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## Women's Experiences of Female Ejaculation

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**Abstract** Thirteen women responded to an open-ended questionnaire about their female ejaculation experiences. Responses are described from a phenomenological perspective. The major themes of responses include feelings of humiliation and shame or feelings of exploration and wonder, moving towards acceptance or acceptance tinged with resignation. Women explain their relationships to their bodies as well as their relationship to the ejaculation fluids and how this affects their sexual identities. The origins of their sexual fluids are mysterious. The stimulation needed for ejaculation differed among respondents, and was also found to occur separately from orgasm for some women. Ejaculation began at one of two distinct time points in the life course. This study supports the existence of female ejaculation as a common experience for some women, and proposes new areas for further exploration.

**Keywords** Ejaculation · Women's sexuality · Sexual fluid · Women · Female prostate · Phenomenology · Orgasm · G-spot · Multiple orgasm · Female sexual experience

Female ejaculation has been defined previously as the “expulsion of fluid from the urethra” during sexual arousal (Whipple and Komisaruk 1999). The topic of female ejaculation has a contentious history in modern sexology. There has been considerable debate as to whether the phenomena exists, the organs or physiological structures involved in the fluid's creation and expulsion, and the makeup of the fluid. Upon researching the topic it becomes obvious that voices are missing from this debate: the women themselves speaking about the nature of their experience.

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While several researchers had done polls on whether or not women experienced ejaculation, there had not been any qualitative research on the meaning or effects of the female ejaculation (FE) experience.

## Literature Review

In 1966, Masters and Johnson stated they did not find any ejaculators among their original female participants (Masters and Johnson 1966). In later years, using data from 1000 women in their sex therapy programs, they concluded that only a “handful” of these women had reported a spurt of fluid at the moment of orgasm (Masters et al. 1988, 1992). Masters and Johnson reported that these cases could be explained by urinary stress incontinence and suggested Kegel exercises or urinary surgery. They concluded that the phenomenon did not exist.

The article that began the contemporary debate on research female ejaculation was published in 1978 by Sevely and Bennett (1978). They state, “In the contemporary view of human sexuality, ejaculation is experienced by males but not by females. For many preceding centuries, there was widespread belief that both sexes ejaculated during coitus”. Their historic overview of the phenomena questioned Master’s and Johnson’s conclusions.

In 1981, research on female ejaculation became intertwined with what Perry and Whipple called the Grafenberg spot, or G-spot (Perry and Whipple 1981). Women who reported experiencing female ejaculation had stronger pelvic muscles than women who did not experience this phenomenon (Perry and Whipple 1981). In two other studies, women who reported themselves as ejaculators had a higher reporting rate of sensitive areas in their vagina that influenced or caused orgasm (Goldberg et al. 1983; Darling et al. 1990). Reviews of recent research show that the two issues may also be examined separately, as ejaculation and G-spot stimulation may not necessarily be associated with one another (Whipple and Komisaruk 1992; Whipple and Komisaruk 1999; Hines 2001).

Current theory holds that the female prostate gland is a principal source of ejaculate fluid for some or most women (Cabello 1997; Zaviacic 1999), and that this fluid is expelled through the urethra through rhythmic pelvic contractions. The fluid contains prostatic specific antigen (PSA) markers that are analogous to PSA markers in male semen created by the male prostate gland during sexual arousal (Zaviacic and Ablin 2000). It may also contain trace amounts of urea from urine residue found in the urethra. Cabello tested the preorgasmic and postorgasmic urine of several women, including women who do not ejaculate (Cabello 1997). A significant difference was found in PSA values between the two specimens. Cabello hypothesizes that all women may create ejaculate fluid, although some may have retrograde ejaculation; instead of the fluid being expelled out along the urethra, it follows the urethra back into the bladder.

In the past, fluid has been examined to discover whether it contains urea and creatinine which are both present in urine; plus glucose or fructose and prostatic acid phosphatase (PAP) which are characteristic of the prostate component of semen. Five studies show the majority of women’s ejaculate shows zero or low

levels of urea and creatinine, and also test positive for PAP and higher rates of glucose or fructose (Addiego et al. 1981; Belzer et al. 1984; Zaviacic 1984a, 1984b; Zaviacic et al. 1988). Results have been mixed in other studies (Goldberg et al. 1983), leaving us without definitive explanations for the sources or composition of ejaculate fluid. Based on this research it may be practical to conclude that some women expel a fluid that is different from urine and some women expel a fluid that also contains urine (Whipple and Komisaruk 1991).

Another debate that researchers have been struggling with is the question of whether female ejaculation exists since it seems to occur regularly only in a small group of women. Estimates range from 14 to 54% (Bullough et al. 1984). In a volunteer sample of 233 women who were educated about female ejaculation through an oral or audio-visual presentation, 54% said they had experienced ejaculation at least once. Fourteen percent stated that they experienced it with most or all orgasms. Among a professional population of 1289 nurses, sex therapists, sex educators and counselors, 40% reported experiencing ejaculation at least once (Davidson et al. 1989; Darling et al. 1990). However, if the large numbers in these studies were representative of the population at large, more medical information or even popular knowledge about this phenomenon would likely be available. As previously stated, Masters and Johnson found only a "handful" of female ejaculators in their research. To date, no large scale studies of female sexual experiences have included a component on ejaculation, so the debate about the prevalence of this experience continues.

In the Davidson and Darling study, women who experienced fluid expulsion during sexual arousal were queried about their perceptions of their fluid and their sexual response and satisfaction. Other than their questionnaire, women identifying as female ejaculators have not been queried in detail about their experiences. The current study was designed to ask women who experience ejaculation about aspects of their sexual response, their social experiences with ejaculation, and explore the meaning of this experience to their sexual lives.

## Method

### Participants

Over a 1 year period during 2001–2002, three announcements were placed about 6 months apart, inviting women to contact me who "regularly experience the release or gush of fluid around the time of orgasm". (This statement reflected the bias in the published information about FE—that it is concurrent with orgasm.) Two appeared in a regional weekly paper and one was listed in local women's sexuality resource store newsletter. Prior to placing the announcement, approval of the project was received from the Human Subjects Committee in the College of Letters and Science at the University of Wisconsin-Madison. Twenty-one questionnaires were mailed to respondents and thirteen were returned. After receiving the letter, women were able to self-select whether their experiences fit the description of ejaculation and ejaculating regularly. The questionnaire defined regularly as "if you can count

on ejaculating if certain conditions are met during sex. In other words, this is something that usually happens to you: it's happened before, and you think it's likely that it will happen to you again". Phrasing "regularly" in this manner was designed not to exclude possibly qualifying participants, especially if the rate of ejaculation is mitigated by the need for specific stimulation. Participants were urged to return the completed questionnaires within 2–3 weeks of receiving them. After 6 weeks, that respondent group wave was closed and an information packet about female ejaculation was sent.

### Data Analysis

Phenomenological inquiry offers the opportunity to understand more deeply the life experience of another by describing the essential nature of the experience rather than by analyzing or classifying it in a reductive manner. Rather than giving us theory to explain the world, phenomenology analysis enables readers to feel that we grasp the essence of another's experience. By understanding what it is like for participants, further research can be guided with a sense of relevance. In this instance analysis of responses to the eleven open ended questions was guided by Van Manen (1990). In phenomenology, the role of the researcher is also significant, since all data is filtered through the researcher. The phenomenological method involves four essential operations: bracketing, intuiting, analyzing and describing (Speigelberg 1965). In bracketing, the researcher suspends any preconceived notions or expectations about the phenomenon. It is then possible for the researcher to be open to the description given by the participants, and intuit what is truly present from a more global perspective. During analysis, all transcriptions are read as a whole and then examined separately looking for patterns and common themes. After reading and rereading and allowing the voices of the participants to be heard, the researcher is then able to describe the essence of the phenomena at hand. Thus the lived experience of individuals is woven together to create an accurate and coherent whole (Giorgi 1997).

As a woman's health advocate and certified birth doula, I have been listening to women's stories for years and assisting in the transition to motherhood. My involvement with women's intimate lives has increased my sensitivities to the nature of their experiences as embodied beings. This background sensitized me to the varieties of women's experiences and their reflections on these experiences. It also assisted me in bringing together a coherent portrait of relevant themes.

In phenomenology, validity is ascertained by the quality of the description obtained and its fit to the truth of participants whose experience is being described. The criteria for validity is not a particular number of respondents or seeking repetition in responses in order to terminate data collection. The goal is to describe accurately the experiences of this group. Because of the constraints of the Human Subjects Committee, I was unable to contact any respondents to crosscheck that their accounts were accurately represented. In lieu, other women known to the researcher to be ejaculators were asked if the descriptions in the report might be inclusive of their experiences. These three readers unanimously confirmed that the

themes were representative of their own life experiences and feelings, thus validating the descriptions.

In addition to open ended questions, respondents were also asked several short answer questions and four Likert scale questions. These questions were compiled to gain a general description of trends in women's female ejaculation experiences. Respondents were 27 to 61 years of age. Six were married and seven were unmarried. Nine identified themselves as heterosexual or having only male partners. Three identified as lesbian or having primarily female partners. One respondent identified as having male, female and transgendered partners.

## Findings

### Women's Experiences of Ejaculation

All women described their experiences of themselves as ejaculators to be significant in defining their sexual lives. Their responses to initial ejaculation experiences varied but can be grouped into two general categories: feelings of humiliation and shame or feelings of exploration and wonder. From their initial responses, participants described reaching a place of acceptance or acceptance tinged with resignation.

#### *Humiliation and Shame*

The first theme that was consistent across many women was feelings of shame and embarrassment about ejaculation. This was especially true for women who had no prior knowledge about female ejaculation. As Amanda put it, "It used to horrify me and make me ashamed, sad...It used to make me feel like a complete freak; I called myself broken. I couldn't believe anyone would want to make love with me when they knew this secret."

Another respondent, Diedre, concurs. "For a very long time it was upsetting. I used to think I 'wet the bed' (pee). I thought I'd rather not orgasm if it meant that I would pee on the bed or the guy." For 2 years Diedre refrained from orgasm with her fiancé in order to keep herself from "peeing" on him. For most women experiencing humiliation and shame, they reported several attempts to gain information from friends, books, or articles, which proved fruitless. Until they saw the advertisement for this study and talked with the researcher they had no knowledge that female ejaculation could be a normal function of the female body. (My bias during these conversations was to normalize the experience: it was normal for the respondent.)

Both Amanda and Diedre first experienced ejaculation in their late teens or early twenties. Both described curbing their sexual activities and not having sex with certain partners because of their shame regarding ejaculation. However, it was the response of caring sexual partners to whom they felt an emotional bond that made a difference. Both of them were encouraged to orgasm even though this meant they would "pee" on their partners. Because of their lack of knowledge about ejaculation

both women and their partners assumed the women were urinating. Amanda and Diedre described mixed feelings of pleasure and disgust about their bodies because of ejaculation.

However, not all women who were uninformed about female ejaculation experienced shame. For Ilana, who first experienced it at age 36, ejaculation is “disconcerting but not unenjoyable”. Fern, now 61 years old, states, “It’s hard to remember back 38 years. I just figured it was normal til I talked to other friends and found that none of them had experienced it. Husband had never had intercourse before so he probably figured it was normal as well.”

### *Exploration and Wonder*

A second theme that consistently appeared was exploration and wonder about this new experience of spurting or releasing fluid during arousal. These respondents wrote joyfully about their ejaculation experiences and showed playfulness and pleasure with their bodies. Carol wrote that after her first ejaculation experience in her early twenties, “I wanted to do it again and again. So I practiced, both by myself and with partners...My mom even asked me how.” Betty began experiencing ejaculation at age 31. She writes, “It made me feel on top of the world. After being in a sexual desert for my twenties, I felt like I was really sexually desirable.”

Both Carol and Betty had some knowledge that women could ejaculate. Their responses showed more comfort with themselves as sexual beings. While Carol mentioned other sexual partners and friends who also ejaculated, Betty did not know of anyone else even after making several inquiries. She mentioned combing bookstores for information and feeling tremendously relieved after reading about female ejaculation in *The G-Spot* (Ladas et al. 1982).

### *From Resignation to Acceptance*

Over time, most respondents progressed to either acceptance or resignation about themselves as ejaculators. Most often this process was aided by a positive response from sexual partners and friends. Finding information in books or art brought feelings of relief and validation. As Gail put it, “The ‘Vagina Monologues’ does a piece about a woman who described having a wet orgasm. I nearly cried because I had never heard anyone mention it before.”

Some women reported that sexual partners tolerated their ejaculation but did not enjoy it. For them it was also a process of adjustment. Diedre shares, “Before he’d say, ‘I don’t want pee on me’ or ‘Can’t you go to the bathroom before sex?’ Now he feels its attractive and he’ll say, ‘Squirt me!’”

Amanda writes, “My partner calling it ‘magic’ was a turning point. I saw a glimmer of the possibility of appreciating this quirk. Reading a brief passage about female ejaculation in a [fiction] book gave me a hint that I wasn’t peeing but ejaculating, that I wasn’t the only one doing it! That helped tremendously.”

Juanita states, “I have only been embarrassed or ashamed of ejaculating and telling about it a few times when other people were disgusted. But usually even then I just ignore their responses and know that my ejaculating is awesome and

powerful.” Juanita’s response affirms her willingness to validate her own experience rather than be influenced by the opinions of others.

For some women, ejaculation has become a significant and positive part of their identity as sexual beings. The majority of respondents shared that ejaculation has made them “feel special” or “lucky”. For Betty, “I feel really hot-like I’ve got something to offer that men don’t even know about...I’m not that great looking-average face, average body. So somebody really has to get to know me and like me as a person to want to have sex with me. And here I’ve got this reward for them-I’m multi-orgasmic plus I have these ejaculating orgasms that most men would die for in a partner. I mean what I can do naturally men are fantasizing about. That’s exciting.”

When asked how they would feel if they stopped ejaculating, all respondents stated they would be sad or that they would miss it. The process of acknowledging and exploring female ejaculation and finally accepting themselves as ejaculating women is exemplified best by Gail’s statement:

It used to make me feel embarrassed, and I used to try to stop it from happening. Then I would feel frustrated because my sexual experiences were not fulfilling. But now that I am in a caring relationship, and I am older, I enjoy it very much. It makes me feel good that it makes my partner feel good – it is an obvious sign to him that he has pleased me. It makes me feel unique, sexy, and irreplaceable.

### *Responses to Ejaculation Fluid*

The majority of participants described releasing copious amounts of fluid. It “soaked the bed” or “sprayed the wall”. Acceptance of ejaculation as a part of their sexual response seemed to go hand in hand with having a system for dealing with it. Most commonly, participants kept a stack of towels by the bed. They mentioned using washable 3’ × 3’ incontinence pads, waterproof mattress pads, and even traveling with large plastic lined (chux) pads. Another respondent would sit on the toilet when she knew ejaculation was imminent because she releases “cups of fluid”.

Almost all respondents spontaneously described their fluid. For one or two women their fluid was thick, but most women described watery ejaculate. They smelled it, tasted it, described its odor. As women became more positively accepting of themselves as ejaculators, they explored it more thoroughly. The fluid became viewed as “a part of me”. Another necessary part of the process of relating to the fluid is deciding what to call it. All women had to find a way to describe their fluid and used these synonyms for ejaculating: “heavy water flow”, “wet orgasms”, “flowing”, “flooding”, “gushing”, “melting”, “squirting”, “releasing”, and “a balloon inside of me that finally bursts”.

For participants who were unfamiliar with ejaculation when they began doing it, the fluid itself was a puzzle. Most assumed it was urine but that it had to be a special type of urine. Almost all women described experiences of making sure they urinated immediately before sex and that it had no effect on whether or not they ejaculated.

The fluid did not smell or look like urine yet it must be urine, because there was no other alternative explanations. Seven respondents found information through books, experts, partners or friends about ejaculation. These women knew it wasn't their usual urine but what it was and where it came from was still a mystery for many. All women were satisfied through their own explorations that it was not their normal urine.

The other six respondents knew nothing about female ejaculation until receiving the few paragraphs of background information accompanying the questionnaire. These paragraphs were designed to describe the experience in order to determine eligibility for the study rather than give information or opinions about female ejaculation. Every respondent wrote notes of gratitude and relief on their questionnaire. Being asked about their experience and being given the opportunity to reflect on it also made several women feel "normal".

For some participants, ejaculating has come to symbolize something more than the expulsion of fluid during sexual arousal. Carol feels her ejaculations lead her to "a more ecstatic, meditative sexual space". Elise described her ejaculating as "a cleansing process" and "wonderful healing cleansing release physically AND emotionally" (original emphasis). These responses highlight the individual interpretation of the ejaculatory experience and the common theme of acceptance of themselves as ejaculators and producers of fluid.

### Interpretation

From the responses in this small study, ejaculation by women is shown to have a profound effect on their sexuality. Participants described finding meaning in their ejaculation experiences and reflecting on this meaning to define themselves. In turn, this self-definition led women to see themselves as "different" and make sexual decisions based upon feelings about themselves and feelings about ejaculation. All but one participant described her ejaculating as making her different from other women. Participants described making choices about sexual partners or whether to have sexual relations based upon their status as ejaculators. Some women limited their sexual responses in order to limit ejaculation.

Familiarity with ejaculation before experiencing it personally led to a greater acceptance of the phenomena for those respondents. However, the women who knew about female ejaculation were also open minded about sexual matters, and displayed a high level of sexual education in their responses. It may be that familiarity does not necessarily mean acceptance but that an acceptance of sexual differences and responses was already present.

### Characteristics of Ejaculation

Respondents were also asked about their sexual responses, but not all respondents answered all questions. From this information, a more defined portrait of women who experience ejaculation emerges. When asked about the amount of pleasure they experienced from breast stimulation, four respondents said "extremely", five said "very", and three replied "somewhat". Of the 13 respondents, five stated they

masturbated more than once a week, four said “several times a month”, and four replied “once a month or less”.

### *Age at Onset of Ejaculation*

Two patterns emerged from respondents regarding the age at which they began experiencing ejaculation. Nine respondents reported experiencing ejaculation for the first time in their late teens or early twenties. Three experienced ejaculation for the first time in their early to mid-thirties, and one woman began ejaculating at age 51.

### *Multiple Orgasms*

When supplied with a definition of multiple orgasms, eleven respondents replied that they “regularly” or “always” experience more than one orgasm within a one to several minute time frame. Two respondents replied that it happens “sometimes”. For women who ejaculate with orgasm, several reported that they also have multiple ejaculations with each orgasm or series of orgasms.

### *Ejaculation and Orgasm*

Eleven respondents stated that ejaculation occurred either immediately preceding, during or after orgasm. Most women reported that when ejaculation occurred varied between experiences. Women reporting multiple orgasms shared that ejaculation strength and amount also varied from orgasm to orgasm, most likely gaining in strength and pleasure as she became more aroused. Two women reported that ejaculation and orgasm were independent events. One clearly stated that ejaculation occurred at an earlier phase in her arousal cycle and whether or not ejaculation occurred did not influence whether or not orgasm occurred. The second woman stated that ejaculation could occur earlier in her arousal cycle but now most often happened in conjunction with orgasm.

### *Types of Stimulation that Lead to Ejaculation*

Although not asked a direct question, all women spontaneously distinguished between orgasms resulting from clitoral stimulation, vaginal stimulation or G-spot stimulation. Of the 11 women who experienced ejaculation in conjunction with orgasm, nine reported that clitoral stimulation alone could bring on ejaculation and orgasm. Two reported that vaginal stimulation alone without any clitoral stimulation was most likely to bring on ejaculation and orgasm quickly. All respondents, except one, reported ejaculation occurring when vaginal and clitoral stimulation were used simultaneously. The one woman who did not experience ejaculation in conjunction with orgasm replied that only light clitoral stimulation led to ejaculation. Vaginal stimulation would actually deter ejaculation for her.

Most respondents also reported a need to feel relaxed, comfortable or “very aroused” in order to experience orgasms and ejaculations. However, the length of time women needed to be stimulated to achieve a very aroused state differed. One

respondent, Betty, stated, “I can have an orgasm, an especially wet one almost right away...it can happen in just 2–3 min.” Another respondent, Kesia, was more typical, needing about 20 min of stimulation to reach ejaculatory orgasms. “The build up to ejaculation can be quite intense sometimes and I have a lover who doesn’t stop even if it takes a while...sometimes I can have a more intense and wet orgasm if he licks me after we’ve had intercourse.”

### *Menstruation and Ejaculation*

Three respondents reported changes in ejaculation based on their menstrual cycle. One reported that ejaculation occurred most often immediately preceding her menstrual period. A second respondent stated that for the last several years, ejaculation is much less likely to occur from 2 days after ovulation until 2 days prior to menstruation. The third respondent stated that she does not ejaculate during her menstrual period.

### *Frequency of Ejaculation*

To be eligible for this study, women needed to experience ejaculation regularly. All eleven respondents experiencing ejaculation in conjunction with orgasm reported that ejaculation occurred with most orgasms. Most women stated that once they were past a particular arousal threshold, ejaculation happened consistently. Three respondents stated that ejaculation happened with every orgasm no matter what their arousal state.

### *Ejaculation and Release*

Several women reported feeling a sense of release upon ejaculation and congestion when ejaculation did not occur, even though they did orgasm. As one woman, Elise, described it, “I would feel stuffed or stuck “down there”. Amanda stated, “I don’t feel a sense of completion until I reach that point”.

### *Amount of Ejaculatory Fluid*

The subjective nature of this question provided a substantial challenge. Respondents were asked how large a wet spot on a fluffy bath towel would be when given a scale of common household objects. Three women reported a soda can to compact disc sized wet spot after a typical ejaculation. Nine women reported substantially larger amounts of fluid.

## **Discussion**

Responses from this inquiry show that ejaculation and orgasm are not simultaneous for some women. Ejaculation occurs at different times in the arousal cycle for different women. This has previously been reported by Zaviacic

et al. (1988); this research project supports at least three of my findings. In this laboratory study of ten ejaculating women in Czechoslovakia, four women repeatedly ejaculated but did not show any classic signs of orgasm as observed by two attending physicians. These participants also did not self-report orgasm and stated that ejaculation was not the climax of their sexual response. It may be more advantageous to view ejaculation as an independent event rather than a certain type of orgasm.

Other responses from participants in this study were in agreement with Zaviacic's laboratory study (Zaviacic et al. 1988; Zaviacic 1999). Each of the ten Czech women had at least four sessions where they were stimulated to fluid expulsion (ejaculation) and/or orgasm. At least two doctors attended each session. After the four sessions, the women were grouped as "relatively hard to induce expulsion", "easy to induce expulsion", or "intermediate". These same groupings are possible in this Wisconsin study.

As described by my respondents, clitoral stimulation seemed most likely to bring on ejaculation. Only two out of the 13 respondents reported ejaculation and orgasm to occur from vaginal stimulation only. They also did not report G-spot stimulation or deep vaginal stimulation as causing ejaculation, which may mean that stimulation of the vaginal introitus is sufficient for these two women. Four respondents spontaneously mentioned deep vaginal or G-spot stimulation in their responses. When this was concurrent with clitoral stimulation, orgasm and ejaculation were likely to occur. The findings from Zaviacic's laboratory study support that the type of stimulation that induces fluid expulsion varies (Zaviacic et al. 1988). In each of the three expulsion groups, some participants preferred vaginal stimulation only to reach orgasm, while others wanted clitoral stimulation only. Other women desired both areas to be stimulated to reach orgasm and/or ejaculation. Also not all women experienced orgasm upon ejaculation. Some of the Czech women did not reach orgasm in the laboratory setting although they did ejaculate fluid several times with repeated stimulation. These findings support the experiences reported by women in this study.

Women reported differing amounts of fluid released during a "typical or usual sexual episode". An episode may include more than one orgasm or period of stimulation and ejaculation. Women reported both small and large amounts, although most women reported large amounts. This may have been influenced by the original phrasing of the study advertisement, "women who regularly experience the release or gush of fluid around the time of orgasm". Nevertheless, the differing amounts of fluid described are consistent with the reports of other authors. Belzer estimates 10 ml (Belzer et al. 1984); Goldberg from 3 to 15 ml (Goldberg et al. 1983); Bullough 3 to 12 ml (Bullough et al. 1984); and Heath from 30 to 50 ml (Heath 1984).

No research has been done in this area for over 20 years, and we still do not have an answer satisfying to most sexologists as to what female ejaculate fluid is or where it is manufactured. While small amounts of fluid may be produced by the female prostate, logic tells us that large amounts of fluid must be stored and released from the bladder. Copious amounts of fluid must be produced by an organ. Yet most women in this study report that their ejaculate is dissimilar to their urine. Several

report emptying their bladder minutes prior to ejaculating and still releasing large amounts of fluid. Based on previous research it is most likely that female ejaculate is composed of different combinations of arousal fluids for most women, with the possibility of added urine for some (Whipple and Komisaruk 1991). Until the appropriate laboratory studies are done, this may be the most practical operational assumption.

## Conclusion

For the most part this study highlights what we do not know about female ejaculation. It indicates several trends that may be of interest to sexologists and physiological researchers. The distinctive patterns in age of onset are deserving of further inquiry. Physiological changes may be responsible or it may have more to do with reaching a particular level of arousal, or a certain amount of intrapersonal safety and comfort. While I asked the age when sexual activity began, I did not inquire about the quality of sexual relationships in women's lives at the time they began experiencing ejaculation.

Overall, it is the effect of ignorance about female ejaculation that should arouse us to action, not just scientific curiosity. Ejaculation by women is not common knowledge in North America, and this is to the detriment of women experiencing it. Currently only four recently published or reprinted consumer paperbacks mention the subject (Ladas et al. 1982; Winks 1998; Chalker 2000; Sundahl 2003). Two are books that are primarily about the G-spot, and include the word in their title. As this and other research has shown (Zaviacic et al. 1988; Zaviacic 1999), these two phenomenon are not necessarily related. Continued research on female ejaculation should explore types of sexual stimulation preferred by women without assuming that the G-spot is connected to their ejaculation. This will allow for a more complete and open exploration of this phenomenon. Normalizing female ejaculation and educating the public with accurate information can lead to more satisfying sexual relations for both men and women.

More distressing to us as sexologists should be the misinformation that abounds about female ejaculation. Several "how to" books and commercial web sites have appeared in recent years. Not all of them carry accurate information about female anatomy and they commonly state that "almost all women" can ejaculate with practice. They also state that female ejaculate is not urine nor is it related to bladder function, which is still debatable when larger amounts are involved. However without accurate science to counter these claims, we lose our credibility and opportunity to enrich the sexual lives of men and women with accurate information.

Lastly, participating in this research study had a positive, educational effect for participants. Almost all women expressed their gratitude upon being offered the opportunity to share their feelings as well as their experiences. For some women, it appears to have improved their sexual adjustment.

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