**Prevalence, health and social hazards, and attitude towards early marriage in ever married women, Sohag, Upper Egypt**

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**ABSTRACT:**

**Introduction:** Early marriage is associated with many social, physical and health problems and it is common in many developing countries including Egypt. Many factors affect the decision of marriage timing. In this study, we aim to estimate the prevalence, social and health hazards and to identify the attitudes and factors that affect attitudes towards early marriage.

**Subjects and Methods:** This cross-sectional study was done in Sohag, Upper Egypt. Random samples of ever-married women aged 20-60 years were taken from six districts. A questionnaire was designed to collect the data.

**Results:** The prevalence of early marriage is about 60%. The associated self-reported health and social hazards included: anemia (18%), hemorrhage (27.5%) uterine prolapse (37%), preterm (36%), LBW (31%), delayed immunization of infant (94%), separation from husband (17%) and discontinuation of education (23%). About 42% of studied populations supported early marriage. Reasons for supporting include: to prevent premarital promiscuity(35%) and difficulty to get married later (28%). Reasons for not supporting include harmful to mothers (26%), difficulty in childcare and discontinuation of education (18% each). Final models of factors significantly affecting the women’s attitudes indicated that the factors for not supporting early marriage were: higher education, believing early marriage is due to ignorance or is more among relatives, and is causing health or social problems.

**Conclusion:** Early marriage is still high in Sohag. Including the hazards of early marriage in the curriculum of preparatory and secondary schools as well as encouraging girls to complete their education up to university stage will help in decreasing this problem.

**Keyword:** early marriage, prevalence, attitude, child marriage and Egypt.

**INTRODUCTION:**

The age at first marriage is varying from area to another in the world. However, there are many females married before eighteen year in developing countries (1). Marriage before this age is called “child” or more common “early marriage”. Egypt, one of the developing countries, suffers from this problem with one in sex women is still marry early (2). Egyptian demographic and health survey (EDHS), 2014 (3) showed that the early marriage prevalence ranged from 17%in women aged 20-24 years to 33% in women aged 45-49 years with total prevalence of 23.8% among women aged from 20-49 years.

Early marriage is associated with many social, physical and health problem such as discontinuation of education, depression, anxiety, divorce, anemia, osteoporosis and cervical cancers (4-9). Women married before eighteen are also more exposed to physical and sexual violence than those married after eighteen (10). Early child bearing increases the risk of morbidity and mortality for mothers and infants (1, 6, 11). Early marriage also prolongs the childbearing period which contribute to increase fertility and population problems in Egypt. In addition, infants born to early married women have a high risk of being preterm or having low birth weight (11). In addition, infant mortality was higher in women less than twenty years compared to other women(11).

Many factors affect the decision of marriage timing (9). In this study, we aimed to estimate the prevalence of early marriage in Sohag, Upper Egypt and its related social and health hazards. In addition, women attitude towards early marriage and the factors affecting their attitudes were investigated.

**SUBJECTS AND METHODS:**

This is a cross-sectional study. The study was carried during 2017. The study was done in Sohag, one of Upper Egypt governorates. This study included a sample of ever-married women aged 20-60 years from six clusters.EPI info version 7 was used to calculate sample size. With a 99% confidence interval, a design effect of 2 and a 23.8% prevalence of early marriage (3), the minimum estimated sample size was calculated, at 786 women.

Random samples were taken from six districts. These districts are Sohag, Tahta, Dar El-salam, El-Monshah, Sakolta and Gohina. from each district two area were taken, one represented rural area and the other represented urban areas.

A questionnaire was designed after reading previous articles related to the subject. Pilot study was performed on one hundred women to test the questionnaire and to make and necessary changes. The questionnaire was used to collect data about demographic and social characteristics, age at first marriage, social or health hazards related to early marriage. A direct question, about if they support or not didn't early marriage, was asked to measure their attitude towards early marriage. This was followed by questions about the reasons for supporting or not supporting it.

**Statistical Analysis:**

Data was analyzed by STATA version 12.1 (Stata Statistical Software: Release 12. College Station, TX: Stata Corp LP.). Univariate logistic regression was used to report odds ratio and 95 confidence intervals. Significant data were entered in multivariate analysis. Only final model with significant variable in multivariate analysis was kept and shown in the results. Significant level was set if P value is less than0.05.

**RESULTS:**

This study included 1064 ever married women with a mean age of 35 years. Other sociodemographic characteristics were shown in table (1).

**Table 1: Sociodemographic characteristics of studied women, Sohag, Egypt, 2017**

|  |  |
| --- | --- |
| **Variables** | **Summary statistics** |
| **Age**  Mean ± SD  Median (range) | 34.83 ± 8.47  33 (20-60) |
| **Age group**  <30 years  30 - <40 years  40 - <50 years  ≥50 years | **No. (%)**  398 (37.41)  403 (37.88)  184 (17.29)  79 (7.42) |
| **Residence**  Rural  Urban | 541 (50.85)  523 (49.15) |
| **Religion**  Muslims  Christian | 905 (85.06)  159 (14.94) |
| **Level of education**  Less than secondary  Secondary or more | 577 (54.23)  487 (45.77) |
| **Occupation**  Not working for cash  Working for cash | 672 (63.16)  392 (36.84) |
| **Family members**  ≤5  >5  Mean ± SD  Median (range) | 391 (36.75)  673 (63.25)  6.72±2.24  7 (3 – 12) |
| **Family income**  ≤2000  >2000 | 713 (67.01)  351 (32.99) |
| **Marital status**  Married  Divorced or widow | 867 (81.48)  197 (18.52) |

**Prevalence of early marriage:** Table (2) showed that the mean marriage age was 17.86 ± 3.27 years. It was significantly decreasing with age. It was 19.19 ± 2.46 in women aged ≤30 years, decreased gradually to reach 15.15 ± 1.77 in those aged >50 years (p<0.0001). The overall prevalence of early marriage was about 60%. It was lower in women aged ≤30 years (31%) compared to other age groups (about 77-78%, p<0.0001). It was lower in urban than rural areas (37 % vs. 82%, p<0.0001). Women with secondary or higher education had lower prevalence than those with less than secondary education (22% vs. 92%, p <0.0001). There was no relation between prevalence of early marriage and religion (0=0.68) .

**Table 2: Prevalence of early marriage by different characteristics of** **studied women, Sohag, Egypt, 2017**

|  |  |  |
| --- | --- | --- |
| **Variable** | **Prevalence of early marriage**  **No. (%)** | **P value** |
| **All women** | 640 (60.15) |  |
| **Age group**  <30 years  30 - <40 years  40 - <50 years  ≥50 years | 125 (31.41)  311 (77.17)  142 (77.17)  62 (78.48) | <0.0001 |
| **Residence**  Rural  Urban | 446 (82.44)  194 (37.09) | <0.0001 |
| **Religion**  Muslims  Christian | 542 (59.64)  98 (61.64) | 0.68 |
| **Level of education**  Less than secondary  Secondary or more | 533 (92.37)  107 (21.97) | <0.0001 |

**Hazards of early marriage:**  Table (3) showed that women married before 18 years had health and social hazards and their infants also had affected. Health hazards included anemia (18%), hemorrhage (27.5%), uterine prolapse (37%), toxemia of pregnancy (8%) and gestational diabetes (4%). The social problems reported were separation from husband (17%) and discontinuation of education (23%). Mothers reported that many of them had preterm deliveries (36%) and low birth weight (LBW) infants (31%). Immunization was delayed for most of infants born to women younger than eighteen (94%).

**Table 3: Health and social hazards of early marriage reported by early married women, Sohag, Egypt, 2017**

|  |  |
| --- | --- |
| **Hazards** | **No. (%)** |
| **Health hazards #**  Anemia  Hemorrhage  Uterine prolapse  Toxemia of pregnancy  Gestational diabetes | 450 (70.31)  117 (18.28)  176 (27.50)  237 (37.03)  50 (7.81)  28 (4.38) |
| **Social problems**#  Separation from husband  Discontinuation of education | 181 (28.28)  106 (16.56)  150 (23.44) |
| **Problem to infants#**  Preterm  Low birth weight  Delayed immunization | 599 (93.59)  232 (36.25)  202 (31.56)  599 (93.59) |

# The total does not sum up to 100% due to multiple responses

**Attitude towards early marriage:** As shown in table (4), about 42% of studied populations supported early marriage. Reported reasons for supporting early marriage were; to prevent premarital deviation (35%), difficult to get married later (28%), less annoying to parents (13%), less cost (15%) and helping in childcare (8%). Reasons for not supporting early marriage were; harmful to mother (26%), difficulty in childcare, discontinuation of education (18% each), hinders mother’s ambition (14%), mother death due to childbirth (12%), and causing anemia for the mother (9%).

**Table 4: Attitude** **of studied women towards early marriage, Sohag, Egypt, 2017**

|  |  |
| --- | --- |
| **Variables** | **Number (%)** |
| **Attitude towards early marriage**  Not supporting  Supporting | 613 (57.61)  451 (42.39) |
| **Reasons for supporting early marriage**  Prevent premarital promiscuity  Difficult to get married later  Less annoying to parents  Less cost  Helping in child care | 160 (35.48)  130 (28.82)  58 (12.86)  68 (15.08)  35 (7.76) |
| **Reasons for not supporting early marriage**  Harmful to mother’s  Difficulty in childcare  Mother death due to childbirth  Causing anemia for the mother  Personal ambition prevention  Discontinuation of education  Others | 159 (25.94)  111 (18.10)  74 (12.07)  56 (9.06)  87 (14.19)  109 (17.78)  17 (2.77) |

**Factors affecting attitude towards early marriage:** Table (5) showed univariate analysis of factors affecting attitude towards early marriage. Women aged more than 40 years, those with family members more than five, and those believing that early marriage is due to poverty were supporting early marriage. On the other hand, women from urban residence, those with secondary or higher education, with family income more than 2000 pounds, with previous early marriage, believing that early marriage is due to tradition, ignorance, is common in relatives, causing health, social or community problems were not supporting early marriage. However, factors like religion, occupation or marital status did not affect the attitude towards early marriage. In multivariate analysis, many factors became insignificantly related to the attitude to early marriage.

**Table 5: Factors affecting attitude of studied women towards early marriage, Sohag, Egypt, 2017**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Variables** | **No. (%)** | **Attitude towards early marriage** | | **Odds ratio (95% confidence interval)** | **P value** |
| **Not support**  **N=627**  **No (%)** | **Support**  **N=437**  **No (%)** |
| **Socioeconomic characteristics** | | | | | |
| **Age group**  ≤ 40 years  > 40 years | 801 (75.8)  263 (24.72) | 554 (90.38)  59 (9.62) | 247 (54.77)  204 (45.23) | 1  7.76 (5.59-10.74) | <0.0001\* |
| **Residence**  Rural  Urban | 541 (50.85)  523 (49.15) | 291 (47.47)  322 (52.53) | 250 (55.43)  201 (44.57) | 1  0.72 (0.57-0.93) | 0.01\* |
| **Religion**  Muslims  Christian | 905 (85.06)  159 (14.94) | 521 (84.99)  92 (15.01) | 384 (85.14)  67 (14.86) | 1  0.99 (0.70-1.39) | 0.95 |
| **Level of education**  Less than secondary  Secondary or more | 577 (54.23)  487 (45.77) | 193 (31.48)  420 (68.52) | 384 (85.14)  67 (14.86) | 1  0.08 (0.06-0.11) | <0.0001\* |
| **Occupation**  Not working for cash  Working for cash | 672 (63.16)  392 (36.84) | 382 (62.321)  231 (37.68) | 290 (68.30)  161 (35.70) | 1  0.91 (0.71-1.18) | 0.51 |
| **Family members**  ≤5  >5 | 391 (36.75)  673 (63.25) | 348 (56.77)  265 (43.23) | 43 (9.53)  408 (90.47) | 1  12.46 (8.76-17.73) | <0.0001\* |
| **Family income**  ≤2000  >2000 | 713 (67.01)  351 (32.99) | 381 (62.15)  232 (37.85) | 332 (73.61)  119 (26.39) | 1  0.59 (0.45-0.77) | <0.0001\* |
| **Marital status**  Married  Divorced or widow | 867 (81.48)  197 (18.52) | 502 (81.89)  111 (18.11) | 365 (80.93)  86 (19.07) | 1  1.06 (0.78-1.46) | 0.69 |
| **Previous early marriage** | | | | | |
| **Age of marriage**  < 18  ≥ 18 | 640 (60.15)  424 (39.85) | 260 (42.41)  353 (57.59) | 380 (84.26)  71 (15.74) | 1  0.14 (0.10-0.19) | <0.0001\* |
| **Beliefs & knowledge** | | | | | |
| **Early marriage is due to poverty**  No  Yes | 837 (78.67)  227 (21.33) | 521 (84.99)  92 (15.01) | 316 (70.07)  135 (29.93) | 1  2.41 (1.79-3.26%) | <0.0001\* |
| **Early marriage is due to tradition**  No  Yes | 785 (73.78)  279 (26.22) | 400 (65.25)  213 (34.75) | 385 (85.37)  66 (14.63) | 1  0.32 (0.24-0.44) | <0.0001\* |
| **Early marriage is due to ignorance**  No  Yes | 477 (44.83)  587 (55.17) | 109 (17.78)  504 (82.22) | 368 (81.60)  83 (18.40) | 1  0.05 (0.04-0.07) | <0.0001\* |
| **Early marriage is more among relative**  No  Yes | 256 (24.06)  808 (75.94) | 83 (13.54)  530 (86.46) | 173 (38.36)  278 (61.64) | 1  0.25 (0.19-0.34) | <0.0001\* |
| **Early marriage has health or social hazards for family**  No  Yes | 301 (28.29)  763 (71.71) | 66 (10.77)  547 (89.23) | 235 (52.11)  216 (47.89) | 1  0.11 (0.08-0.15) | <0.0001\* |
| **Early marriage has bad effect on community**  No  Yes | 343 (32.24)  721 (67.76) | 86 (14.03)  527 (85.97) | 257 (56.98)  194 (43.02) | 1  0.12 (0.09-0.17) | <0.0001\* |

\* P <0.05 is statistically significant

Table (6) showed final models of factors significantly affecting the women’s attitudes. Only women with family members more than five were supporting early marriage (odds ratio 2.79- CI 1.62:4.77). Higher education, believing early marriage is due to ignorance or is more among relatives, or is causing health or social problems were factors not supporting early marriage.

**Table 6: Final multivariate regression model of factor supporting early marriage**

|  |  |  |
| --- | --- | --- |
| **Variables** | **Odds ratio (95% confidence interval)** | **P value** |
|
| **Level of education**  Less than secondary  Secondary or more | 1  0.35 (0.21-0.58) | <0.0001\* |
| **Family members**  ≤5  >5 | 1  2.79 (1.62-4.77) | <0.0001\* |
| **Early marriage is due to ignorance**  No  Yes | 1  0.12 (0.08-0.18) | <0.0001\* |
| **Early marriage is more among relative**  No  Yes | 1  0.29 (0.19-0.43) | <0.0001\* |
| **Early marriage has health & social hazards for family**  No  Yes | 1  0.54 (0.35-0.84) | 0.0006\* |

\* P <0.05is statistically significant

**DISCUSSION:**

Early marriage before eighteen is shown to have may drawbacks on the health of the mothers and their children(12). It is prohibited in many countries (12) including Egypt (3). EDHS (3) showed that age at first marriage decreases with age, with prevalence rate of early marriage of 23.8% for all women from age 20 to 49 years. In this study, although the prevalence rate of early marriage dropped from 78% in older groups to 31% in women aged less than thirty, the prevalence was 60% for all women. Many factors could be related to the reported high prevalence in this study. For the overall prevalence, we included women aged up to sixty and the prevalence increase in proportional to the increase in women’ age. Early marriage rate was also high in many developing countries e.g. including Bangladesh (65%) (13), Yemen (48.4%) (14), South Asia (48%) and Africa (42%) (15).

In this study, the prevalence was lower in urban than rural areas. This is in context with data from EDHS (3) that showed that the age at marriage was 4 years earlier in rural upper Egypt than urban governorates. High early marriage prevalence in rural areas was reported in many studies from different countries (11, 16, 17). In Egypt, early marriage is associated with lower wealth, lower education levels, and higher labor force participation that are more common in rural area (2).

Previous studies (13, 18-21) reported that female education is an important determinant of early marriage. Education have an important role in delaying time of marriage. It also gives women new ideas and help in controlling their decision. Education helps women to improve their career and to wait for better match (22). The present study showed that women with secondary or higher education had lower prevalence than those with less than secondary education. This indicate the importance of female education in reducing early marriage.

A report from UNICEF showed that being a member of majority or minority religious group may or may not affect marriage before eighteen (15). Our study reported no relation between prevalence of early marriage and religion.

Many social, physical and health problems like discontinuation from education, divorce, anemia, osteoporosis, cervical cancers, physical and social violence, increased morbidity and mortality for both mother and child including preterm and LBW were reported in previous studies (1, 4-11). Our study also showed that women who were married early reported that they suffered from many health problems mostly uterine prolapse (37%), hemorrhage (27.5%), and anemia (18%). This study also found that about one-fifth early married females suffered from social problem as separation from husband and discontinuation of education. We also found that about one-third of infants born to early married women were preterm and/or of LBW and most of them (94%) their immunization was delayed.

Our study showed that 42% of studied population still supported early marriage. Higher proportion of women in our study support early marriage than that from Bangladesh (13). This is because our study included all women till age 60 years and not adolescents only.

Our stud showed that the reported reasons for supporting early marriage were; to prevent premarital deviation (35%), difficult to get married later (28%), less annoying to parents (13%), less cost (15%) and helping in childcare (8%).This is in context with data from study from Bangladesh (13) that showed that the main reasons for supported early marriage were less chance to go astray (24.5%), very difficult to get married at later ages (23.5%) and less troublesome to the parents (22.9%).

Reason for not supporting early marriage, in this study were; harmful to mother (26%), difficulty in childcare discontinuation of education (18% each), hinders mother’s ambition (15%), mother death due to childbirth (13%), and causing anemia for the mother (10%). Similar findings were reported from a study in Bangladesh (13): leading to maternal and child health problems (37.7%) and physical immaturity to have a child and difficult rearing an immature child (57.4%) were the main reasons for not supporting early marriage. Another study in Pakistan (23)also showed the main reasons for not supporting early marriage were: harmful to mother’s (26%), difficulty in childcare and discontinuation of education (18% each).

Many studies (9, 16, 24-26) that investigated the determinants of early marriage showed that the most important determinants of early marriage showed that most important determinants were related to traditional, cultural lack of awareness of hazards of early marriage and poverty. These studies emphasized on the importance of girls’ education to prevent the early marriage. Our study showed similar finding as we found that, many factors were affecting women attitude towards early marriage including age, poverty, residence, education, family income, tradition and ignorance. However, in multivariate analysis, the significant factors for not supporting early marriage were higher education, believing early marriage is due to ignorance or is more among relative, or is causing health or social problems. These finding indicate the important role of education of either girls or their parent on facing the problem of early marriage.

**Strengths and Limitations of the study:**

This study is a community-based study that included many women from rural and urban area from 6 district that represent all population in Sohag, one of the Upper Egypt governorates. So, it is possible to generalize our results to other governorates with similar characteristics. In addition, the prevalence, hazards and attitude of women were obtained by self-reporting. However, there is some limitations of this study; mainly the recall bias of self-reported morbidity especially of elderly women. Some questions included medical terms such as uterine prolapse, gestational diabetes, preterm, low birth weight etc., that need to be explained to some women to obtain a true response.

**CONCLUSION:**

This study indicated that, in spite of decreasing with age, the rate of early marriage is still high in Sohag governorate, Upper Egypt. The rate can be reduced by health education of parents about health and social hazards of early marriage on women and their children and encourage them to delay marriage until the legal age of marriage. Other important ways to decrease the early marriage is to include the hazards of early marriage in the curriculum of preparatory and secondary schools and by encouraging girls to complete their secondary and university level which will delay marriage.

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