

Concepts and measures of reproductive morbidity*



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Abstract

This paper presents a conceptual and methodological framework developed by an interdisciplinary group of researchers to diagnose reproductive morbidity at the community level. The paper also presents a determinants structure that delineates the health and social factors hypothesized to influence reproductive morbidity. The high prevalence of reproductive-morbidity conditions revealed by implementation of the study framework in two villages of Giza in Egypt is reported. Based on this research experience and the process of presenting its results to the larger professional community, the paper discusses policy implications of the study in terms of reproductive-health services, education and training programs and research efforts for measurement of reproductive ill-health at a community setting.

Introduction

The past decade has seen a growing concern with women's health in developing countries as evidenced by the safe-motherhood initiatives, and by the adoption of women's health perspectives in strategies addressing child survival, family planning and women-in-development issues. This concern has created a demand for information that can provide a diagnosis of women's health needs in developing countries. The available information base has been inadequate partly because of problems related to two main potential sources of information. First, statistics from health institutions in developing countries generally suffer from problems of incomplete coverage. This problem is particularly severe where women's health is concerned because of the lack of support for women to visit health services and of the 'culture of silence' among them regarding their health (Dixon-Mueller and Wasserheit 1991; Khattab 1992). Secondly, most population-based surveys directed at women in developing countries have largely concentrated on other issues than women's health such as fertility, contraceptive prevalence and child health.

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In this situation of scarcity, the search for information on women's health has come to rest on the most negative indicator, namely, the maternal-mortality ratio. This ratio suffers from inaccuracy and from lack of coverage in many developing countries. Nevertheless, the figures available for developing countries indicate rates of maternal mortality that are almost ten times higher than in developed countries (Abou Zahr and Royston 1991). This is alarming in its implications, but presents only the tip of the iceberg where women's health is concerned. In fact, a realistic diagnosis of this condition must be derived from development of a much wider representation of women's health that reflects the true dimensions of the problem.

A broad definition of health is given by the World Health Organization as 'a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity'. This definition takes us beyond mortality and even morbidity, but in so doing brings us face-to-face with the problem of conceptualizing health from a broad perspective. This conceptualization problem applies similarly to men's health and to women's health. It is considered a key component of the 'measurement trap' that has contributed to lack of information on women's health globally (Graham and Campbell 1990:3). Hansluwka (1985:1208) identifies four difficulties in conceptualizing health namely, 'the vagueness of the concept, the value judgement of the definer (individual or physician or family, etc.), the multidimensionality of the phenomenon and the impossibility of meaningful operationalization'. One way to overcome the problem is to adopt simplifying strategies that deal with some of these difficulties.

This paper addresses the issue of learning about women's health at the community level in the context of Middle Eastern society. Two main simplifying strategies are used to assist the conceptualization process. The first involves disaggregation of the concept of health to mitigate problems of vagueness and multidimensionality; thus only one dimension of women's health is considered, namely, reproductive health. This dimension is chosen because of its relevance to the larger program, of which this research is part, established by the Population Council office in Cairo for the West Asia and North Africa region, to look into interlinkages of child health and women's health within the context of the family and the community (Population Council 1990). The second strategy adopted involves bringing together an interdisciplinary group of researchers including health and social scientists, who would be able to view the definition of health from the perspectives of providers and of women, and who could thus develop frameworks and operational instruments that represent both perspectives.

Reproductive morbidity was considered a first priority on the research agenda set by the group for learning about reproductive health in Middle Eastern society. This paper is the first of a series of papers presenting work undertaken by the group to diagnose the magnitude of the problem of reproductive morbidity in our region. The paper emphasizes two components of the underlying research work. It presents the conceptual and methodological framework that was developed by the group to represent reproductive morbidity at the community level. It also discusses the process of collaboration of an interdisciplinary team¹, three of whom are women, and the involvement of a larger interdisciplinary audience in discussing the framework and findings of the study. The research process and the questions it raises are seldom presented in scientific publications. We find that the research process advanced our understanding of the topic under study as much as did the results, and we choose to give it prominence in this paper. In order to give due attention to substance, however, some results are presented that indicate the seriousness of the problem of reproductive morbidity in our region. Detailed analysis and

¹ The research team for this study is composed of a biostatistician-demographer (Zurayk), an anthropologist (Khattab), two obstetrician-gynaecologists (Younis and El-Mouelhy) and a microbiologist (Fadle).

discussion of results are presented elsewhere (Younis et al. 1992): here we share the contribution of the rich research experience to our knowledge of the issues surrounding women's reproductive health.

The concept of reproductive morbidity

Defining reproductive morbidity

Various conceptualizations of reproductive health (Evans et al. 1987; Germaine 1987; Fathalla 1988; Zurayk 1988) consider reproductive morbidity as inclusive of conditions of physical ill-health related to 'successful childbearing' and 'freedom from gynaecological disease and risk'. In line with these conceptualizations, we define reproductive morbidity to encompass obstetric morbidity including conditions during pregnancy, delivery and the post-partum period; and gynaecological morbidity including conditions of the reproductive tract not associated with a particular pregnancy such as reproductive-tract infections, cervical cell changes, prolapse and infertility. In addition, an interest in reproductive morbidity is also considered to encompass related morbidity including such conditions as urinary-tract infections, anaemia, high blood pressure, obesity and syphilis as a systemic condition. Obviously this framework of reproductive morbidity is based on a biomedical model of health. A discussion of this choice for representation of health will be undertaken in the final section of this paper.

Chart A lists the conditions that have been selected to represent obstetric morbidity.² These are conditions of public health interest because they are common and may have serious implications for maternal and child health.

Chart B lists the gynaecological conditions, as well as related health conditions (see Glossary). Among the gynaecological health conditions, we have emphasized reproductive-tract infections because of their dangerous sequelae in terms of health and reproduction (Wasserheit 1990; Dixon-Mueller and Wasserheit 1991). These infections include lower reproductive-tract infections occurring in the vagina and cervix, and upper reproductive-tract infections, also called pelvic inflammatory disease (PID), occurring in the uterus, tubes and ovaries. The major symptoms for lower reproductive-tract infections are discharge and genital ulcerations, and for upper reproductive-tract infections are discharge and lower abdominal pain.

Chart A

Conditions constituting obstetric morbidity*

1. During pregnancy:

- a. haemorrhage
- b. discharge
- c. fever
- d. headache
- e. oedema in limbs
- f. burning with urination
- g. high blood pressure
- h. convulsions in third trimester
- i. natural pregnancy conditions

2. During delivery:

- a. haemorrhage
 - b. episiotomy/tear
 - c. delivery by instrument
 - d. caesarean section
-

² As explained later in the paper, obstetric conditions were measured through women's reports on their last pregnancy using an interview questionnaire. Anaemia during pregnancy was not included because it was considered difficult to measure accurately through women's reports and was being assessed through a medical exam for current morbidity related to gynaecological conditions. Breast conditions after delivery were assessed indirectly and in little detail when asking about breastfeeding of the newborn.

e. malpresentation of the foetus
f. long labour

3. After delivery:

a. haemorrhage
b. discharge or inflammation
c. fever
d. depression

*see Glossary

Chart B**Measurement of gynaecological and related morbidity***

Morbidity conditions	Questionnaire	Clinical examination	Laboratory test
Gynaecological morbidity			
1. reproductive-tract infections			
lower: vaginitis	x		x
cervicitis	x	x	
upper: pelvic inflammatory disease	x	x	
2. cervical ectopy (erosion)		x	
3. cervical cell changes			x
4. prolapse	x	x	
5. menstrual problems	x		
6. problems with intercourse	x		
7. infertility	x		
Related morbidity			
8. urinary-tract infections	x		x
9. anaemia			x
10.obesity		x	
11.high blood pressure		x	
12.syphilis			x

*see Glossary

Among the other gynaecological conditions, menstrual problems and problems with intercourse are included because of their association with infection. Cervical erosion also accompanied by discharge is indicative of an infection. Cervical cell changes, including an increased proportion of immature and distorted cells as seen on a Pap Smear examination, are indicative of precancerous changes.

Determinants of reproductive morbidity

Our concern with the concept of reproductive morbidity goes beyond the delineation of the elements inherent in this concept. Since our main interest is diagnosis of the magnitude of the problem of reproductive morbidity in the Middle East region for the purpose of informing policy, we find we have to take a wide view of the problem covering the process of production of ill-health at the community level and attempt to represent it through a determinants structure. Understanding the determinants and their mechanisms for production of the level of ill-health we observe is, in our view, a necessary first step for a realistic policy aimed at alleviating conditions of reproductive morbidity.

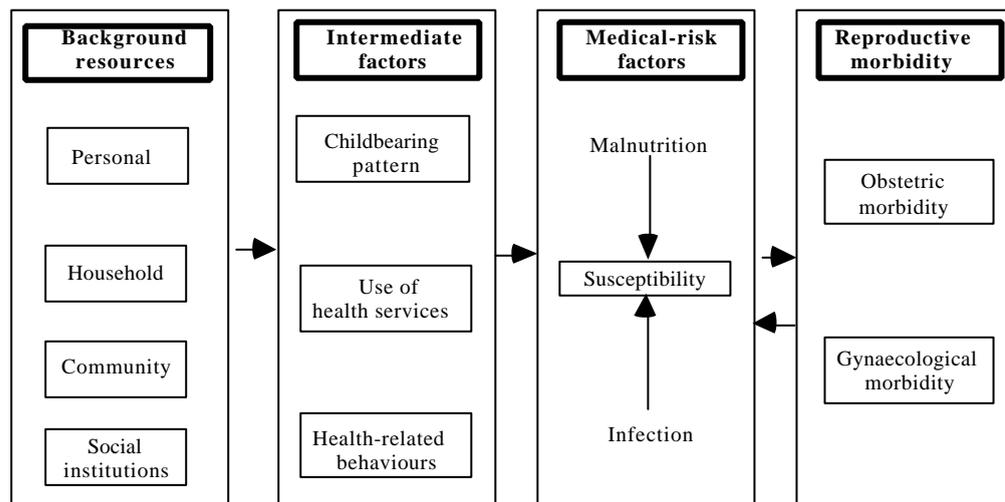
In analysing the determinants of various conditions of ill-health in population groups, an approach has emerged that categorizes these determinants according to their mode of operation or distance from the outcome of ill-health. This approach owes its origin to research on the determinants of fertility in the work of Davis and Blake (1956) and of Bongaarts (1978). It was introduced into the health field

through the work of Mosley and Chen (1984) which attempts to synthesize in one model the medical and socioeconomic determinants of child survival. The approach divides determinants into two categories: the 'intermediate variables', which have a biological link to the outcome variable of interest; and the 'background variables', which operate through the intermediate variables. Because the intermediate variables are more direct in their effect they have alternately been called the proximate determinants. These determinants are the most amenable to medical interventions. The background variables represent the social context of ill-health.

Recent developments in the framework of analysis have added an additional set of factors between the intermediate ones and morbidity. Norren and Vianen (1986) in work on child survival, and Winikoff (1987) in work on reproductive health, have introduced medical-risk factors more proximate than the intermediate variables, referred to as susceptibility factors. At the other extreme, the vague expression of the background variables has generated concern for the need to 'open the black box' and clarify the important elements in the social context of ill-health (Shorter 1987). Such concern with the social context has formed the main substance of 'health-transition' research which is taken to involve 'the cultural, social and behavioural determinants of health: that is those determinants other than medical interventions ...' (Caldwell and Caldwell 1991). An attempt by Frenk et al. (1991) to encompass these health-transition variables in a theoretical framework of the determinants of general health status provides a particularly rich presentation of both intermediate and background factors giving due consideration to the structural determinants of health.

In the area of women's health, we have only recently become aware of several attempts other than our own to apply this layered approach to constructing a determinants structure for outcomes concerned with various dimensions of women's reproductive health (Campbell and Graham 1990a; Fathalla 1991; McCarthy and Maine 1992). We have used this layered approach in designing our study of reproductive morbidity in rural Giza, considering determinants of reproductive morbidity in three main blocks as background, intermediate and medical-risk factors (Figure 1).

Figure 1
Determinants of reproductive morbidity



Starting from the most proximate block, we consider medical-risk factors to be the general health condition or the susceptibility status of a woman. Susceptibility is affected by exposure to nutritional, infectious and other morbidities. These are linked together and with reproductive morbidity in a cumulative and interactive fashion (Winikoff 1987). Susceptibility can be measured through biological data such as the level of anaemia and anthropometric indicators, or through medical history information including cumulative reproductive health experience and general health conditions such as hypertension and diabetes. Measurement of these factors may not be easy in a field situation.

Moving one step backwards, we encounter the block of intermediate variables which include a woman's childbearing pattern, her use of health services and her health-related practices that affect susceptibility. A woman's childbearing pattern relates to her age at childbearing episodes, the number of pregnancies and births, and the extent of birth spacing. Studies have shown that the prevalence of reproductive morbidity is higher in the early and late childbearing years and increases with the number of pregnancies and births, and with shorter birth intervals (Dixon-Mueller and Wasserheit 1991).

The extent of a woman's use of health services during pregnancy, at the time of delivery and in the post-partum period, is an essential factor in avoiding most of the complications and health problems associated with childbearing, and in treating them quickly when they occur. Her use of services for gynaecological and general health care is equally important in controlling reproductive morbidity, and will depend on her perception of need, as well as on availability, accessibility and, especially, on quality of these services.

A woman's health-related behaviours, particularly during an episode of pregnancy, affect the likelihood of her suffering from reproductive morbidity. Among the important behaviours influencing reproductive health are a woman's diet, her workload especially in terms of physical work, and her personal hygiene practices. Also very important in terms of reproductive-tract infections are the woman's sexual activity, or rather in most cases in our region, her husband's.

A final step backwards takes us to the background variables which include the personal resources of the woman, such as her education, her urban or rural origin, and her work experience. They also include household resources representing the personal resources of other members of the household, particularly the woman's husband, as well as housing conditions and amenities available. Next come the community resources such as accessibility to health services and individuals in contact with health institutions, and the support network that the woman can resort to in health-related matters. Finally come the social institutions resources, particularly represented by the dominant values related to reproduction and reproductive health care in the community.

Since our concern is with improving reproductive morbidity, we consider the direction of influence from the determinants to reproductive-morbidity conditions. We are aware, however, that reproductive morbidity has reverse influences of its own affecting susceptibility, the intermediate factors and some of the background resources. An illness state affects a woman's general health status and some of her living conditions and behaviours. It is in fact fear of such influence that makes some women endure a condition in silence rather than change some behaviours, such as workload for example, that would have detrimental consequences to her position in the household.

The usefulness of the framework developed by the study for a policy to improve reproductive health conditions of women depends on its ability to yield a broad diagnosis of the problem when applied in community settings. Application of the framework, however, involves a measurement challenge. The challenge is particularly difficult for arriving at field indicators that will adequately represent the magnitude of reproductive morbidity at the community level. Moreover, capturing the social context in its relation to health represents another challenge of both a conceptual and operational

nature. We deal with the problem of measurement of reproductive morbidity in the next section and address the issue of representing the social context among other issues in the final section of the paper.

Measurement of reproductive morbidity

Developing the measurement instruments

Whereas medical instruments for assessing reproductive morbidity are well developed through medical-history taking, clinical examination and laboratory testing, these mechanisms are very expensive to implement for representative community assessments. Our field study of reproductive morbidity was undertaken to develop an alternative mechanism for community diagnosis while assessing, at the same time, the magnitude of concern with reproductive morbidity in our region. Based on our definition of the elements of reproductive morbidity, we attempted to develop an interview questionnaire for collecting information on reproductive-morbidity conditions directly from women in their homes, and to test the questionnaire by comparison of responses to a medical examination given to the women. The medical examination naturally provided information on the prevalence of reproductive morbidity and, in combination with information collected on the community through the questionnaire, on the determinants delineating risk factors to these conditions.

Testing the field questionnaire by comparison with the results of a medical examination could only be used, however, for studying gynaecological morbidity. In the case of obstetric morbidity during a pregnancy episode, two reasons prevented the implementation of the approach. First, the number of currently pregnant women in the study community to interview and then invite to a medical examination would have been too small. Secondly, the physicians in the study, sensitive to community concerns about possible risks to pregnancy, preferred not to physically examine on pregnant women.

The information in Chart A on obstetric morbidity was thus collected only by the interview-questionnaire method from a sub-sample of women who had experienced a pregnancy in the last two years (207 women). Women were asked to report spontaneously on conditions, and then to respond to detailed questioning on the occurrence of the conditions listed in Chart A during each of the three trimesters of the last pregnancy. They were asked whether they treated themselves for reported conditions and whether they consulted a physician. They were also asked about the place of delivery and the occurrence of complications during delivery and in the post-partum period. The reports thus obtained represent self-diagnoses that unfortunately could not be validated by a medical examination.

Chart B summarizes the instruments that were used to measure the elements of gynaecological and related morbidity including a questionnaire, a clinical examination and laboratory testing. These three instruments could not be applied to all disease elements, however. On the one hand, only some of the selected disease elements have expected symptoms that can be recognized by women; these symptoms were included in the interview questionnaire (see Chart C). On the other hand, the scope of the medical examination (see Chart D) had to be restricted to what was possible to undertake at the village health centres with some upgrading of the medical equipment. Some of the laboratory tests were undertaken at the health centre but others had to be undertaken at a specialized laboratory in Cairo.

Since developing a questionnaire that would reflect the pattern of reproductive morbidity at the community level is one of the primary objectives of the study, the research team put a great deal of effort into the construction of the morbidity component of the interview questionnaire. Three distinct activities were carried out. First, an exploratory study was organized in a family-planning clinic in Cairo to investigate the prevalence and nature of women's perceptions of gynaecological morbidity. Next, a medical workshop was conducted which focused on clarification of the medical concepts, particularly the symptomatology of reproductive-morbidity conditions that could be addressed through the interview questionnaire. Subsequently, a focus-group session was organized in a village in Giza

other than the study villages to gain further insight into women's perceptions and terminology used to refer to the morbidity conditions under study and their delineated symptoms. The information gained was used to ensure that the questions on symptoms in the interview questionnaire applied the language commonly used by women in referring to these disease concepts. Pilot tests were conducted separately for components of the interview questionnaire, followed by a test of the whole questionnaire before it assumed its final format.

Chart C
Symptoms from questionnaire on gynaecological morbidity
1. Reproductive-tract infections:

- Discharge:
- presence
 - characteristics (colour, texture, odour, itching, cyclicity)
 - characteristics of serious discharge

Lower abdominal pain:

- pain in lower abdomen
- type of pain
- severity
- continuity
- duration with condition

2. Prolapse:

- feeling of heaviness below
- feeling of *Sakf Badan** out
- extent of bother

3. Menstrual problems:

- spontaneous responses
- direct questions:
 - pain/blood clots/change in duration/change in quantity

4. Problems with intercourse:

- pain with intercourse
- type of pain
- duration of condition
- blood with intercourse
- odour with intercourse

5. Infertility:

- tried to get pregnant without success (over twelve months of regular intercourse) at any time during reproductive period.

6. Urinary tract infection:

- burning outside
- burning inside
- frequent urination
- night urination
- interrupted flow
- stress incontinence
- urgency
- duration with condition

* A term used by women in the study community for prolapse which actually means 'ceiling of the reproductive organs'.

Chart D
Clinical examination: gynaecological morbidity*
1. Reproductive-tract infections:

- Discharge:
- presence
 - amount
 - characteristics
- Tenderness: (bimanual pelvic examination)
- cervical motion
 - uterus
 - right adnexa
 - left adnexa

2. Cervical ectopy (erosion)
3. Prolapse:

- vaginal: anterior/posterior
- uterine: first/second/third degree

* see Glossary

The study sample

Several factors were taken into consideration in selecting two villages in rural Giza in Egypt for testing the instruments developed and for exploring the magnitude of the problem of reproductive morbidity in a community setting. The most important are the defined nature of the rural community, the vulnerability of women in these communities because of the socioeconomic environment, the interesting networking presented by rural society, as well as the availability of Ministry of Health clinic facilities at the village level with female physicians in charge. The proximity to Cairo enabled the daily

transport of laboratory specimens to a specialized Cairo laboratory. The two villages were contiguous and had populations of 12,000 and 4,500.

The sample size was determined at 500 on the basis of the expected prevalence of morbidity conditions in this low socioeconomic-status community and taking into consideration the cost of laboratory testing. A random sample of streets, alleys and housing blocks was selected. Households were visited sequentially in the selected blocks and ever-married women were invited to join the study after explaining to them all phases involved. A total sample of 509 women was achieved.

Women who agreed to join the study were visited twice. During the first visit information was collected on characteristics of the household and the woman, and on the last pregnancy episode if it occurred within the past two years. A date for a second visit was then agreed on; at that visit the interview questionnaire on symptoms of gynaecological morbidity was administered to the woman, and she was then accompanied to the health centre by the social researcher to undergo the gynaecological examination.

Despite the relatively large sample and the complicated data-collection process required, the team in charge of the field work invested a lot of effort and time and throughout the field work in getting to know the community, especially the women, and in involving them in the various stages of planning and preparation. Once selected randomly, however, a woman was left entirely free to decide, with no coaxing or attempts at persuasion, whether she would like to join the study. Those participating who were found to suffer from health problems were followed up for treatment and those among them needing more specialized care were referred to Al-Azhar University hospital. This approach eventually led to very good rapport with the study community. Some women refused initially to participate, but as the study progressed, many changed their minds and sought out the field team. Eventually only 8.6 per cent refused to participate and no particular characteristics differentiated refusals from participants. This is outstanding in comparison with other studies in the Third World that have attempted to invite women to take a medical examination at community health centres (Campbell and Graham 1990b).

The heavy burden of reproductive morbidity

Table 1 reveals the heavy burden of disease borne by women in this community in terms of reproductive and related morbidity as measured by the medical instrument. The table shows a high, age un-related prevalence of reproductive-tract infections. Most of infections are vaginitis. Considering vaginal infections occurring alone or in combination with other infections, the prevalence includes bacterial vaginosis (22%), trichomonas (18%) and candida (11%). These levels are very high by comparison with the limited data available for Third World women, particularly for bacterial vaginosis (Wasserheit and Holmes 1992). Bacterial vaginosis may cause upper-tract infections which have very serious consequences for the health and reproductive potentials of women (Dixon-Mueller and Wasserheit 1991).

Prolapse is present for most women, and rises in prevalence with age reflecting increasing parity. Two in every five women were found to have prolapse of the bladder and anterior vaginal wall (anterior), with one of these two women also having prolapse of the rectum and posterior vaginal wall (posterior). Eight per cent of the women were found to have vaginal and uterine prolapse. Although prolapse may not be considered serious in terms of its medical consequences, it is certainly a condition that is very disturbing to women. In-depth interviewing with some women indicated a particular problem with pain during intercourse which could be debilitating for women if they have little choice in the frequency of the sexual act.

Table 1
Percentage prevalence of gynaecological and related morbidities, by age

Condition	14-19	20-24	25-34	35-44	Age 45+	Total	p ^a
Reproductive-tract infections							
Present	43	54	49	56	41	50	0.28
vaginitis only	39	46	37	44	37	41	
cervicitis only	3	2	7	5	0	4	
vaginitis + cervicitis	1	2	3	5	2	3	
cervicitis + PID	0	2	2	1	2	1	
vaginitis + cervicitis + PID	0	2	0	1	0	1	
Prolapse							
Present	24	43	65	74	63	56	0.00
posterior vaginal only	2	3	10	10	14	8	
anterior vaginal only	14	22	20	21	21	19	
posterior + anterior vaginal	5	11	26	32	21	21	
vaginal + uterine	3	7	9	11	7	8	
Urinary tract infection							
Present	13	12	11	16	25	14	0.16
Anaemia^b							
Present (haemoglobin < 12 gms/dl)	76	63	66	55	49	63	0.01
moderate	51	45	48	45	37	46	
severe	25	18	18	10	12	17	
Obesity^c							
Present (weight/height ² \geq 25 kgms/m ²)	21	32	44	59	61	43	0.00
moderate	16	25	24	26	25	23	
severe	5	7	20	33	36	20	
High blood pressure^d							
Present (diastolic \geq 90mm Hg)	7	8	13	30	55	18	0.00
moderate	5	8	9	19	32	12	
severe	2	0	4	11	23	6	
Average number of women^e	78	94	174	115	44	505	

^ap-value for chi-squared test of significance of difference in prevalence of condition (present/absent) by age group.

^bAnaemia: moderate 10-11.9 gms/dl; severe less than 10 gms/dl.

^cObesity: moderate 25-29 kgms/m²; severe \geq 30 kgms/m².

^dHigh blood pressure: moderate 90-99 mm Hg; severe 100+ mm Hg.

^eEvery condition has a few missing women

Anaemia, as expected, is the most serious aspect of related morbidity with 63 per cent of the women having the condition and 17 per cent experiencing its most serious form. The situation is particularly dangerous for women younger than twenty, of whom one out of four was shown to have very serious anaemia. The situation improves with age as women stop reproducing and gain enough power and status in the home to have more access to resources of the household and do less heavy work. Obesity, on the other hand, which is prevalent among 43 per cent of the women, increases with age, as does the condition of high blood pressure which was found in almost one out of five women.

These results present a serious profile in terms of the prevalence of gynaecological and related conditions among women in the study community, each condition being considered alone. A more serious picture emerges when we look at multiple occurrences of conditions among women. It is particularly noteworthy that out of the 509 women in the study, only 24 (5%) had none of the conditions shown in Table 1. Almost half of the women, on the other hand, had three or more conditions. The number of conditions that a woman suffers from increases significantly with age.

Table 2
Percentage of women reporting current symptoms, by age

	14-19	20-24	25-34	35-44	Age 45+	Total	p
Discharge	81	77	79	78	59	77	0.06
my nature	63	66	63	67	52	64	
not my nature	18	11	16	11	7	13	
Pain in lower abdomen	23	13	18	16	23	18	0.37
Heaviness below	11	22	29	26	30	24	0.03
Stress incontinence	25	35	37	41	48	37	0.09
Delay in conception during reproductive cycle (anxiety over infertility)	49	41	45	51	61	48	0.20
No. of women	79	95	175	116	44	509	
Pain during menstruation	80	65	74	68	46	71	0.08
No. of currently menstruating women	60	68	132	97	13	370	
Pain during intercourse	37	32	39	34	36	36	0.81
No. of sexually-active women	78	93	168	103	22	464	

Table 2 shows what the women complain of when asked about specific current symptoms of gynaecological and related morbidity using the interview questionnaire developed by the study. Most women report the presence of discharge, and even more women consider the discharge as natural rather than as different from their nature. In addition, substantial proportions report pain in the lower abdomen, heaviness below, stress incontinence, pain during menstruation, pain during intercourse and the experience of a perceived delay in conception during the reproductive cycle, which reflects anxiety over infertility. Only the symptom of 'heaviness below', which indicates possible prolapse, has a significant pattern with age. It is noteworthy that report of pain during intercourse, which might carry both a psychological as well as a physical dimension, is made by around a third of the women in all age groups.

In terms of the effect on obstetric morbidity, 207 women (41%) were found to have been pregnant in the past two years. Among these pregnancies 19 (9%) ended in abortion and two in stillbirth. Table 3 shows the type of conditions reported by the 188 women whose pregnancies went to full term, with some conditions, such as haemorrhage, high blood pressure and convulsions during the third trimester, being of a serious nature. None of these conditions, except for oedema in limbs, has a significant age pattern. It is noteworthy that only one-third of the women reported receiving prenatal care. Moreover, a large proportion of the women delivered at home (77%) and fewer than one-fifth of women reported conditions during delivery. Fever and discharge or inflammation were reported by one-third of women after delivery, and the latter condition rose significantly with age.

Table 3
Obstetric morbidity: Percentage of women reporting condition in response to direct question, by age

Age

Condition	14–19	20–24	25–34	35–44	Total	p
During pregnancy						
haemorrhage	10	9	5	16	9	0.49
discharge	36	49	43	63	45	0.22
fever	13	26	21	21	21	0.52
headache	54	55	61	74	59	0.44
oedema in limbs	5	16	25	37	20	0.01
burning with urination	18	22	32	42	27	0.14
high blood pressure	3	15	13	5	11	0.19
convulsions in third trimester	–	2	1	5	2	–
During delivery	18	13	15	32	17	0.27
After delivery						
haemorrhage	13	7	11	5	10	0.72
discharge or inflammation	15	22	39	47	30	0.01
fever	33	24	32	37	30	0.61
depression	8	13	16	26	14	0.27
Number of women pregnant in past two years	39	55	75	19	188	

Women are clearly aware of disturbing symptoms of reproductive morbidity. What they do about them is certainly insufficient and inadequate, however, for a heavy disease burden persists, particularly in terms of gynaecological morbidity. The analysis of the framework of determinants of this disease condition will allow us to better judge to what extent this situation is likely to be generalizable to women in the Middle East region, but the results are applicable to rural societies in Egypt, particularly to those in upper Egypt where conditions are worse than the study community, and possibly to similar societies in the region.

The situation revealed by our study emphasizes the priority need to work with women at the community level to improve their reproductive health. As we began to explore ways for doing that by sharing the conceptual and measurement frameworks and the findings of the first stage of analysis with the larger community of concerned professionals, we came across issues that widened our perspective of the problem and of the scope of mechanisms needed for arriving at sustainable solutions, taking into account the social context of women in the communities that are our concern. Because of their policy relevance, we turn our attention to these issues in the next section of this paper.

Policy concerns for improving the reproductive health of women

Our concern to share the nature and findings of this study with the larger community of professionals, from medical and social-science disciplines, working as researchers, practitioners, program managers and policy makers, led us to organize several workshops and to participate in meetings on related topics in the region. The objective of such efforts was to initiate a deliberation of policy instruments that could be set in motion with the aim of improving the reproductive health of women in the region. We proposed three mechanisms that we considered to be of top-priority, policy relevance. First, we considered the importance of undertaking similar research in other communities in order to arrive at adequate instruments to enable the diagnosis of women's reproductive-morbidity conditions in these communities and beyond. Secondly, we emphasized the need for an expansion of reproductive-health services at the community level to deal with reproductive morbidity problems of women. Thirdly, we stressed the usefulness of introducing changes in the education and training programs of health

professionals and social scientists, the better to prepare them for collaboration in finding solutions to health problems of women at the community level.

The process of interaction with the larger community of professionals in presenting the study and discussing the proposed policy mechanisms has proved to be a rich and thought-provoking experience and has exposed us to a variety of points of view and professional outlooks. We summarize the main lessons learnt in these deliberations for their contribution to the process of arriving at adequate policies for improvement of reproductive health in our region.

Reproductive-health services

The expansion we proposed for reproductive-health services in our region goes beyond the current interest in women's health, activated in 1985, at the end of the United Nations Decade for Women, by raising the key question of 'Where is the M in MCH?' (Rosenfield and Maine 1985). The M in this question refers to maternal health, and has come to focus mostly on maternal mortality which is certainly a serious and neglected problem for women in developing countries. Important as it is, however, emphasis on maternal mortality represents a narrow strategy for concern with women's health, in our view, since it keeps the focus of attention on the mother at, and shortly after, the episode of childbearing and disregards the majority of women who survive this episode. Our study suggests that the survivors suffer from a heavy burden of reproductive morbidity which partly results from the social conditions of their lives. Thus reproductive morbidity seen within the social context of women's lives represents a neglected other M with serious sequelae for women and children (Wasserheit 1990).

Deriving from this larger reality we suggested a strategy for improvement of reproductive-health services based on a three-pronged approach that would include: first, introducing gynaecological services within a comprehensive organization of reproductive-health services at community clinics; secondly, building outreach linkages to women by complementing the clinic with social services that would take into account the social conditions of women's lives; and thirdly, establishment of outreach linkages to other health services for consultation and referral.

The scope that this perspective adds to health services directed at women in developing countries, many of whom have not yet managed to solve the problem of maternal mortality, may be considered difficult and costly. Nevertheless, we felt like others (Germaine 1987; Wasserheit 1990; Dixon-Mueller and Wasserheit 1991) that movement in this direction was necessary since the problems of mortality and morbidity are interrelated and since a large number of women seem to be suffering silently from disabling reproductive morbidities.

Our experience in presenting this issue for discussion, however, has shown us that there will be resistance to this perspective for two main reasons. First, as a result of the emphasis that the Child Survival Strategy and the Safe Motherhood Initiative have placed on women's health in relation to the childbearing episode, we have found that the thinking in terms of women's health, particularly by program managers and policy makers but also some practitioners and researchers, is totally directed to problems occurring during these episodes. Foremost in such thinking come the problems of complications of pregnancy and delivery, maternal and neonatal mortality and abortion, as well as the practice of breastfeeding. Attention to women's health outside these childbearing episodes has focused mainly on their need for family-planning services, while reproductive morbidity has remained a largely unmapped problem. Accordingly, we have found it very difficult to move discussions of appropriate reproductive-health services even the short distance required to consider the gynaecological problems women face between, or after completing, childbearing episodes.

Secondly, the implied successes of the medical-interventions approach of programs of the Child Survival Strategy seem to have induced a search for similar interventions yielding quick solutions to the problems of women's health. Such solutions are more difficult to find in the case of women because

cumulated world knowledge and experience on a public health level is limited. Yet international initiatives continue to exert pressure for such solutions, which is exacerbated by a tendency to address problems in terms of targeting (such as the halving of the maternal mortality ratio by the year 2000). The emphasis on such solutions has tended to point attention to medical interventions which are directed at the more clearly identifiable causes of morbidity and mortality. However, attention should be equally directed to the social conditions that need to be taken into account for effective implementation of these interventions.

In the face of this environment, we support even more strongly the move towards a more realistic perspective on women's reproductive health needs and towards a more thoughtful approach to exploring mechanisms for addressing these needs according to the three-pronged strategy suggested above. This more thoughtful approach to the search for solutions is at the heart of the recent call for essential national health research (Commission on Health Research 1990), which is beginning to be heard and absorbed in more program-oriented organizations such as UNICEF. In order for such an approach to be operational in arriving at policy recommendations for improvement of women's reproductive health, it needs to mobilize task forces of professional resources from various orientations: the researchers, the practitioners, the program managers and the policy makers, social scientists and health scientists, to strive in a concerted manner in the search for solutions in consultation with the communities of women who are our concern.

The task forces would thus be charged over a period of time to arrive through deliberation, study and experimentation, and by networking and benefiting from each other's experiences, at recommended policies for improvement of reproductive-health services for women in countries of our region. The success of these task forces depends to a large extent on the existence of a spirit of communication and collaboration between research and program-oriented professionals. It presupposes an analytic and practical perspective on both sides, a short and a long-range view, and a commitment to search and research for solutions, and to advocate for them. The success of the task forces also requires a true understanding by all professionals of the interaction of the social and health conditions of women.

Education and training programs

The second policy avenue we considered deals with the preparation and training of professionals, particularly in the social and medical-science disciplines, to collaborate in finding solutions to the reproductive health concerns of women at the community level. In full awareness of the importance of this collaboration, we had come together as an inter-disciplinary team to learn about the prevalence of reproductive-morbidity conditions and of determinants in a community context. It is important to admit, however, that the experience of working together through the various stages of the research, as well as the process of interacting in joint meetings with social and medical scientists, has been accompanied by tensions and disagreements that have only been overcome when each side demonstrated an open attitude.

The experience of our research process revealed three particularly noteworthy examples of areas of tension and disagreement between medical and social scientists. First, an atmosphere of tension was always created whenever a feeling of disciplinary territoriality was encountered on either side. This occurred whenever a medical scientist displayed an attitude that medical information was 'hard' data that reflected the true situation and could not be understood by non-medically trained professionals or, looking at the other discipline, that it was easy to understand the social context and we could all analyse it because we are living within the reality of our societies. On the other hand, communication was again blocked whenever a social scientist turned blank at the discussion of even rudimentary matters of health and the human body. Moreover, some social scientists tended to brush off all medical scientists as uninterested in the social context of health without attempting to establish discourse or to see

differences between them. In the face of such outlooks, we found that true collaboration could only be achieved when mutual respect was expressed between disciplines, and when a curiosity to learn and a patience to teach was displayed on both sides.

As a second example, a disagreement seemed inevitably to emerge over the setting of priorities. Medical scientists were generally concerned about conditions that are potentially physically disabling such as reproductive-tract infections, or that can lead to serious disease such as high blood pressure. Social scientists who happened to include a majority of women in our networks were, on the other hand, equally concerned with conditions like prolapse which were particularly disturbing to women. Since medical scientists felt that no medical intervention could handle the problem of prolapse on a community level, they immediately gave it low priority without giving thought to a preventive strategy.

A third example is also influenced by the sex segregation of the two professions under consideration here. Medical scientists, who were mostly males in our networks, seemed to have little knowledge of how women feel about their bodies and how they understand matters of health and ill-health, even though the majority were obstetrician-gynaecologists who dealt with women all the time: indeed, in some extreme cases, such knowledge was seen as unimportant. Their focus was on giving good medical service to women. As an illustration, we mention a particularly heated argument over the gynaecological examination where some male obstetrician-gynaecologists were appalled to hear, and refused to accept, that the gynaecological examination was a 'traumatic' experience for women.

The lesson of this valuable experience is that there is a need to overcome the isolation of the disciplines of social and health sciences from each other, and to improve communication and collaboration in understanding and improving living and health conditions of women in our region. The most effective mechanism to achieve that would seem to be the introduction of modifications to the curricula of education and training programs in these disciplines. The formation of multidisciplinary task forces of committed believers from both disciplines seems to provide the best approach for recommending such modifications after careful deliberation, study and experimentation over a period of time. Limiting the task to a concern with women's health is of relevance to our interest in reproductive health and would make it a more manageable task. However, this should certainly be a more general process over the long run.

Whereas some may argue that each of the social and medical sciences encompasses too large a body of knowledge to allow for such modifications, the almost complete separation that exists today in the content of these two disciplines is certainly detrimental to a holistic view for both professions. In addition, the inculcation by these two disciplines of different values and approaches in education and practice leads to the creation of language and psychological barriers that obstruct necessary communication and collaboration. The task forces would need to look, therefore, not only at the curriculum but at the professional orientation and professional personality that is created by the educational system in each discipline. As a starting point, it would be useful for both medical and social-science professionals on the task forces to go through a process of introspection and examine the mechanisms of creating the professional identity and personality in their discipline. Such a process can bring medical professionals to a better understanding of how their educational system, as well as the interests and power of their profession, shape them as human beings and limit the focus of their professional lens to a purely medical perspective. It can, on the other hand, lead social scientists to recognize that the isolation of their discipline from exposure to the natural sciences limits their capacity to understand the physical nature of our world and our bodies. The physical and social worlds overlap and interact in determining our health and our social being; thus, exposure to the sciences of the physical world, in substance and methodology, certainly expands the tools and the spheres of interaction of social scientists, particularly those with interest in health issues.

The success of the task forces charged with proposing modifications to training and education programs in the medical and social sciences in the area of reproductive health depends primarily on maintaining an open-minded outlook to one's own discipline as well as to the other discipline. It also depends on understanding the gender issues involved in dealing with women's reproductive health.

Research efforts

The third policy avenue proposed for arriving at improvements in women's reproductive health is continuing research efforts in countries of the region to develop measures for diagnosis and monitoring of conditions of reproductive morbidity that can inform policy. The concept of reported morbidity adopted in our study has, however, raised concerns from both medical professionals and social scientists exposed to our study. On the one hand, some medical professionals have questioned the validity of collecting reported symptoms through the questionnaire as a way of arriving at a community diagnosis of women's reproductive morbidity. On the other hand, some social scientists have expressed concern over our limiting the conceptualization of health to its biological meaning and developing a measuring instrument that focuses on that meaning of health. We give below special consideration to these two concerns.

Viability of the concept of reported morbidity

While it is understandable that a medical professional would prefer the more accurate medical instruments of the physical examination and laboratory testing for assessing disease conditions, such instruments are too expensive and difficult to implement for community diagnosis. Other attempts (World Health Organization 1989; Campbell and Graham 1990b) have been undertaken in several parts of the developing world, among them a study by Wasserheit et al. (1989) in Bangladesh and by Bang et al. (1989) in India, to obtain information on some aspects of reproductive morbidity both by the survey method and by the clinical and laboratory examinations directed at women. Most of these studies, however, have suffered from high refusal rates of the medical examination which has interfered with a proper validation of the questionnaire method against medical diagnosis. Nevertheless, the prevalence detected for some reproductive-morbidity conditions suggest that community diagnosis through cross-sectional surveys is a feasible methodology (Campbell and Graham 1990b).

The procedure of relying on symptoms reported by women has been widely used in child-health surveys in developing countries (such as the Demographic and Health Surveys, and the Pan Arab Project for Child and Development in our region) to detect prevalence of childhood diseases, particularly diarrhoea and acute respiratory infections. It is understood in such endeavours that the community diagnosis arrived at is not fully accurate. It is believed, however, that efforts to make questions medically relevant and culturally sensitive produce estimates of prevalence that point adequately to the magnitude of the problem.

The distrust expressed by some medical professionals in women's reports of symptoms of reproductive-morbidity conditions is partly based on the reality that some of these disease conditions, such as chlamydia among reproductive-tract infections, are asymptomatic in some women. On the other hand, that distrust is also probably influenced by the trend in medical practice to move away from clinical decisions informed by history-taking together with other diagnostic criteria, to a diagnosis dependent to a large extent on laboratory tests. Also contributing to this distrust is a lack of confidence in women's ability, particularly in poor communities, to accurately describe symptoms (Das 1990). This position of distrust came sharply in contrast to the readiness of medical professionals to accept, without much doubt, community diagnoses of health problems derived from hospital and health centre statistics. Such statistics have grave shortcomings in terms of their incomplete coverage of women's

reproductive health conditions given the practice of women not to present themselves to health facilities for these conditions.

There is certainly a tendency among medical professionals to consider medical data as hard and 'objective', and therefore usable in most situations, in contrast to the 'subjective' reports of symptoms. Continuation of the research effort is needed to show how the latter can be brought closer to the medical definition of disease to provide a mechanism for diagnosing and monitoring reproductive-morbidity conditions in the community. Such research effort would cover only part of the challenge of measurement, however, posed by a policy concerned to learn about the reproductive health of women at the community level. Another part of the challenge takes us to other meanings of the concept of health.

The meaning of health

The validity of relying solely on the biomedical approach, as we have done, to produce information for guiding policy concerned with women's reproductive health at the community level has been questioned by some social scientists. Health to them has several meanings, only one of which is represented by the biomedical approach. This multiplicity of meanings of health needs to be recognized, in their view, for achieving an analytic understanding of the process of production of health as a basis for any realistic and comprehensive effort to improve health conditions in the community.

From the perspective of the individual, two categories of meaning are differentiated as expressed in the concepts of disease and illness (Frankenberg 1980; Young 1982). The concept of disease has historically been the most dominant category: it has a biological interpretation and refers to 'abnormalities in the structure or function of organs and organ systems; pathological states whether or not they are culturally recognized' (Young 1982:264). This meaning of health, or more directly ill-health, underlies the biomedical model.

Health, as a felt experience of the individual, provides another meaning which is embodied in the term 'illness'. Thus, illness is the meaning that individuals give to health and refers to 'a person's perceptions and experiences of certain socially disvalued states including, but not limited to, disease' (Young 1982:265). Illness is the individual's 'consciousness that there is something wrong' (Frankenberg 1980:199). We could refer to it in another terminology as the individual's perceived morbidity.

The concept of perceived morbidity has been included in the framework of our study through some questions asking women to specify the nature their current of health problems and to indicate what they consider are dangerous symptoms in terms of their reproductive health. However, this approach was a minor orientation of our study, as the major emphasis was placed conceptually on disease as a representation of health. Moreover, we considered it difficult to extract perceptions from women about their health using the questionnaire instrument in a limited interview. This concept is rich in meaning, and to capture it requires a more qualitative methodology than was included in our main study instruments.

In retrospect, we recognize the significance of the concept of perceived reproductive morbidity as representing an important realm for policy concerns for at least two reasons. First, women's health behaviour, particularly in seeking health care, is governed by what women perceive as ill-health whether this perception is consistent with medical symptoms or not. Secondly, learning about morbidity as perceived by women brings to attention what worries women about their health based on criteria of seriousness such as discomfort, or interference with their daily routines, or with their feeling of dignity (Ozbay 1989). Such emphasis contrasts with what the medical profession considers as serious, which are mostly fatal diseases forming only the tip of the iceberg. It could lead to more balance in the process of delineation of policy priorities between the rare and fatal, on the one hand, and the common and disturbing to women, on the other.

In dealing with the concept of perceived morbidity, the role of sociocultural factors becomes apparent not only as a determinant of the occurrence of illness, but also as essential in the construction of the concept of ill-health. In fact, this important role of sociocultural factors goes beyond the individual to act on society's construction of health, through its determination of the breakpoints marking degrees of good-health and ill-health on the health-illness continuum representing health status (Johansson 1991). As such, these breakpoints are mostly 'culturally negotiated'. They are determined in order to ensure attention to problems considered serious in that culture. Moreover, they take into account the power structure in the community, particularly in marking incapacitating ill-health, in order to ensure the needed level of human resources for that society within the dominant work organization patterns (Johansson 1991).

This emphasis on society's cultural construction of ill-health is particularly relevant for understanding women's perception of ill-health in poor communities in our region. For a woman with a low power base, such as a young woman living with her mother-in-law, the load of work expected in the field, at home and in the rearing of children is so heavy that it puts the threshold of illness recognized by society very high on the health-illness continuum in order to ensure her availability to undertake these chores (Bourqia 1990). Our field observations show that such a woman will endure much pain and discomfort before she admits to a state of illness. In contrast, any symptom suggesting problems with the socially-sanctioned function of childbearing, such as disturbances in the menstrual cycle for example, are exaggerated and a great source of worry deserving of the label of reproductive illness.

When we view providers, on the other hand, it is important to recognize that this cultural construction of the meaning of health does not only occur in the domain of illness, representing an individual's or a society's perception of ill-health, but also penetrates the domain of disease which is not entirely 'objectively' determined (Singer 1989). Thus, the influence of sociocultural factors in the construction of disease is revealed by physicians making different diagnoses of the occurrence of disease in a patient depending on their own training, gender, experience or interests. More specifically, for example, questions of class and power of a patient might determine whether the same combination of symptoms is given the label of disease or not by the physician (Young 1982:271). In line with this argument, it is worth noting here that several professionals, among them physicians, queried our use of the clinical examination in the village health centre as a standard for validation considering that 'different physicians see different things'.

This recognition of the role of sociocultural factors in the production and distribution of health has led to another expression of the meaning of health which is categorized as 'sickness' (Frankenberg 1980; Young 1982). Sickness includes both disease and illness in being the process of the 'making social of disease' (Frankenberg 1980:199). The concept of sickness involves particularly a consciousness of the role of social relations in their expression of power, at the family, community, national and international spheres, on the process of production of health (Morsy 1990). Starting from the widest international sphere for a simple illustration, we can take as an example a very recent World Bank study (Jamison and Mosley 1990) which labels 'excess fertility' as a disease in developing countries alongside malnutrition, anaemia, tetanus, AIDS, and STDs, diabetes, and so on. The dominant power of this institution in the international health network is likely to propagate this disease label into the public-health diagnostic domain.

The meaning of health embodied in the term sickness is not totally absent from the analytic framework of our study, particularly in the framework's representation of social relations at the family level as a determinant of women's health. We have attempted to delineate the power status of women in the household through some items included on the questionnaire in order to relate their status to

occurrence of disease, to perception of health and to their health behaviour. This allows us to examine the association between power and autonomy of women in the household and physical health as measured in our study, an association already demonstrated as important in a study of child health in a community of our region (Doan and Bisharat 1990).

Adequate reflection of the concept of sickness in attempting to represent reproductive morbidity at the community level, however, necessitates a wider conceptual framework of the process of production of health than this study has developed. Not only would such a framework have to involve a reconceptualization of reproductive morbidity to include women's perceptions of their health and ill-health, but it would also need to develop a more dynamic determinants structure, particularly in terms of representation of the background variables; and it would have to embed that structure into the wider sphere of power relations active at the community, national and international domains.

These are large measurement challenges but they need to be addressed for better diagnosis and monitoring of women's reproductive-morbidity conditions at the community level. In putting the framework of this study in review in this last section of the paper, the intention is to underline the importance of what has been achieved by our study in defining reproductive morbidity for community diagnosis, in revealing the possible magnitude of the problem in our region, in proposing an interview questionnaire for community diagnosis, and in emphasizing the role of the social context in health. Our intention is additionally to draw the contours around what has been done using the biomedical model, and to stress the need for further research efforts applying an even more socially-determined perspective of the meaning of health.

Better diagnosis, with better preparation of professionals, and more realistic services are key concerns of a policy that aims to improve women's reproductive health. We should take up this task.

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Glossary

adnexa	A tube and ovary
cervical cell changes	Pathological changes in the cells covering the cervix which might lead to malignancy
cervical ectopy (erosion)	Change in the surface covering the cervix
episiotomy	Surgical incision to widen the vaginal outlet
oedema	Swelling of feet and legs due to water retention in the body
prolapse	Descent below the normal level of the anterior or posterior walls of the vagina and/or the uterus
reproductive tract infection (lower)	Infection in the vagina (vaginitis) and/or cervix (cervicitis). Vaginitis includes Bacterial Vaginosis and Candida which result from overgrowth of normal vaginal flora, and Trichomonas which is a sexually transmitted disease.
reproductive-tract infection (upper or pelvic inflammatory disease)	Infection in the uterus, tubes and/or ovaries
tear	Accidental tear in the vaginal outlet
tenderness	Pain upon examination (by moving the cervix or feeling the uterus and adnexa)
