Perceived reproductive morbidity and treatment seeking behavior among ever married women in Siwa Oasis, Egypt.

Ola A. Akl [1] , Hala K. Ibrahim [2], Heba M. Mamdouh [2]

[1] Department of Primary Health Care, High Institute of Public Health, Alexandria University; [2] Department of Family Health, High Institute of Public Health, Alexandria University.
hebamamdouh74@gmail.com , ola_akl@yahoo.co.uk

Abstract: Information about reproductive morbidity in developing countries is scanty and mainly based on information obtained from clinics or hospitals which are not usually reflecting the true magnitude of the disease burden. A cross-sectional study were conducted to assess the self-reported reproductive morbidity and the factors affecting it and to investigate the health seeking behavior among a sample of women in Siwa (Oasis), Egypt. A total of 340 ever-married women in the reproductive age group of 15 to 49 years were interviewed using a pre-designed questionnaire. About three quarters of women reported having any obstetric (72.6%) or any gynecological morbidity (75.6%). The most commonly reported obstetric problem was symptoms of severe anemia (43.8%), while symptoms of lower RTIs (51.2%) and UTIs (35%) were the commonest gynecological problems. Overall, 58.5% of participants had sought treatment for any morbidity with the majority had sought services of the public sector facility (80%). Regression analysis showed that education, age at first pregnancy and duration of marriage were the factors associated with women reports of any reproductive morbidity. The present results reveal a high prevalence of reported reproductive morbidity in Siwa, Egypt. Factors such as education, duration of marriage and women age at first pregnancy were associated with reported morbidity among the sampled women. This high reported rate in peripheral and remote areas needs to be explored further.

1. Introduction

Reproductive morbidity (RM) is "any morbidity of the reproductive tract, or any morbidity which is a consequence of reproductive behavior including pregnancy, abortion, child birth or sexual behavior and may include those of psychological nature (WHO, 1990). RM encompasses obstetric morbidity, gynecological morbidity and contraceptive morbidity (Sadana, 2000).

Addressing reproductive health issues of women is on the global social agenda for the forthcoming century. Maternal mortality has long been the only indicator for women's health even though RM occurs far more frequently and seriously affects women's lives (Kambo *et al.,* 2003). The pattern of disability adjusted life years (DALYs) lost from reproductive ill health either due to premature mortality or morbidity associated with reproductive conditions is substantially different from that for deaths alone. This is because of the large component of years lived with disability (YLDs) resulting from many of these conditions (Abou Zahr, 1998; Murry & Lopez, 1998).

RM is high among women of developing countries resulting in devastating consequences on health and social well being of women. Usually many reproductive disorders go unnoticed, either because of being asymptomatic, or because of producing vague and non specific symptoms. Low level of female literacy, low level of awareness, as well as socio-cultural norms, values and taboos withhold women from seeking health care for reproductive tract infections (Rathore *et al.*, 2003).

Information about RM in developing countries is scanty and mainly based on information obtained from clinics or hospitals. However, large proportion of women doesn't visit such facilities; results are not usually reflecting the true magnitude of the disease burden. This type of information is better obtained through community-based self reporting surveys (Rahman *et al.,* 2004).

The procedure of relying on symptoms reported by women has been widely used in health surveys in developing countries such as Demographic and Health Survey and the Pan Arabic Project for Child and Development (Zurayk *et al.,* 1993). Research has shown that self reporting corresponds closely to clinical diagnosis when diagnostic criterion is clear (Zurayk *et al.,* 1995). Thus, such surveys could prove to be an inexpensive way for generating continuous information on reproductive health (RH) issues (Rahman *et al.*, 2004).

Since the International Conference on Population and Development (ICPD), Egypt has given much attention to RH situation by applying policies and programmes to provide adequate services, but reorienting policies and programs have been more challenging. Closing the gap between urban and rural or remote areas' access to and use of RH care is a major challenge for North Africa and Middle East region including Egypt (Fahimi, 2003). Though the region has experienced major improvements in health over the past few decades, significant inequities in access to health care services and overall health status persist for the region's women, especially in the area of reproductive health (Fahimi, 2006).

The present study aimed to assess the self-reported reproductive morbidity and the factors affecting it among a sample of ever-married women in Siwa (an isolated oasis in a frontier governorate-Matrouh), Egypt. It also aimed to understand the treatment seeking behavior of the sampled women for these morbidities.

2. Materials and Methods

A community-based, cross sectional study was conducted. A systematic random sampling technique was adopted, voluntarily taking ever-married women in every fifth house for interviewing, in Siwa town, located in the southern part of Siwa Oasis (Siwa Oasis, information from anserws.com, 2011). Siwa Oasis is one of Egypt's isolated settlements, with 23.000 total populations. Siwi women have traditionally been kept behind closed doors that made them difficult to be examined by strangers (Women's freedom comes slowly to a sleepy Oasis, 2011). RH services are delivered only through one governmental hospital for the whole town. The number of health units that provided RH services in Matrouh governorate equals 82 (compared to 197 in Cairo and 167 in Alexandria). The majority of people living in the Oasis lacks the basic infrastructure, sanitation and proper water supply.

A total of 340 ever-married women in the reproductive age group of 15 to 49 years were interviewed. Women were asked about the symptoms of obstetric morbidity they experienced during their most recent pregnancy, delivery and post-partum period. Also, symptoms of gynecological morbidity that women experienced during the past 12 months were inquired about. The study considered self reported RM status to measure the prevalence of RM, as laboratory verified estimates are eight times more expensive than self reported status (Zurayk *et al.*, 1993). Also, health facilities at the community level in Siwa are generally poorly equipped and service

providers are not well acquainted to detect the morbidity or to provide counseling.

After reviewing the available literature, a pre-tested, structured interview questionnaire was used. The questionnaire drew on a number of existing instruments used to gather data on RM experiences (Zurayk *et al.*, 1993; Swimini *et al.*, 2004; NIPORT, 2003).

In addition to investigating the socio-demographic characteristics, the questionnaire included detailed questions about obstetric history; the complications experienced during pregnancy, delivery and the postpartum period; gynecological morbidity; and patterns of treatment sought for morbidities experienced. The study investigated RM in the form of gynecological and obstetric morbidities. Contraceptive morbidity could not be included owing to the small number of participants reported currently using any contraceptive methods (30.9%). Women were interviewed at their homes by female doctor researchers. The aim of the study was explained to all participants and only volunteered responses were recorded. This study conducted after taking the approval of the research and ethical committee of the High Institute of Public Health, Alexandria University. The study was carried out from April 2010 to October 2010. Data entry and analysis were carried out using SPSS version 16. Univariate analysis was performed with x^2 test whenever applicable. Logistic regression analyses were used to identify variables that were significantly related to women's reporting of RM. The outcome variable was ever exposure to any RM with women's age, education, age at first pregnancy and duration of marriage taken as covariates (significant variables by univariate analysis).

3. Results

Regarding the socio-demographic characteristics of the participants, about forty percent of the women were in the age group 20 to less than 30, with a mean age of 33.5 ±8.7 years. Nearly half the participants had ever enrolled in schools (51.8%). Almost all the women were currently married (95%), with a mean duration of marriage of 14.1 ±10.2 years. The mean age at first pregnancy was 19.1 ±3.3 years. Four in ten participants reported ever having any pregnancy wastage. Less than one in two women (45%) reported history of institutional deliveries. Only 47.1% of the participants reported ever use of any contraceptive methods and less than one third (30.9%) of them reported current use. Slightly more than half of the women (55.3%) reported having from 1 to 3 deliveries and 12.4% had 9 deliveries with a mean number of 4.4 ±3.5 deliveries.

Self-reported obstetric morbidity

Findings indicate that more than half (52.9%) of the participants reported suffering from any pregnancy problem during their last pregnancy. The most commonly reported complications during pregnancy were symptoms of severe anemia, reported by about four in ten women (43.8%), excessive vomiting (15.3%) and symptoms of preeclampsia (9.7%). Less commonly reported complications included threatening abortion (6.2%), high fever (8.2%), vaginal bleeding (2.1%) and fits (1.8%).

Concerning complications experienced during delivery, one in five women reported experiencing any complication during the last delivery. As for the individual complications experienced during delivery, 9.7% of participants reported experiencing premature rupture of membranes, 7.9% suffered from prolonged labor (>12 hours) and 4.4% reported having abnormal presentation of the fetus (other than the head).

In addition to morbidities experienced during pregnancy and delivery, the study also explored the morbidities that women experienced during the post-partum period, with one in four women reported experiencing any post partum complication. The most commonly reported complications after delivery were symptoms of sepsis and heavy bleeding (9.7% & 8.8%, respectively). Breast engorgement and postpartum depression were less frequently reported by all women (3.8 % & 1.8%, respectively).

Table 1 finally presents the percentage of women who reported experiencing any obstetric complication during the last pregnancy with about three quarters of women reported having any obstetric problem (72.6%).

Reproductive morbidities were assessed using the following clinical presentations;

Dysmenorrhea	Painful menstruation.
Menorrahgia	Prolonged duration of more than five days with excessive bleeding
Oligomenorrhea	Duration of bleeding less than three days with scanty period or spotting.
Lower reproductive tract infections (RTIs)	Vaginal discharge with associated itching or irritation, white colored discharge with or without foul odor
Dyspareunia	Painful sexual intercourse.
Lower Urinary Tract infections (UTIs)	Dysuria (pain or burning sensation while passing urine) and frequent urination.
Prolapse	A feeling of heaviness or something coming out (protruding) from vaginal opening
Chronic pelvic pain	Pain in the pelvis that lasts for at least 6 months.
Premature rupture of membranes	Clear fluid leaking from the vagina prior to the beginning of labor contractions.
Preeclampsia after 20 weeks gestation	Includes both blurred vision and severe headache or high blood pressure.
Severe anemia	Includes pale eyes, pallid face, pale palms, breathlessness following light work and breathlessness when lying on one's back.
Post-partum heavy bleeding	Bleeding during the postpartum period that required the woman to change the cloth used to contain the blood every hour or more often
Post-partum sepsis	Includes experience of high fever with foul-smelling discharge within 72 hours following delivery.

Self-reported gynecological morbidity

Surprisingly, high proportion of participants reported having at least one gynecological problem (75.6%). The most commonly reported gynecological problems were symptoms of lower RTIs, reported by nearly half of the sampled women (51.2%), symptoms of UTIs (35%), menorrhagia (32.1%) and symptoms of chronic pelvic pain (31.5%). Less commonly reported complications included severe menstrual pain (25.8%), dysparuenia (24.1%), hypomenorrhea (5.2%) and uterine prolapse (4.1%). Nine in every ten women reported having any RM.

Treatment seeking for RM

Out of the 247 women who experienced any obstetric morbidity only 83 (33.6%) sought treatment for these health problems. Similarly, out of 257 women who reported having any gynecological morbidity, nearly half of them (47.8%) sought treatment for their morbidities. Overall, 58.5% of participants reported that they had sought treatment for any RM.

Among women who had sought treatment for any RM, the majority had sought the services of the public sector facility (80.1%), one in four women (26.8%) sought the services of private sector, and 18.1% reported receiving treatment at home.

Among women who had sought treatment for morbidities, the majority had sought the services of a doctor from a public sector facility (74.2%) or a private sector facility (26.8%). Almost one-fifth (19.8%) reported that they had sought treatment from an unqualified provider or relied on over-the-counter medications or home remedies and 11.1% reported having sought treatment from a nurse or auxiliary nurse-midwife.

Factors affecting RM

Using univariate analysis selected demographic and reproductive characteristics that associated with the women reports of any RM were elicited (data not shown). The highest prevalence of RM was reported by women in the age group of 20 to 29 years (96.4%), compared to 82.1% among women aged 40 years with significant differences between age groups of women (p<0.05). Illiterate or women who can just read and write reported significantly higher proportion of RM than women with secondary education or above (96.3% & 81%, respectively, p<0.01). Women who got pregnant at first time at age of 20 to 24 reported the least percentage of RM than those who had their first pregnancy at older ages (93%) or younger, with significant differences between these groups. Women with shorter duration of marriage (9 yrs.) reported significantly lower RM compared to women who married for 9 or more yrs. (85.9% vs. 98.7%, p<0.01). Though women who had history of any pregnancy wastage reported more RM than those without such a history, the differences were not statistically significant. Minor insignificant differences were also encountered in the reported morbidity between ever users of contraceptive methods than never users (92% vs. 88.8%). Concerning the place of delivery, women who had their last delivery at an institution reported significantly higher percentage of RM than those who had their last birth delivered at home (95.4% vs. 88.7%, p<0.05). Women who had 9 deliveries reported significantly higher proportion of RM than those with 1-3 deliveries (100% vs. 93%, p<0.01).

Results of the stepwise logistic regression analysis for factors affecting RM among sampled women were shown in Table 4. Illiterate or just read and write women and those with primary and preparatory education were five-times (AOR= 5.51, 95% CI=2.1- 8.4) more likely to report any RM than women with secondary or higher education. Women who got pregnant for the first time at ages older than 25 years were more likely to report any RM than those

who had their first pregnancy at age 20-24 years (AOR=1.73, 95% CI=1.23-2.17). Long duration of marriage was positively associated with the reported RM, with women married for 20 years were more likely to report any RM than women with less than 9 years of marriage (AOR= 4.34, 95% CI=2.08-5.48). All data are available from the authors upon request of any interesting reader.

4. Discussion

In Egypt, the health status of women has improved over the past fifteen years (after the ICPD), but their needs have changed over that same period of time. Their overall health and reproductive indicators are slowly improving; however, this improvement was not eventually distributed among all Egyptian women with noticeable variations by women's education, wealth and place of residence (El Zanty & Way, 2008).

Community based studies have emphasized on elicitation of symptom complexes of RM for correct diagnosis (Bhatia & Cleland, 1995; Hawkes *et al.,* 2000). Till the time, at least peripheral laboratory tests could routinely be incorporated at peripheral health facilities, the diagnosis and treatment of conditions such as RTIs has to rely upon the symptomatology (Nanda & Tripathy, 2005).

The present study revealed a high reported reproductive morbidity rate; all, except nine percent of the sampled women reported having any RM. Findings indicate a high prevalence of most problems, especially symptoms of RTIs, UTIs, chronic pelvic pain and symptoms of anemia. This high prevalence reported by the current study could be explained as most of Siwi women lack access to many RH services (in terms of availability, affordability and even quality of services). Data from 2008 Egypt Demographic & Health Survey (EDHS) revealed that 64.7% of women in the frontier governorates reported receiving regular antenatal care compared to 85.1% of women in urban governorates (El Zanty & Way, 2008). Besides, this high frequency could be attributed to different socio-demographic characteristics of the sampled women than women in other parts of Egypt (in terms of living standard and education). The morbidity rate reported by the study is comparable to that described by the Giza study, a cornerstone study of reproductive morbidity in Egypt, as only 5 percent of women in the Giza study had no RM (Zurayk *et al.,* 1993). A high prevalence of RM has also been reported in studies from other developing countries (Al Riyami, *et al.,* 2005; Bhanderi & Kannan, 2010; Rahman *et al.,* 2004).

Symptoms of severe anaemia, as expected, were the most commonly reported symptoms during the last pregnancy by the participants (43.8%), which can be attributed to the high parity of the sampled women (mean number of deliveries of 4.4). It is also interesting to mention that Zurayk *et al.,* (1993)

reported higher prevalence of anaemia in a previous decade (63%). It should be noted that in 2008 EDHS, the percentage of women who received iron during last pregnancy was much lower in the frontier governorates than those in urban governorates (42.3% & 62.9%, respectively), (El Zanty &Way 2008). About one third of women in the current study reported suffering from symptoms indicating UTIs. This high prevalence might be attributed to that the main source of drinking water in Siwa town is artesian and non artesian wells that handled directly from the source after minor treatment (carries a risk of contamination). Al Riyami *et al.* (2005) stated in their study that a urinary culture should supplement self-reports of UTI to enhance specificity, although the presence of a positive culture in the absence of symptoms is of no clinical significance in non-pregnant women or women without renal disease.

Much has been documented to demonstrate the prevalence of RTIs. It is unlikely that symptoms indicating lower RTIs have been reported by more than half of women in our study. Reporting abnormal discharge provides some insight into the extent to which women are aware of abnormal reproductive tract symptoms. It is worth to mention that Zurayk *et al.* (1993) reported in their study a high percentage of vaginal discharge (77%). Their findings revealed that women's reports of vaginal discharge agreed moderately well with the physician's observations, but are not good predictors of the occurrence of reproductive tract infections (Zurayk *et al.,* 1995). Different frequencies of RTIs have been reported in Bangladesh (64.5%), India (52%) and Nepal (30.1%) (Dangal, 2008; Sharma & Gupta, 2009; Rahman *et al.,* 2004).

Furthermore, chronic pelvic pain has been mentioned by almost one third of our sample. This was largely in agreement with Muhammad (2010) who reported a similar prevalence of chronic pelvic pain (27%) in her study in Alexandria, Egypt.

The extent of a woman's use of health services during pregnancy, at the time of delivery and at the post-partum period, is an essential factor in avoiding most of the obstetric morbidities and in treating them quickly when they occur. Women use of services for gynecological morbidities 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 (Zurayk, 1995). The situation revealed by our study highlights that less than half of participants had never sought treatment for any form of RM (only 33.6% & 47.8% sought treatment for obstetric and gynecological complications, respectively). The majority of them sought treatment from a public sector facility, in spite of high parity and

high rate of morbidity. Women of these remote areas (Siwa Oasis) tend to internalize their health problems because of their status in the family. They may not be allowed to seek health care, or they may feel shy about reporting reproductive problems causing them to be stigmatized by the community. It should be noted that women's low social status plays an important part in keeping women's suffering from being recognized and addressed. Besides, many women in developing countries have been taught to accept their symptoms as part of being a woman.

Data from 2008 EDHS demonstrated that women in frontier governorates (63.9%) were more likely to be concerned about the unavailability of female providers than women in urban governorates (30%) indicating more cultural obstacles in frontier areas (El Zanty & Way, 2008). El-Mouelhy *et al.* (1994) described even that those women who experience symptoms might not make any linkage with a specific morbidity conditions due to lack of awareness about morbidity conditions, therefore, refrain from seeking medical assistance. Comparatively, Nanda & Tripathy (2005) reported that more than 80% of women included in their study had sought some kind of treatment.

The effect of selected socio-demographic characteristics on reported morbidity was addressed in the present study. Women's age, their educational status, age at marriage, duration of marriage, place of delivery and number of deliveries were the factors that associated with women reporting of any RM by univariate analysis. After using logistic regression analysis for controlling for confounders, only women's education, age at first pregnancy, marital duration were the significant correlates for women's reports of any RM. The effect of socio-demographic factors on RM has been previously reported in other studies (Iyoke *et al.,* 2010; Zurayk *et al.,* 1995).

The experience of our research process revealed that women who never attended schools were 5-times more likely to report any morbidity than women with secondary education or higher. This finding might indicate that illiterate women suffer from heavier morbidity burden or they were more to report due to lack of information generally or awareness about morbidity in particular.

Concerning the duration of marriage, our results revealed that longer duration of marriage was associated with more reporting of RM. Long marital duration is associated with high parity and in turn higher obstetric and gynecological morbidities linked to Iyoke *et al.,* 2010. This finding was in accordance with that of Garg *et al.* (2002) who emphasized a positive association between the duration of marriage and the reporting of RM.

Table 1: Self-reported obstetric & gynecological morbidities among the sampled women.

Characteristic	No.	Percentage
Any Pregnancy complication	**180**	**52.9**
Excessive vomiting	52	15.3
Threatening abortion	21	6.2
Severe Fever	28	8.2
Fits	6	1.8
Symptoms of pre-eclampsia after 20 weeks of gestation	33	9.7
Vaginal bleeding after 20 weeks of gestation	7	2.1
Symptoms of severe anemia	149	43.8
Any delivery complication	**68**	**20.0**
Premature rupture of membranes	33	9.7
Abnormal presentation of the fetus	15	4.4
Prolonged labor (>12 hours)	27	7.9
Any post-partum complication	**75**	**22.1**
Heavy bleeding	30	8.8
Symptoms of sepsis	33	9.7
Breast engorgement	13	3.8
Postpartum depression	6	1.8
Any obstetric morbidity	**247**	**72.6**
Total	**340**	**100.0**

Table 2: Self-reported morbidity among the sampled women.

Characteristic	No.	Percentage
Any gynecological morbidity*	**257**	**75.6**
Severe menstrual pain	85	25.8
Menorrhagia*	106	32.1
Hypomenorrhea	17	5.2
Dysparuenia	74	24.1
Symptoms of lower reproductive tract infection	174	51.2
Symptoms of chronic pelvic pain	107	31.5
Prolapse	14	4.1
Symptoms of UTI	119	35.0
Any reproductive morbidity **	**311**	**100**

* Missing data

** Calculated for those reported any obstetric or gynecological morbidity

Table 3: Percentage sought treatment for reproductive morbidity among the sampled women.

Characteristic	Percentage Sought Treatment
Percent sought treatment for any obstetric morbidity*	33.6
Percent sought treatment for any gynecological morbidity**	47.8
Percent sought treatment for any reproductive morbidity	58.5
Type of facility from where treatment was sought#	
Public sector facility	80.1
Private sector facility	26.8
Treatment provided at home	18.1
Type of provider from whom treatment was sought !	
Doctor in a public sector facility	74.2
Doctor in a private sector facility	26.8
Nurse/auxiliary nurse-midwife	11.1
Unqualified provider/pharmacist/ home remedies	19.8

* Percent calculated from women who had any obstetric morbidity.

** Percent calculated from women who had any gynecological morbidity.

! Totals did not sum up to 100% because of multiple responses.

Table 4: Relative risk ratios from stepwise logistic regression for factors affecting RM among the sampled women.

Characteristic	Adjusted Odds Ratio	95% Confidence Interval
Education **		
Illiterate or just read & write	5.51**	2.13- 8.45
Primary & preparatory	1.95*	1.56-3.23
Secondary education or higher ®		
Age at First Pregnancy (years)		
19	1.51*	1.15-1.95
20-24®		
25	1.73*	1.23-2.17
Duration of Marriage (years)**		
<9 yrs ®		
10-19	1.12	0.90-1.49
20	4.34*	2.08-5.48

®: Reference category.

*Significant at p < 0.05, ** Significant at p < 0.01.

In this study, women who got pregnant for the first time at ages older than 25 years or at age lesser than 20 years were more likely to report any RM than those who had their first pregnancy at age 20-24 years (this age group had the least reported morbidity in the present results). Increased morbidity associated with adolescent pregnancy has been long reported (WHO, 2004).

5. Conclusions:

The present results reveal a high prevalence of reported RM among women of reproductive age in Siwa, Egypt. Socio-demographic factors such as education, duration of marriage and women age at first pregnancy were the factors that associated with reported morbidity among the sampled women. This high reported rate in peripheral and remote areas needs to be explored further. In the absence of cost effective tests, health workers have to be trained to carefully elicit symptoms, and use standardized criteria for clinical diagnosis.

Corresponding Author:
Dr. Heba M. Mamdouh
e-mail: hebamamdouh74@gmail.com
Department of Family Health, High Institute of Public Health, Alexandria University, Egypt
165 El Horya Avnue El Hadara, Alex.

References

1. Abou Zahr, C. Maternal mortality overview. In: Murray CJL, Lopez AD, eds. Health dimensions of sex and reproduction: the global burden of sexually transmitted diseases, HIV, maternal conditions, perinatal disorders, and congenital anomalies. Cambridge, MA, Harvard School of Public Health on behalf of the World Health Organization and the World Bank, 1998 (Global Burden of Disease and Injury Series, No. III).
2. Al Riyami, A., Afifi, M. & Fathalla. M.M. (2005). Reliability of Omani women's self-reporting of gynaecologic morbidities. Medical Principles and Practices, 14(2), 92-7.
3. Bhanderi, M.N & Kannan, S. (2010). Untreated reproductive morbidities among ever married women of slums of Rajkot city, Gujarat: the role of class distance, provider attitudes, and perceived quality of care. Journal of Urban Health, 87(2), 254-63.
4. Bhatia, J.C & Cleland, G. (1995). Self reported symptoms of gynecological morbidity and their treatment in South India. Studies in Family Planning, 26(4), 203- 16.
5. Dangal, G. (2008). A study of reproductive morbidity of women in the Eastern Terai Region of Nepal. Nepal Journal of Obstetrics and Gynecology, 3(1), 29-34.
6. El-Mouelhy, M. El-Helw, M., Younis, N, Khattab, H. & Zurayk. H. (1994). Women's understanding of pregnancy-related morbidity in rural Egypt. Reproductive Health Matters, 2, 27-34.
7. El-Zanaty, F., & Way, A. (2008). Egypt Demographic and Health Survey 2008 (Cairo: Ministry of Health and Population, National Population Council, El-Zanaty and Associates, and ORC Macro, 2008).
8. Fahimi, F. The Population Reference Bureau. (2003). Reproductive Health in the Middle East and

North Africa (MENA). 2003; Policy Brief, Feb. Issue.

9. Fahimi, F. The Population Reference Bureau. Gender and Equity in Access to Health Care Services in the Middle East and North Africa. (2006). Available at; (http://www.prb.org/Articles/2006/GenderandEquityinAccesstoHealthCareServicesintheMiddleEastandNorthAfrica.aspx?p=1), Last accessed 20.3.2011.

10. Garg, S., Sharma, N. & Bhalla P, et al. (2002). Reproductive morbidity in an Indian urban slum: need for health action. Sexually Transmitted Infections,78, 68-9.

11. Hawkes, S.L., Morrisson, S., Foster, K., Chakaraborty, J. & Weeling, R. (2000). Reproductive tract infections in women in low income, low prevalence situations: Assessment of syndromic management in Matlab, Bangladesh. The Lancet, 354, 1776-81.

12. Iyoke, C.A, Ezugwu, F.O & Onah, H.E. (2010).Prevalence and Correlates of Maternal Morbidity in Enugu. South-East Nigeria African Journal of Reproductive Health, 14,121-30.

13. Kambo, I.P., Dhillon, B.S, Singh, P., Saxena, B.N. & Saxena NC. (2003). Self reported gynecological problems from twenty three districts from India. Indian Journal of Community Medicine, 28, 67 – 73.

14. Muhammad, Y.Y. (2010). Chronic pelvic pain among women attending family health centers in Alexandria [MPH, Thesis]. Alexandria: University of Alexandria.

15. Murray, J.L, Lopez, A.D. (1998). Quantifying the health risks of sex and reproduction: implications of alternative definitions. In: Murray CJL, Lopez AD, eds. Health dimensions of sex and reproduction: the global burden of sexually transmitted diseases, HIV, maternal conditions, perinatal disorders, and congenital anomalies. Cambridge, MA, Harvard School of Public Health on behalf of the World Health Organization and the World Bank, 1998 (Global Burden of Disease and Injury Series, No. III).

16. Nanda, S. & Tripathy, M. (2005). Reproductive morbidity, treatment seeking behavior and fertility: a study of scheduled caste and tribe women. Journal Human Ecology, 18(1), 77- 83.

17. National Institute of Population Research and Training (NIPORT), ORC Macro, Johns Hopkins University & ICDDR B. (2003). Bangladesh Maternal Health Services and Maternal Mortality Survey 2001. Dhaka, Bangladesh and Calverton, Maryland (USA): NIPORT, ORC Macro, Johns Hopkins University, and ICDDR,B.

18. Rahman, M.M, Kabin, M. & Shahidullah, M. (2004) Adolescent self reported reproductive morbidity and health care seeking behavior. Journal of Ayub Medical College Abbottabad, 16(2), 9-14.

19. Rathore, M., Swani, S.S, Gupta, B.L, et al. (2003). Community based study of self reported morbidity of reproductive tract among women of reproductive age in rural area of Rajasthan. Indian Journal of Community Medicine, 28, 117-21.

20. Sadana, R. (2000). Measuring reproductive health: review of community based to assessing morbidity. Bull World Health Org, 78(5), 640-54.

21. Sharma, S. & Gupta, B.P. (2009).The prevalence of reproductive tract infections and sexually transmitted diseases among married women in the reproductive age group in a rural area. Indian Journal of Community Medicine, 2, 62-4.

22. Siwa Oasis. Information from answers. Com. Available at: http://www.answers.com/topic/siwa-oasis. Last accessed, 25. 1.2011.

23. Sowmini, C.V & Sankara Sarma, P. (2004). Reproductive morbidity among contraceptive users: need for quality services. The Journal of Family Welfare, 50(1),31-7.

24. Zurayk, H., Khattab, H. &Younis, N., et al. (1993). Concepts and measures of reproductive morbidity. Health Transition Review, 3 (1),17-40.

25. Zurayk, H., Khattab, H.. & Younis, N., et al. (1995). Comparing women's reports with medical diagnoses of reproductive morbidity conditions in rural Egypt. Studies in Family Planning, 26, 14-21.

26. Women's freedom comes slowly to a sleepy Oasis. Time in partnership with CNN. Available at: http://www.time.com/time/world/article/0,8599,1630445,00.html. Accessed, 25 January, 2011.

27. World Health Organization. (1990). Measuring reproductive morbidity. Report of a technical working group, Geneva, WHO, unpublished document WHO/MCH/90.4.

28. World Health Organization. (2004). Adolescent Pregnancy: Issues in Adolescent Health and Development. Geneva, World Health Organization, WHO/DOC/ 92 4 159145 5.

5/5/2011