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AUSTRALIAN DEVELOPMENT ASSISTANCE BUREAU RESEARCH FOR DEVELOPMENT SEMINAR
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LAY CONCEPTS OF REPRODUCTIVE PHYSIOLOGY RELATED TO
CONTRACEPTIVE USE: A METHOD OF INVESTIGATION

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IUSSP Seminar on Micro-Approaches to Demographic Research

Australian National University

Canberra, Australia

3 - 7 September 1984

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EXTENSIVE AND INTENSIVE METHODS OF INVESTIGATION

Knowledge about relatively safe and effective methods of contraception are widely known in some countries. The proportion of the adult population with this knowledge can be quickly known using questionnaire survey methods. Some countries also have family planning services which provide good coverage of the population. Coverage can be known by looking at Ministry of Health statistics and verifying them by some direct observations of clinics and their function. Although knowledge and coverage in a country may be good, actual utilization rates are sometimes low. A significant proportion of women in their reproductive years have never used contraceptive services, or of those who have ever used them, some use contraceptives sporadically and ineffectually. In such a situation, the survey questionnaire is usually not an adequate data collection technique for understanding why women are making particular choices.

Intensive qualitative methods are of two types: sociological and cognitive. Sociological investigations measure behaviour affected by social structures such as class or family type. Sociological studies, for example, would seek to understand if women of a particular class, caste, ethnic group, age group, or other social category are being left out of services and educational opportunities. Sociological investigations might also attempt to answer more subtle questions. For example, why are a significant number of women seeking high-risk late term abortions in a country where abortion is illegal except on medical grounds? A possible reason in countries where marriage rates are low (usually with concomitant high male unemployment) is that only by becoming pregnant can a woman test the "baby father's" promise of financial support. Should he renege, then an abortion may be preferred by the mother to solitary support of another child.

Investigations into the conceptual domain are also necessary. This paper gives a technique for exploring the cognitive system of a sample of women. What images and concepts do they have of their bodies, and how do they think the pill, an intra-uterine device, Depo-Provera, or other methods actually work? Their lay concept of reproductive physiology will affect the way they actually use or do not use contraceptives.

This method of cognitive analysis was developed in a study of 300 urban and rural Jamaican women in 1983 and 1984. It was also tested on a small sample of 1) women attending health centres in central Sudan, 2) American undergraduates reading anthropology, 3) British undergraduates reading social anthropology, and 4) British second year medical students.

METHODS: A JAMAICAN EXAMPLE

Interviews were structured by a schedule of open-ended questions, and an outline drawing of a matronly female figure. Interviews were conducted in a conversational rather than a formal style. Questions could be put in a variety of ways, interspersed with a good deal of small talk and even jokes. The object was 1) to put women at ease, 2) let them know we understood and were interested in their concepts, and 3) we were not looking for medically

correct responses only. Thus, when a woman said she could not remember the biology she had been taught in school, we reassured her that we were not school examiners but were only interested in what she thought her own body was like inside. We were careful not to ask leading questions that would pre-suppose a medical textbook type of answer. For example, from my previous work in Sierra Leone I knew that many women did not think of the uterus as a bag, but visualized the vagina/uterus as a central tube, sometimes open at both ends. Therefore, we did not say "please draw your uterus (womb)", but "please draw the place where the baby grows".

The quality of interviewers is crucial to the success of this type of investigation. They must be intelligent, have a degree of social grace, be interested in the topic, and be women - preferably mature women with children. In Jamaica, women university students, especially mature students, earning money in holidays, helped with interviewing. To minimize interviewer variation we initially did interviews together, holding a small group discussion with a woman. Then we split into pairs of interviewers and I paired with each interviewer in turn. When satisfied that we were all giving similar encouragements, had found the best way to put questions without giving offence, and all were avoiding leading questions, we began to interview singly. Each day I interviewed on site with the others. At the end of each day (or each week) I read the interview sheets to look for signs of interviewer bias.

Each interview took at least a half-hour, but with some women an amiable conversation easily went on for an hour. Because of the length of time needed for a conversation, and because of the need for the principal investigator to participate closely in the interviewing, the sample size was a relatively small 300 women. We drew part of our sample from women attending ante-natal clinics in various locations. However, that on its own did not constitute an adequate sample. It was a self-selected sample of women using health services, and might not be characteristic of the country at large. We particularly wanted to know about women who are not using health services as planned. Therefore we also sampled women who came to fruit and vegetable markets in various locations. The open markets attract a broad cross-section of Jamaican women. We had a 98% compliance rate. Two rather depressed women attending ante-natal clinic did not make drawings, and a few shoppers were too busy to be bothered. Most women found the task and concomitant conversation enjoyable.

The Interview Schedule

The interview ended with objective questions about the woman's age, the last year she completed in school, and a three-part question giving an indication of socio-economic status.² The interview began with questions that were less objective, and were easier to chat about - even joke about. For example, "Is it possible for a woman to become pregnant if she has sex while she is menstruating?" (Many Jamaicans suspect that an albino child may result.) Follow-up questions probed to see if women knew of any safe period in the menstrual month.

We offered the outline drawing by saying we were curious to know what women are like inside. "Where does the baby grow?" (Gentle persuasion to draw.) "Where does the baby egg come from?" (Jokes about whether women are like

chickens with eggs inside - or do all the eggs come from the father?) "Where does menstrual blood come from? "Why do women bleed every month?" We continued questioning in this way until the woman had made the most complete drawing she was inclined to do.

After they had finished the drawing, women were asked if they had ever used contraceptives. If they had ever used them, we asked the method(s) they had used. "Do you like the method (named) you used?" We probed for their concept of how the device or chemical functioned, and also sought any factors that might affect the social relationship between the woman and her partner. We asked what she liked about the method(s), then invited conversation about what she did not like.

To broaden the enquiry to include all concepts that might prevent a woman from ever using a method, we asked if they knew of any other methods, probing for all family planning service methods they knew about, all traditional methods, and modern non-medical lay methods. Then, one by one, we took up the methods, referred the woman back to her drawing, and asked her to explain how she thought the method worked in her body to prevent conception.

Brief Findings

The most common reason for not using, or not continuing to use, an intra-uterine device was the fear that it would become lost in the body. Figures 1 and 2 indicate the concept held by some women that the vagina and uterus are a single tube. The tube may be open at both ends (figure 2). Thus women tie a binder below the breasts in late pregnancy and perhaps in birth 'to keep the baby from coming up and choking me', or 'to keep the placenta from coming up'. To insert a coil in this tube is to risk it drifting upward, becoming lost in the body.

An equally frequent complaint was that the coil caused pain to the woman and her partner. Virtually every woman who knew about the coil drew it in the vagina (figures 3, 4 and 6). They thought of it as a blocking device that kept the sperm from entering the uterus. Therefore women readily acquiesced to their partner's complaint that the coil poked him and interfered with his pleasure.

Some women told us of their fear that the coil might enter the uterus where it would adversely affect the baby should they become pregnant. It would take space where the baby would grow, and might become implanted in the growing foetus, or block the cervix when birth began. Some women worried that if the coil did enter the uterus, it was difficult to remove, requiring an operation. Others spoke of it causing pain and pelvic infection which might lead to blocked tubes and sterility.

A related complaint was that the coil caused an unpleasant smell. The only aspect of the coil they actually saw was the strings hanging down, like the strings of a tampon. But unlike a tampon which is frequently changed, the coil remained in place for months or years, absorbing sperm, in contact with menstrual blood, but never removed, washed or changed.

A few women mentioned the coil coming out spontaneously, not being reliable,

and 75% of the women who had used the coil complained that it caused heavy bleeding.

Depo-Provera, on the other hand, caused worry because women went for months or years without menstrual bleeding. They regarded regular menstruation as a sign of good health. It is also a time of bodily cleansing, sometimes enhanced by use of a laxative at the end of the menstrual period for 'a good wash-out'. Months without bleeding also caused women to worry about permanent loss of fertility. No menstruation was interpreted as a sign that Depo-Provera had 'blocked up their tubes'. Women were also concerned about developing high blood pressure. With Depo-Provera they would have too much blood accumulating in the body if they did not menstruate a satisfactory amount every month. (In pregnancy the accumulating blood is used up making the baby, and was not therefore thought to cause a high blood pressure problem.)

Many women thought of the birth control pill working mechanically, not chemically. Pills went to the cervix and blocked the sperm from entering the uterus. But one might have too large a build-up of pills over time, so women either used castor oil at regular intervals to have a good wash-out, or stopped taking the pill for a time to allow the load of pills to reduce itself. Women also said they feared the pill 'because it caused clots'. When asked to indicate where the clots were, they replied, 'you know, the clots you have with your menstrual period'.

Women talked a great deal about their 'tubes' and the need to keep them open. We asked them to draw their tubes. For some the essential 'tube' was the same as the vagina, and the proposition to 'have their tubes tied' was interpreted as having the vagina tied, with no more sex, and a worry about menstrual flow for pre-menopausal women (figure 5).

As with the coil, women feared that condoms would come off and become lost in their body or block up their tubes and cause sterility. There was also a very widely-held fear that condoms easily burst and were therefore unreliable. Men also complained to their partner that the condom was not natural, preferring direct skin to skin contact.

When women talked of contraception being 'un-natural' some indicated that they had a specific number of eggs, and contraception could delay their development, but they might as well just go ahead and live out their destiny (figure 6). But they did not particularly object to contraception on religious grounds or regard the use of contraceptive methods in themselves as an un-natural act. Indeed, most women knew of indigenous methods of fertility regulation, such as drinking laundry blue to keep their menstrual periods from coming.

DISCUSSION AND RECOMMENDATIONS

Kingston women are interested in their reproductive health, and monitor the state of their health by noting the time, quantity, and quality of menstrual bleeding. Deviation from their normal flow caused worry and contributed to

underutilization, or irregular use, of services which provided relatively safe methods of fertility control.

Women recognized pelvic pain, inflammation, and unpleasant-smelling discharge as signs of a condition which might lead to sterility. This investigation suggests that women are confounding sexually transmitted disease with possible complications from intra-uterine devices.

When an intra-uterine device is inserted, care must be given to show what it looks like, explain where it is placed, and how it works to prevent conception. Information on prevention and treatment of sexually transmitted disease might be given at the same time. Once signs and symptoms of disease, and explanations of possible complications from the use of an intra-uterine device are described, the two phenomena may be kept conceptually distinct by women. But if careful explanation is not given, women may continue to blame contraceptives for illness and discomforts with different etiologies.

If a contraceptive might change the pattern of menstruation, care must be taken to explain why, and to reassure women that the change will not harm them or make them infertile for life. Indeed, women might come to understand that consistent use of the pill can regulate cycles and enhance potential fertility at the same time it might diminish the amount of menstrual flow. Such explanations would be given in ordinary lay language, not in medical language.

Family planning clinics are a great potential resource, where women might learn, on a one-to-one basis, about gynaecological health. The quality of interaction between staff and patients must be assessed as well as the 'efficiency' of numbers seen. In-service courses to improve staff skills in health education would probably be cost-effective.

Most women said they learned about contraception from other women, and from newspapers. Newspapers, however, often seek to increase their circulation through sensationalism. Thus women are told of the danger of stroke from using the pill, and when they see clots in menstrual blood they feel they are at risk. Newspapers might be requested to provide more informative articles, perhaps written in collaboration with physicians as some radio broadcasts are now done. Furthermore, attempts might be made to improve the practical content of health education in schools. This would help women to assess the validity of sensationalized mass media accounts.

CONCLUSION

There was little correlation between anatomically correct drawings and years of education; an old woman with the notional age of 70, who had never been to school, produced one of the most accurate drawings and explanations. In analysis of these drawings we are not interested in correctness, but in insights into what people think about reproductive function. What they think is a fact that influences actual health behaviour. Effective health education acknowledges lay concepts and seeks to bridge constructively from

the way ordinary people think, to a more effective understanding of physiological function. Furthermore, we must understand why people are not using health services as intended so that clinical practices might be improved to make them more attractive.

Notes

1 In doing a similar Jamaican study, on resort to treatment for diarrhoea in children, mothers found the digestive system much less interesting to draw or talk about. The digestive system produces waste, but the reproductive system yields a child and a degree of social power for the mother.

2 Women were asked:

Do you own or rent the place where you live?

How many rooms do you own (rent) _____?

How many people live in those rooms _____?

We then constructed a socio-economic scale based on ownership of capital and crowding. This method, however, would not work in some parts of the world - rural Africa, for example.

Figure 1

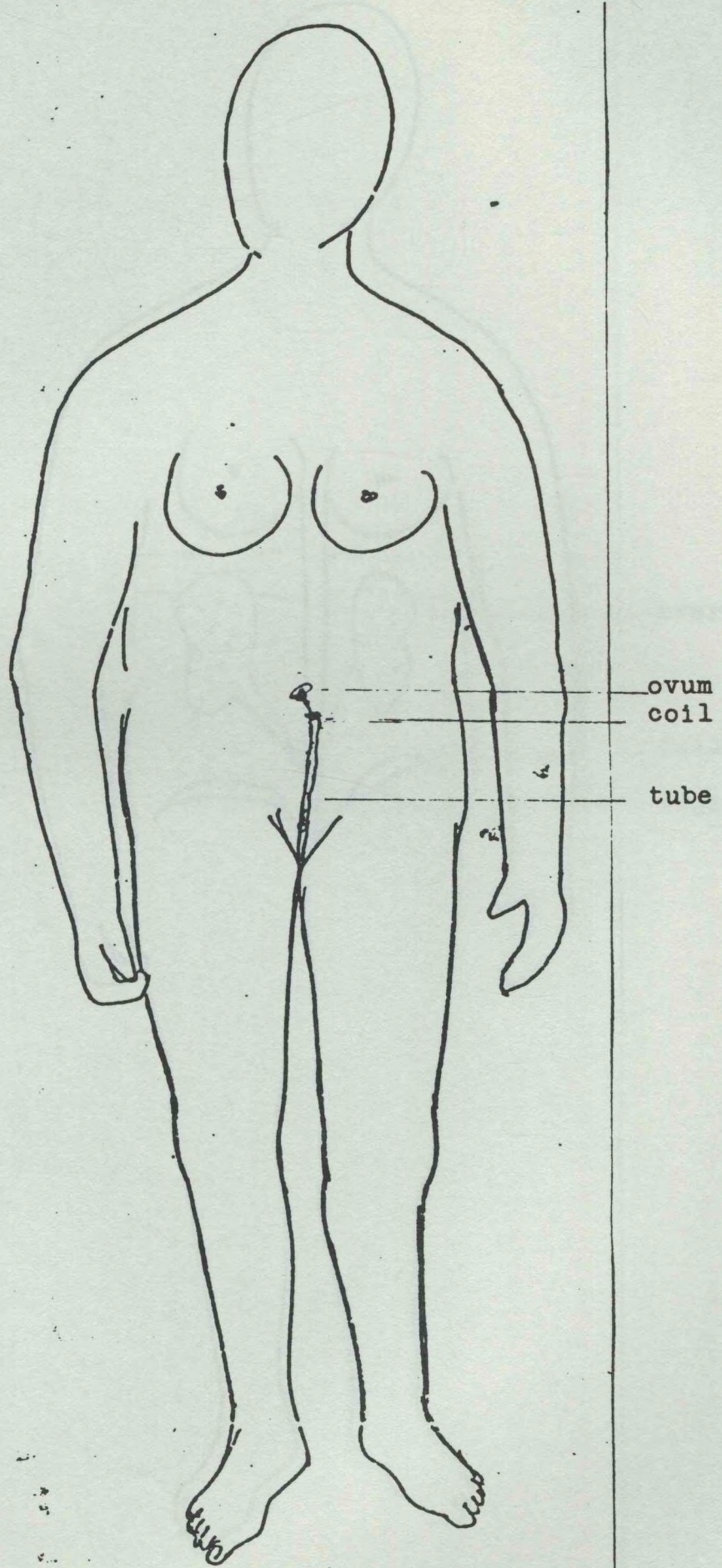


Figure 2

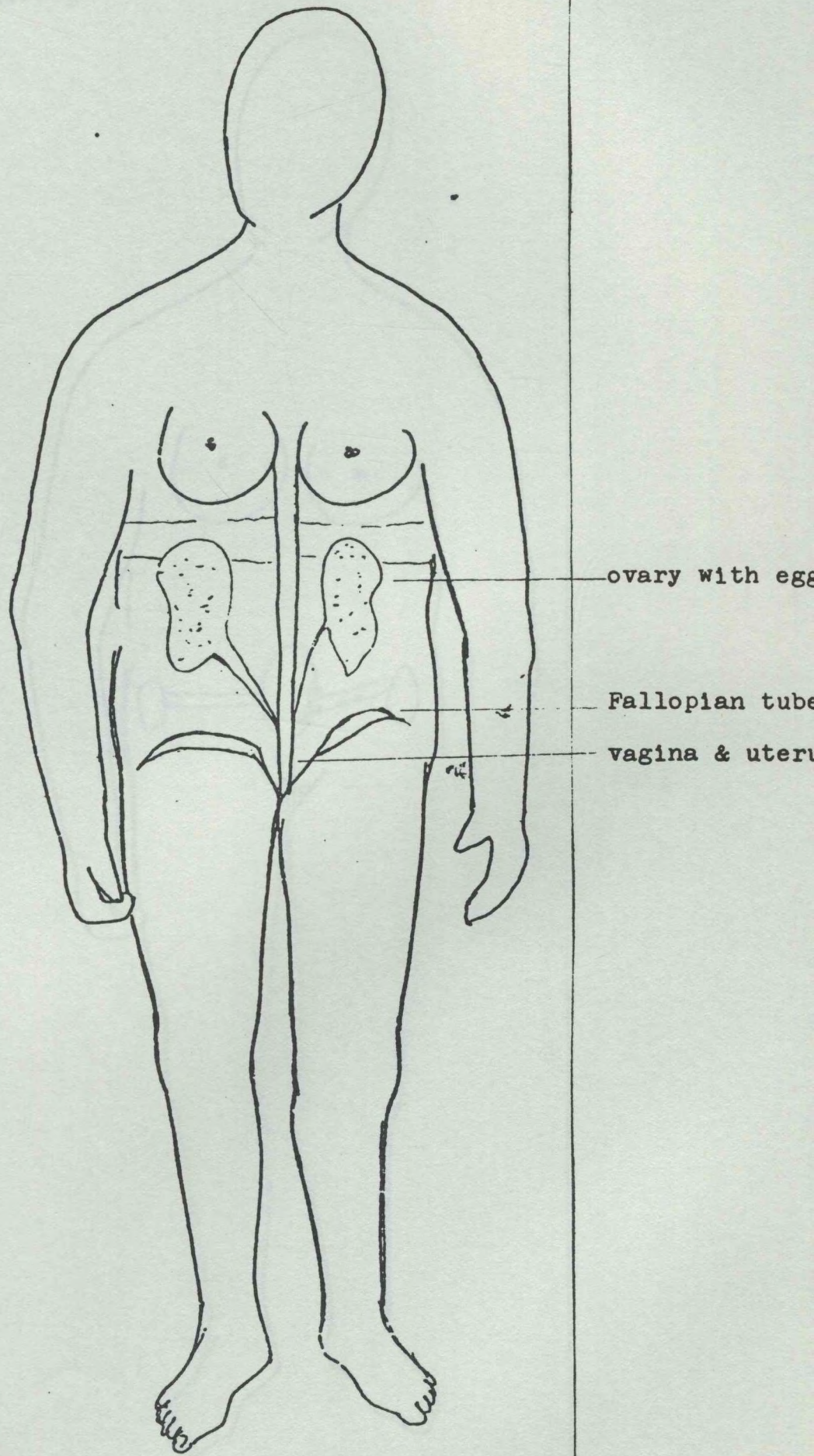
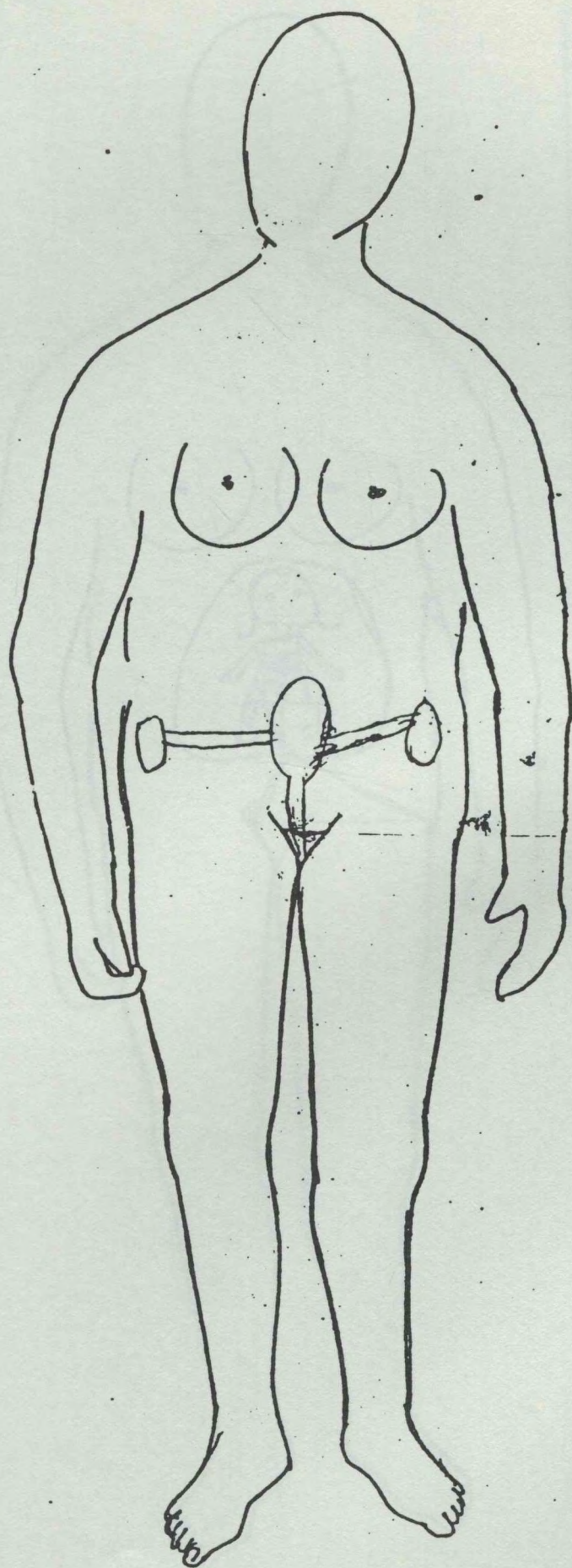


Figure 3



coil

Figure 4

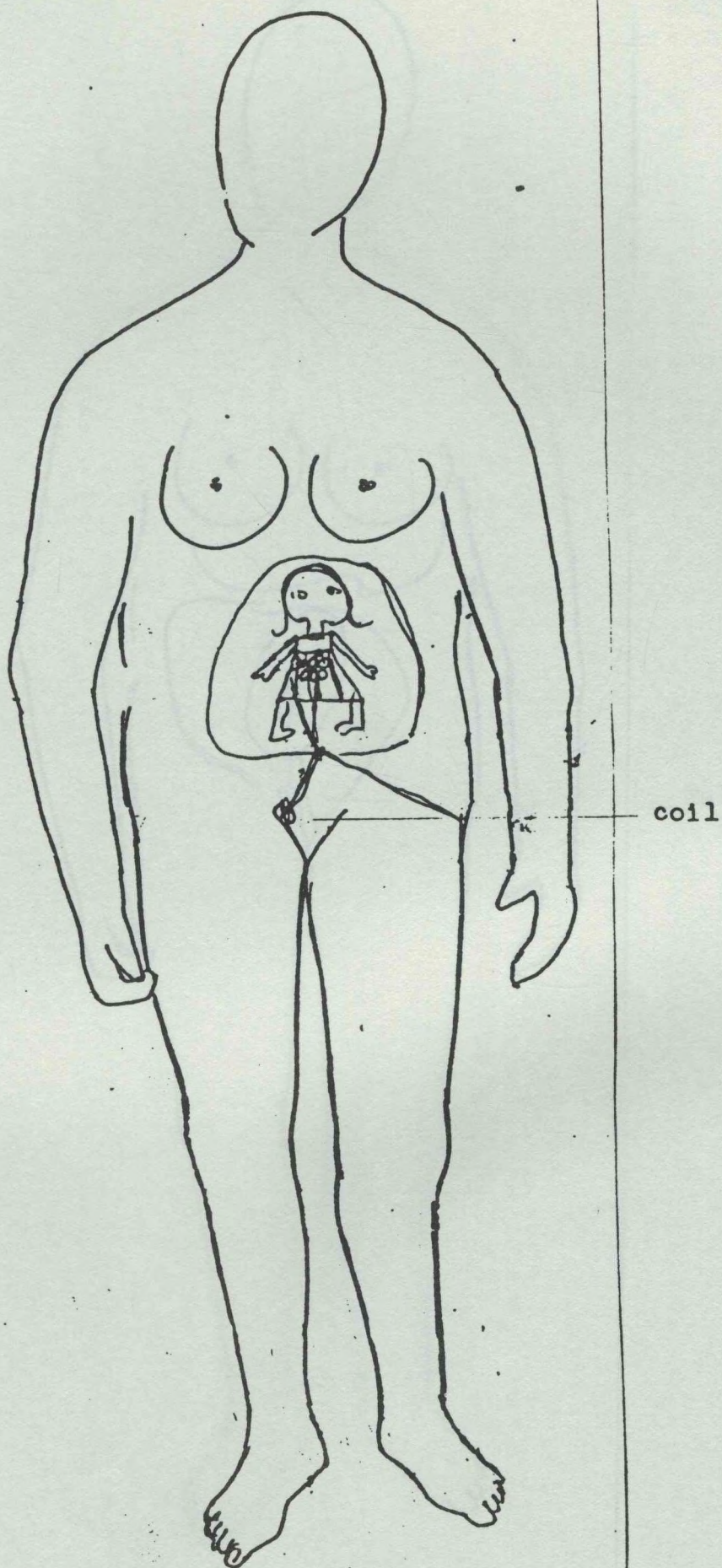
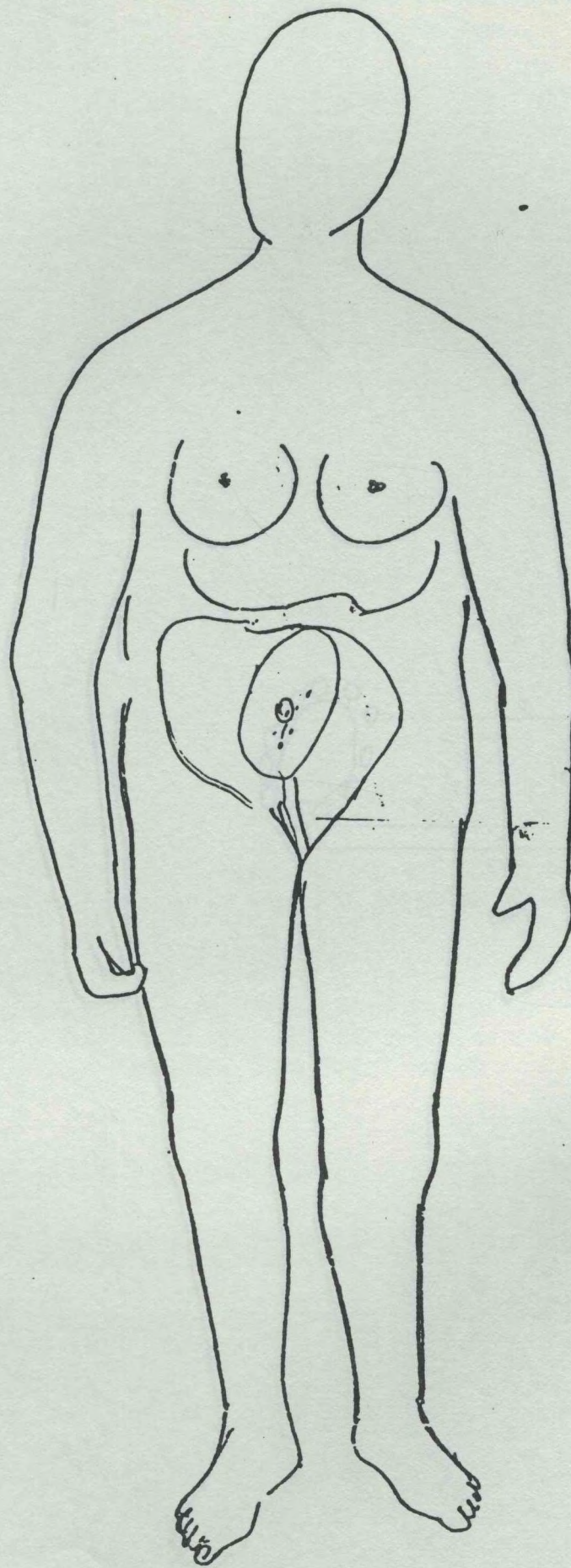


Figure 5



Fallopian
tube

figure 6

