and detailed descriptions, indicating that they were able to clearly recollect their experience. The questions used in the survey referred to overall abortion-related experiences. Thus, respondents with experience of different types of abortion could provide answers that corresponded to one of their abortions. While this made it possible for them to provide comprehensive responses to the open-ended questions, the rating-scale questions illustrate the overall recollection and not in relation to each of their previous abortions.

The study used qualitative latent content analysis, meaning that the data were interpreted for overarching threads and underlying meaning [21,22]. In order to approach the data from different perspectives, two of the authors scrutinised the primary analysis made by the last

author. We acknowledge that these analyses involved interpretations of human experiences, and the findings need to be considered with this in mind.

### **Similarities and differences in relation to other studies**

In line with previous reports [1,3–5], the findings show that women who undergo induced abortion experience various worries and fears, including psychosocial aspects. This highlights the fact that induced abortions often involve emotional difficulties [2] and psychological distress, which later abates over time [25]. Adequate professional psychosocial support, including respectful and non-judgemental attitudes of health professionals, is essential to the provision of high-quality abortion care [8]. According to a previous Swedish study, one in four women is not completely satisfied with her abortion care; the most decisive factor associated with high satisfaction included the human aspects of care [15]. It is problematic that some respondents expressed fear of mistreatment and that several did indeed experience unexpectedly poor treatment from health professionals. Health professionals who work in abortion care stress the importance of imparting sufficient knowledge and showing empathy towards women [11]. The fact that respondents raised issues related to professional treatment illustrates that psychosocial treatment is essential in abortion care and emphasises the importance of addressing pre-abortion fears and worries.

Many respondents reported feeling unprepared, especially for a second-trimester medical abortion, and recalled various unexpected events related to the abortion. Although moderate overall satisfaction with information was reported, participants simultaneously described receiving insufficient and inaccurate information that was incongruent with their actual experience. Previous studies reported that women found abortion-related physical symptoms to be worse than they had expected before the procedure, including vaginal bleeding and physical pain [16]. Preparatory information delivered in a concise and unbiased manner before an induced abortion is highly appreciated among women [10]. However, research has shown that some health professionals who work in abortion care experience challenges communicating with their clients [11,12]. The findings highlight the importance of adequate training and mentorship for health professionals [11] to enable them to adequately support women seeking an abortion.

A large proportion of the respondents used the Web to search for supplemental information, which is in line with results of previous reports [13,26]. The Web is a widely used tool for accessing health-related information among the public [27,28] and has the potential to offer highly accessible and tailored information, independently of geographical limitations [29]. Research indicates, however, that those who search for health-related Web-based information find it difficult to identify reliable sources [13,30,31], and, further, that some consumers are insufficiently able to assess the reliability and trustworthiness of Web-based sources [31,32]. This illustrates the risk of contact with poor quality, biased information, described by some respondents. Descriptive studies have reported various issues related to the quality of websites in the field of obstetrics

and gynaecology [33–35]. Moreover, widespread dissemination of misinformation about induced abortions on the Web has been reported [36], echoing respondents' descriptions. When consulting women seeking an abortion, health professionals should address the potential difficulties of trying to identify relevant websites and emphasise the risk of contact with low-quality misinformation on the Web. Taken together, the findings illustrate the need to develop an accessible Web-based informational tool that contains honest and accurate high-quality information. This information needs to correspond to the preferences of the intended audience, i.e., women seeking abortion, and be written by trustworthy authors.

### **Conclusion**

Previous research reports that a limited proportion of all women are dissatisfied with their overall abortion care and that most do not experience pathological levels of psychological distress. Nevertheless, our results indicate that there is a need for improvement with regard to informing, preparing and supporting women who seek an abortion. Women with experience of induced abortion recollect various worries and fears that they experienced in connection with the abortion process, as well as physical reactions and psychosocial aspects. When women receive insufficient and inaccurate preparatory information, they are at risk of being exposed to unexpected events during and after the abortion. These include events related to the overall abortion process, poor health professional treatment and support, as well as side effects and complications. The results emphasise the importance of health professionals' delivery of sufficient preparatory information to promote preparedness and lessen the impact of possible unexpected events. Those who terminate a pregnancy may decide to use the Web for supplemental information in order to find answers and feel prepared, but high-quality Web-based information can be difficult to identify. Concerns were expressed that the Web contains poor-quality information and misinformation, which may further hinder preparedness and informed decision making. There is a need among women for the development of a trustworthy Web-based service that contain honest and high-quality information written by health professionals, as well as the possibility to ask questions online to health professionals.

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### **Author contributions**

SG, SK and ES analysed the data and critically revised the manuscript. TC conceived and designed the study, collected and analysed the data and drafted the manuscript. All authors approved the final version of the manuscript.

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