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## A Study of White Middle-Class Adolescent Boys' Responses to "Semenarche" (The First Ejaculation)

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*Few empirical studies focus on how boys respond to puberty. This paper presents the results of a questionnaire and interview survey of 36 white middle class adolescent male camp counselors (mean age, 18.4 years) that address pubertal changes and first ejaculation ("semenarche"). It is a descriptive and hypothesis generating study. The first ejaculation, biologically significant in sexual and reproductive functioning, was found to be psychologically meaningful but socially invisible. The mean age at semenarche was 12.9 years. All of the boys in the group had sex education in school, yet many felt unprepared for their first ejaculation, which occurred earlier than they expected and before formal education. Those who felt prepared expressed more positive feelings and coped better. Common responses to semenarche included surprise, curiosity, pleasure, and confusion. Most subjects did not tell anyone that this event occurred and many boys initially confused ejaculation and urination. The association of the first ejaculation with sexuality makes it a charged even psychosocial and developmental difficulties in sexual education for young males are noted.*

### INTRODUCTION

The male experience of the first ejaculation has received little research attention. This invisibility is reflected in the lack of a generally ac-

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cepted term in the English language for the event. "Semenarche"—a word meaning the beginning of semen—is a logical term for the first ejaculation (Sarrel, personal communication, 1987).<sup>3</sup> This paper uses this designation and suggests the common adoption of this term as a name for the first ejaculation.

Research interest in male puberty and the significance of the first ejaculation has focused on biology (Kinsey, 1948; Tanner, 1971; Richardson and Short, 1978; Hirsch, 1988)—the psychological and social components of this phenomena have not been adequately addressed. This deficiency is found both in standard textbooks of psychiatry (Kaplan and Saddock, 1989) and pediatrics (Behrman, 1992) and in the psychoanalytic literature. Yet there are indications that semenarche is an important event.

Kinsey *et al.* (1948) concluded from his retrospective study of 4590 men that the first ejaculation was "the most significant of all adolescent developments" and stated that "the newly adolescent boy's capacity to ejaculate, [and] his newly acquired physical characteristics of other sorts, do something to him which brings child play to an end and leaves him awkward about making further socio-sexual contacts." A questionnaire study of 146 male college students (Shipman, 1968) suggested that semenarche was an important and frightening experience because sex education for boys was inadequate. In contrast, Gaddis and Brooks-Gunn (1985) concluded from a small interview study of 13 adolescent boys that the first ejaculation was not as traumatic as previously reported.

This paper presents a descriptive and hypothesis-generating study of adolescent male camp counselors to determine how they remembered the experience of semenarche and other changes of puberty, and how their education and interaction with family and peers contributed to their understanding of pubertal changes.

## METHOD

Thirty-six white, middle-class, Jewish male camp counselors ranging in age from 15.7 to 21.5 years (average age of 18.4 years) enrolled in this study. This corresponds to 98% participation by the male counseling staff at this private camp. A written questionnaire was followed by a 45 minute audiotaped semistructured interview (with JS). The questionnaire served as an introduction to the topics that were more explicitly discussed in the

<sup>3</sup>Shipman (1968) proposed that the first ejaculation be named either "primus ejaculatus" from the Latin or "spermarche" from the Greek. The latter term is used most commonly but is inaccurate, since "spermarche"—the appearance of sperm (using spermaturia as a marker)—occurs *before* the first ejaculation (Richardson and Short, 1978; Hirsch *et al.*, 1988).

interview. Using both research tools provided a measure of intrasubject reliability—questions in the questionnaire and interview were parallel responses were consistent when compared (except for one exception described below). The research tools included questions regarding physical changes that accompanied puberty, education and sources of information about puberty, and psychological and social responses to these changes. Fearing that parents might consider this an explicit introduction of sexual topics, camp officials excluded campers aged 10–14 years from the study. Subjects were informed about the study by the camp director who presented it as a survey study of how boys experience the changes of puberty. They were interviewed individually in a private setting by a researcher who had been a former camper and counselor at the camp. Each discussion signed a release assuring confidentiality.

## RESULTS

### Age at Semenarche

When asked how old they were when they had their first ejaculation most subjects initially claimed not to remember (responded "don't know" on the questionnaire, or answered "I don't know" in the interview). Fifteen subjects left the question blank on the questionnaire. When restated in the interview as "What grade were you in?" and when more specific questions about context were asked, *all* remembered the circumstances of this event (although 2 still did not remember their age). The average age was 12.9–15 years.

### Context of Semenarche

Semenarche occurs in a number of different contexts—such as during sleep (nocturnal emission), masturbation, or in sexual activity with another person. In interview data, a wet dream was the most common context for semenarche (20 boys) and masturbation was the next (13 boys). In contrast to the agreement on other questions, there was a discrepancy between subjects' answers to this in the interview and on the questionnaire. These subjects reported on the questionnaire that semenarche occurred during masturbation, but in the interview as a nocturnal emission. These subjects discomfort during the interview was rated high by self-report and by the interviewer, and these subjects provided few descriptive details. This suggests that masturbation may be a more common context for semenarche

than is reflected in the interview data. Three subjects experienced semenarche during heterosexual activity—2 having intercourse, one engaging in petting. No subjects reported that their first ejaculation occurred during homosexual activity.

### Response to Semenarche

Subjects were asked to rate the extent to which they experienced 22 feelings at semenarche (Table I). A 4-point scale (*not at all, a little, somewhat, a lot*) was adapted from Gaddis and Brooks-Gunn (1985). The final two categories (*somewhat* and *a lot*) were reported as "a lot" to facilitate comparison with Gaddis and Brooks-Gunn, who did the same. In the interview, subjects were encouraged to elaborate on any strong feelings that

Table I. Experience of Positive and Negative Feelings at Semenarche (Interview Data)<sup>a</sup>

| Feeling          | Percentage |            |          |       |
|------------------|------------|------------|----------|-------|
|                  | Mean       | Not at all | A little | A lot |
| Positive feeling |            |            |          |       |
| Positive         | 2.4        | 28         | 14       | 58    |
| Prepared         | 2.6        | 17         | 25       | 58    |
| Pleasurable      | 2.4        | 36         | 8        | 56    |
| Grown up         | 2.2        | 39         | 17       | 45    |
| Excited          | 2.1        | 33         | 31       | 36    |
| Glad             | 2.0        | 39         | 28       | 34    |
| Relieved         | 1.9        | 42         | 25       | 34    |
| Happy            | 1.8        | 44         | 33       | 22    |
| Proud            | 1.5        | 61         | 28       | 11    |
| Negative feeling |            |            |          |       |
| Surprised        | 3.0        | 14         | 11       | 75    |
| Confused         | 2.4        | 33         | 14       | 52    |
| Embarrassed      | 2.0        | 47         | 25       | 27    |
| Out of control   | 1.7        | 64         | 14       | 22    |
| Upset            | 1.4        | 75         | 11       | 14    |
| Dirty            | 1.4        | 81         | 6        | 14    |
| Scared           | 1.5        | 64         | 25       | 12    |
| Disgusted        | 1.5        | 67         | 22       | 12    |
| Unhappy          | 1.3        | 78         | 17       | 6     |
| Painful          | 1.1        | 92         | 6        | 3     |
| Angry            | 1.1        | 94         | 6        | 0     |
| Ripped off       | 1.0        | 97         | 3        | 0     |

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they may have had. Representative and interesting anecdotes are presented below. Many reported having had strong feelings (rarely negative) at their first ejaculation. The qualitative aspect of their response and conflict were more evident in the interviews:

*My wet dream was kind of an experience that I didn't experience. It had nothing to do with my mental attitude. I was sound asleep. I woke up the next morning and my sheets were pasty—I slept through it—After you wake up your mind is kind of happy and then you realize 'on my god, this is my wet dream.' (Emphasis added)*

Seventy-five percent of the subjects reported feeling surprised (they were so young when their first ejaculation took place and at the physical intensity of the first ejaculation. The extent to which a subject felt "surprised" was strongly correlated with feeling confused (Pearson  $r > 0.60$ ,  $p < .001$ ), embarrassed ( $r > 0.52$ ,  $p < 0.001$ ), scared ( $r > 0.61$ ,  $p < 0.001$ ) and out of control ( $r > 0.68$ ,  $p < 0.001$ ). Many of those who felt "surprised" also felt unprepared ( $r > 0.52$ ,  $p < 0.001$ ). "Surprised" did not correlate with "pleasure" or "happiness."

Subjects whose semenarche was a wet dream were more likely to initially confuse semen with urine. Eleven subjects (31%) reported that their first ejaculation reminded them of "urinating" or "wetting the bed."

*It took kind of awhile to click in—later in the day I finally figured out what the hell was going on. I thought I had pissed in my pants at first!*

*It reminded me of peeing in my pants—that was my first reaction even though I'd never done it.*

Subjects whose first ejaculation was during masturbation remembered more pleasure (two-tailed  $t = 3.71$ ,  $df = 31$ ,  $p < 0.05$ ) and happiness (two-tailed  $t = 2.08$ ,  $df = 31$ ,  $p < 0.05$ ) than did subjects whose first ejaculation was during a nocturnal emission. The latter, however, did not express more negative feelings. The data suggest that the source of difference was conscious experience of an orgasm that accompanied masturbation.

Boys who experienced their first ejaculation while masturbating commented:

*My parents had these videotapes. I knew they were X-rated and I really wanted to see them. My parents were out of town. I knew they were hidden in their closet. I threw them in. I thought 'this is very interesting' and the next thing I knew—Bam—I honestly didn't know what I was doing.*

*I think I was trying to masturbate—I didn't really—it was—the actual ejaculation came as a surprise—I knew what I was doing but didn't know what would hap-*

I was in my bed—I really didn't know what I was doing—just touching myself. I was at the point where I knew it would happen but I was confused—I really didn't know what was going on and was embarrassed because of it.

A boy who woke up after a nocturnal emission remembered:

I didn't know what it was so I blew it off, since the rest of the mornings I woke up normal. I thought I was just nervous or something.

Sixty-seven percent of the subjects remembered feeling curious, wondering how they could make the ejaculation happen again, when it would happen again, and if it would be different with a girl. This boy expresses that sense of wonder:

I was curious to see—I wasn't expecting to have sex or anything. It was just generally—I didn't know exactly how—would it happen again? It had never happened before.

In interviews, the strongest negative responses were related to embarrassment and feeling out of control, especially to less prepared subjects.

I was alone but I was very embarrassed because I was out of control. That was my major feeling—I was worried it would happen again. I put it together about a week later when I did it again. Then I figured it out. (Emphasis added)

The association with urination may also contribute to the sense of being out of control—some boys had expected ejaculation, like urination, to be under voluntary sphincter control. "I thought it was just like peeing."

I thought it would happen when I wanted it to, that I'd have control over it. I was scared about the loss of control. (Emphasis added)

The most stressful experience of semenarche, and the only one that was described as "painful," was that of a boy whose first ejaculation (at age 17) was with a woman. He was embarrassed about not having control over his body in the presence of another person.

It was a lot painful. It hurt. I don't know why. That's what I remember. It was enjoyable to have it done, not physically. I was just glad I got it over. The pain was indescribable.

In contrast to that subject's experience, many of the subjects described the experience as pleasurable:

Well at first I felt really—like it was weird cuz I had never felt that way before. But after a little bit it was—pleasurable. It was good—it felt good—You just have to feel it for yourself."

Some subjects, however, reported feeling uncomfortable with the unexpected intensity of the pleasure that they felt at the first ejaculation.

### Education

Classes at school were the most common source of information about puberty in general. Nearly all of the subjects completed "health education courses in fifth or sixth grade, and continued their education about physical development and human sexuality well into high school. In spite of having an extensive health and sex education curriculum, more than one-quarter of the boys recalled that classes failed to explain ejaculation. In the class that did discuss ejaculation, the topic was postponed until the eighth grade after many boys had already experienced their first ejaculation. The boys remembered that teachers put emphasis on informing students that pubertal changes were "normal" and "healthy." The subjects' responses reflected this focus, as many subjects described their first pubertal changes as a sign that they were "normal."

One boy whose semenarche was during masturbation at age 12 pressed these complicated feelings:

It didn't make me feel proud. It made me feel guilty, like I'd done something wrong. Those kind of feelings—The class didn't say anything. I still think it's something I shouldn't do—My only relief was that I was normal. (emphasis added)

Another boy whose semenarche was a nocturnal emission described a predominant sense of relief at being normal:

I woke up the next morning and noticed the wetness. I felt relieved. I expected it. I mean, people talked about it and the classes—sex ed—told about what happens and it happened. It's a normal thing—I didn't have much emotion attached to it. I felt prepared for it, but I never expected it—I didn't want anyone to know—I was glad that it happened. (emphasis added)

The only late-maturer in the study expressed this sentiment (relief being normal) most strongly.

Forty-two percent of the subjects felt unprepared for semenarche. "Prepared" subjects reported feeling more "proud" and "positive" (tailed  $t = 3.02$ ,  $df = 34$ ,  $p < 0.005$ ); "Unprepared" subjects, stronger negative feelings—more "confused" (3.87, 34,  $p < .001$ ), "upset" (4.87, 34,  $p < 0.001$ ), "scared" (3.18, 34,  $p < 0.005$ ), "disgusted" (3.43, 34,  $p < 0.01$ ), "out of control" (2.70, 34,  $p < 0.02$ ).

For example, one boy stated:

I'm almost positive that it was a wet dream. The problem was that I didn't know what it was. It was just so—I never knew what it was. I was surprised I wet my bed—what did I do? I only found out a year later what it was.

Only one-third of the boys considered parents important sources of information about ejaculation. For those, this topic was usually discussed in father alone or both parents together—in one case information about ejacu-

lation was provided by a mother alone. Conversations about semenarche after it happened were rare. Only 2 subjects told their mother or father that their first ejaculation had occurred. Most boys were very secretive:

For the first time I knew something that they [parents] didn't—it was a private thing that nobody else knew.

Boys often hid the evidence of a nocturnal emission by changing the sheets themselves (some even performed midnight laundering). Others assumed their parents knew but did not mention it directly:

My mom, she knew I had them. It was all over my sheets, and bedspread and stuff, but she didn't say anything, didn't tease me and stuff. I was kind of glad. She never asked if I wanted to talk about it—I'm glad. I never could have said anything to my mom.

I don't remember when it happened or how old I was, but I didn't tell anyone. My friends, we didn't talk about it, but if it came up, you know we always played these games—'So have you done this, so have you done this, so have you done this—I would say I had. But I didn't say 'By the way mom, my bed is wet.' I mean, I knew what an ejaculation was, and I knew that I hadn't wet my bed.

When a boy did tell someone, it was usually a friend. The boys' descriptions reveal more about the fragmentary quality of this kind of discussion with friends:

Before it I remember being in the boy's locker room at school and my friend telling me about having a wet dream and he said 'Oh, everyone has it' and I remember thinking and I remember lying and I remember experimenting with masturbation after that.

While it was going on no one wanted to say anything about it. We all kind of left it alone—After it happened and we knew what was going on, we laughed about it with friends. Laughed at guys' penises, you know.

I had no idea what—I had no idea what was happening—it just hurt and I said 'I gotta go,' so I found my friend and said 'I gotta talk to you' and it just went from there. He made me feel better—I was embarrassed about telling my friend—it just really hit me. I just told him. I didn't hold back cuz I wanted to know what was happening. I said 'I wanna know what happened.' He said 'Oh yeah, you came,' and I felt happy after that, glad it happened.

### Pubertal Events

Seventy-eight percent of the subjects stated that the appearance of a pubic hair was a memorable signal that puberty had started.<sup>4</sup> However, as a group they felt that neither this biological change nor any other was in

<sup>4</sup>This is in accordance with Tanner's Developmental Stage 2, when pubic hair first appears (Tanner, 1971). Reddening of the scrotum and enlargement of testes and scrotum, also occurring in Stage 2, were not mentioned by any subject.

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itself a symbol for their change in status and self-perception. A few boys like this one did assert the importance of the first ejaculation:

The next morning I felt really gross—I knew what it was. I don't think it was pleasurable—I was embarrassed. I don't know, I just remember being in my bed and feeling that I had just—I knew I didn't wet my bed. I mean, I felt weird that this change had just happened—it was pretty major. (*Emphasis added*)

Less than 40% felt that the first ejaculation was important. More of them asserted, like this boy, that

The things that I really remember are the things that I did sexually.

The events (Table II) that were most meaningful for this group were social—"making out" was very meaningful for 89%, "dating" for 83%, and "Bar Mitzvah" for 72%.

Only 10 subjects (28%) felt it was noteworthy that after the first ejaculation they were physically able to "get a girl pregnant." Most report that they rarely considered the possibility that they could father a child. Their confusion is evident in their words:

I never thought about getting a girl pregnant. I knew biologically that I could father a child.

Table II. The Significance of Social and Physical Events (Interview Data)<sup>a</sup>

| Feeling                | Percentage |            |          |       |
|------------------------|------------|------------|----------|-------|
|                        | Mean       | Not at all | A little | A lot |
| Physical event         |            |            |          |       |
| Develop pubic hair     | 2.9        | 8          | 14       | 78    |
| Growth spurt           | 2.8        | 8          | 31       | 61    |
| Growth of penis        | 2.5        | 11         | 28       | 61    |
| Develop facial hair    | 2.5        | 19         | 25       | 56    |
| Develop acne           | 2.3        | 33         | 22       | 45    |
| Voice change           | 2.3        | 25         | 33       | 42    |
| First ejaculation      | 2.3        | 19         | 42       | 39    |
| Develop axillary hair  | 2.1        | 22         | 44       | 34    |
| Growth of testes       | 1.9        | 31         | 44       | 25    |
| Social event           |            |            |          |       |
| Making out             | 3.3        | 8          | 3        | 89    |
| Dating                 | 3.2        | 6          | 11       | 83    |
| Bar Mitzvah            | 3.0        | 14         | 14       | 72    |
| Shaving                | 2.7        | 17         | 17       | 66    |
| Using cologne          | 2.2        | 25         | 39       | 36    |
| Change nudity practice | 2.1        | 31         | 36       | 33    |
| Showering              | 1.9        | 44         | 28       | 28    |
| Using deodorant        | 1.9        | 39         | 36       | 25    |
| Wearing jockstrap      | 1.8        | 50         | 28       | 22    |

<sup>a</sup>N = 36. A 4-point scale was used, such that (1) *not at all*, (2) *a little*, (3) *somewhat*, and (4) *a lot*. The percentage of subjects who responded "somewhat" are included above in "a little."

## DISCUSSION

The subjects comprised a homogeneous sample of boys with similar religious, educational, and socioeconomic backgrounds. They were socially well adjusted enough to be chosen as camp counselors. Because participation was high, this well-defined population can be compared to others, but cannot be used to generalize about other demographic groups. As in all retrospective studies, experiences subsequent to target events may have influenced memories of the event in an unquantifiable manner (recall bias). The average time since semenarche for our subjects was  $5.5 \pm 0.9$  years, so it relied more on memory than the study of young adolescent boys conducted by Gaddis and Brooks-Gunn (1985). Although both of these study samples were small, the higher participation rate (90%) and larger sample size (36) suggest that this study had less selection bias than the study by Gaddis and Brooks-Gunn (1985, 62% participation, 13 subjects). Given these limitations, the study is meant to be descriptive and hypothesis generating.

The results were consistent with the descriptions of the events that signaled pubertal onset in the populations studied by Kinsey *et al.* (1948) and Tanner (1971). The average age of semenarche in Kinsey's study was about a year older, 13.88 years. Adolescent boys experience strong, but rarely negative feelings at semenarche, including surprise, confusion, curiosity, and pleasure. The conscious experience of orgasm allows those who experience their first ejaculation by masturbation to feel more "pleasure" and "happiness." Although boys whose first ejaculation is during a wet dream do not report more negative feelings, they more often confuse semen with urine, at least initially. Boys rarely discuss their first ejaculation and usually hide the evidence. Semenarche is not a socially recognized event and adolescent boys deny attaching much significance to it, especially in light of later sexual experiences.

The first ejaculation, biologically significant in sexual and reproductive functioning, is socially invisible. Thus, semenarche is not comparable to menarche as a significant symbolic developmental milestone. The lack of a name for the first ejaculation contributes to making this an invisible event and parallels the failure to label adequately the female external genitalia (especially sexual structures) in the education of girls (Lerner, 1976). The connection of the first ejaculation with sexuality makes it a charged event.

Despite sex education and hygiene classes at school and some parental input, many of the boys in this group felt unprepared for their first ejaculation, which occurred earlier than they expected. Education, including a specific discussion about ejaculation before semenarche occurs, can posi-

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tively influence how boys experience pubertal transformation. Those who were prepared coped better, in contrast to the subjects interviewed by Gaddis and Brooks-Gunn (1985) and in agreement with Shipman's study (1966).

In view of the current crisis in the prevention of AIDS and unwanted pregnancies, the data from this study raise many questions about how to educate boys about puberty and when to provide information. Educational programs regarding semenarche frequently occurred *after* the boys had already experienced the event, so earlier sex education is clearly needed. In addition, emphasis should be placed on the fact that many boys are fertile at before semenarche (Richardson and Short, 1978; Hirsch, 1988).

The difficulties in sexual education for preadolescents are many:

Frequently, newly provided sexual information seems to be promptly forgotten. At times this rather amazing phenomenon may be due to a feigned ignorance in the service of secrecy, out of uneasiness with the subject matter or compliance with the cultural double standard. Frequently, though, it represents a genuine, unconscious denial of anxiety-producing knowledge. ("Normal Adolescence," 1968, p. 792).

In addition, a boy's ability to understand the physical changes of puberty is limited by his cognitive ability, which is usually still at the concrete, early formal operations stage (Piaget, 1972) when he experiences his first ejaculation. Sigmund Freud (1895/1959a, 1895/1959b) pointed out how persistently adults, particularly parents, avoided acknowledging childhood (adolescent) sexuality. This observation is still accurate and is reflected in the boys' reports and in the paucity of empirical studies of childhood sexuality.

One boy suggested an approach to this problem in terms of a favorite series of childhood picture books:

I would describe it [puberty] as "Curious George."<sup>5</sup> Because you really don't know what's going on unless you really get it explained by somebody who doesn't have a bias on it, I always really liked Curious George—he always wants to find out more about things he shouldn't, and that's what puberty is. (Emphasis added)

This empirical survey study of a well-defined population of normal adolescent boys suggests that although the first ejaculation is not traumatic for the majority of boys, it is a memorable, highly charged event that less anxiety producing if there has been prior education. There is a need for both prospective and retrospective studies documenting the experience of semenarche in other ethnic and socioeconomic groups in order to delineate the impact of this event upon subsequent psychosocial development and to clarify how best to respond to boys' curiosity in preparing them for puberty.

<sup>5</sup>Curious George refers to a series of children's picture books (Rey, 1941) that recount the adventures of a "good little monkey" who is "always very curious."

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## Adoptees' Portrayal of the Development of Family Structure

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*Young adult adoptees and nonadoptees provided retrospective accounts of family relationships from infancy to young adulthood. Adoptive families were portrayed as more cohesive and adaptable than nonadoptive families. Adoptive fathers were recalled as being closer to their children than were nonadoptive fathers in the years preceding adolescence. Within the same time frame, adoptive mothers were drawn in a less hierarchical relation to their children than were other parents. Also, while adoptive males saw themselves as presently more connected to their adoptive parents, adopted females perceived themselves more connected to their parents in the present than any other period of time. Openness of communication and acknowledgment of difference in adoptive family formation varied with graphic retrospective accounts. Results were considered in terms of discontinuities between reported observations of adoptive families and adoptees' personal reflections on family developmental history.*

### INTRODUCTION

Much of the research on adoption has focused upon the evaluative by significant others of the adoptee and the adoptive experience (Bro-

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