

FATE OF UNPLANNED PREGNANCIES AND THEIR PSYCHOLOGICAL EFFECTS

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ABSTRACT

Objective: To identify the prevalence of unplanned pregnancies and obstetric outcomes and psychological effects in pregnant women using a standardized depression screening tool.

Materials and Methods: The study was a cross-sectional study carried out in the Obstetrics and Gynecology Unit of Dow University of Health Sciences/Dr. Ruth K.M. Pfau Civil Hospital, Karachi for six months. The sampling technique used in the study was non-probability consecutive sampling with a total of 217 pregnant women aged 18-35 years. Baseline data was collected, such as education, parity, residence, employment status, pregnancy intention and contraceptive use at conception. A cohort of women with unplanned pregnancies was tracked for pregnancy outcomes, such as the mode of delivery, premature labour and abortion. Psychological impact was evaluated by the Edinburgh Postnatal Depression Scale (EPDS) wherein a score of ≥ 13 was taken to represent depression.

Results: Of the 217 respondents, 123 (56.7%) experienced an unplanned pregnancy. Majority of the participants were multiparous (59.0%), had formal education (65.4%), were residing in urban area (71.9%) and were housewives (83.4%). Of women with unplanned pregnancies, 76 (61.8%) had vaginal births, 47 (38.2%) had cesarean deliveries, 21 (17.1%) had preterm births and 12 (9.8%) had abortions. 38 (30.9%) women with unplanned pregnancies were identified as being depressed by EPDS screening. Unplanned pregnancy was significantly associated with lack of contraceptive use and higher parity.

Conclusion: Unplanned pregnancy was high among women attending a tertiary care hospital with psychological distress being high, which included depression symptoms.

KEYWORDS: Depression; Pregnancy; Pregnancy Outcome; Pregnancy, Unplanned; Psychological Distress.

INTRODUCTION

Unplanned pregnancy continues to be a reproductive health issue worldwide and affects mother's wellbeing, pregnancy outcomes and family dynamics. While contraceptive and reproductive health services have made it easier to plan pregnancy, a significant number of pregnancies are still unplanned. Unplanned pregnancy can include emotional conflict, pregnancy continuation uncertainty and heightened psychosocial stress, which can impact upon maternal psychological well-being during pregnancy and in the post-natal period. Muskens et al. showed that unplanned pregnancy is a risk factor for perinatal depression, making pregnancy intention an important factor in mental health outcomes for mothers [1].

Multiple factors, such as personal vulnerability, socioeconomic conditions, social support, relationship stability, and reproductive health care, interact to contribute to the psychological impact of an unintended pregnancy. A systematic review and meta-analysis by Schonewille et al. revealed that women with psychiatric vulnerability may be at increased risk for unintended pregnancies, indicating that there is a complicated bidirectional relationship between psychiatric vulnerability and pregnancy intention [2]. In addition, unintended pregnancy is known to be linked to poor maternal and infant health, such as heightened psychological suffering and difficulties adapting to pregnancy, as indicated by large-scale evidence syntheses [3].

An unwanted or unplanned pregnancy could also have psychological consequences. Sasaki et al. discovered that unintended pregnancy was linked to ongoing psychological distress, suggesting that impacts can last beyond the antenatal period [4]. Likewise, analyses of women who have gone on to have unintended pregnancies have indicated potential consequences on emotional adjustment, maternal wellbeing, and family relationships [5-6]. The psychological reaction can also impact early mother-infant interaction; recent longitudinal studies have shown that unintended pregnancy is linked to poor maternal bonding in both pregnancy and postpartum [7-8].

The impacts of an unwanted pregnancy can also be snowballed to the effects on child development and the functioning of the family. Beumer et al. suggested that the effect of unintended pregnancy could extend to long-

term psychosocial outcomes for children and that pregnancy intention could potentially have broader implications than just for the mothers' health [9]. Further, in studies assessing stress, anxiety, and depressive symptoms in women with unplanned pregnancies, a psychological dimension of reproductive health outcomes is considered crucial [10].

Although there has been greater awareness regarding the psychological impact of pregnancy and the psychological health of women, the psychological implications of unplanned pregnancies and their long-term effects are still poorly understood. Current evidence indicates links with depression, anxiety, stress, impaired maternal bonding and potential impacts on child development; differences between populations and healthcare contexts need to be explored. Knowledge about the fate of unplanned pregnancies and their psychological impact is crucial to design targeted counselling strategies, psychosocial support and to enhance reproductive health interventions for women and families impacted by unplanned pregnancies.

MATERIAL AND METHODS

A cross-sectional study was carried out in Obstetrics and Gynecology unit at the Dow University of Health Sciences/ Dr. Ruth K.M. Pfau Civil Hospital, Karachi. The study was conducted for six months. The non-probability consecutive sampling technique was used in recruiting the participants.

Sample size was calculated by WHO sample size calculator with a 95% Confidence level, absolute precision of 5%, expected frequency of unplanned pregnancy of 17.2%, and the required sample size of 217 participants. Pregnant women aged 18–35 years were included in the study. Women with a previous history of depression (recording in medical records) or a positive family history of depression or with a history of autoimmune disorders (recording in medical records) were excluded.

An unplanned pregnancy was defined operationally as a pregnancy that did not result from the (married) couple's intention to conceive, even when they used contraceptives. The eligible participants who came to the outpatient and inpatient departments of Obstetrics and Gynecology were approached and informed consent was obtained before enrolment. Using a structured questionnaire, baseline demographic and clinical characteristics such as age, parity (primiparous or multiparous), duration of marriage, educational level, area of residence, employment status (housewife or working woman) and pregnancy intention status were documented.

Maternal and pregnancy-related outcomes, such as mode of delivery, preterm labour, abortion and the psychological impact were also assessed among women who had an unintended pregnancy. The method of delivery was classified as either vaginal or cesarean section. Preterm labor was considered to be contractions starting before 37 completed weeks of gestation, and abortion was considered to be the expulsion of products of conception either spontaneously or induced at or before 24 weeks of gestation. Psychological effects were evaluated by screening for depression with the Edinburgh Postnatal Depression Scale (EPDS). The score of ≥ 13 was used to denote depression. Psychological and obstetric support were given to those who needed it in line with standard clinical guidelines and follow-up undertaken until six weeks postpartum.

The statistical package for social sciences (SPSS) version 25 was used in analysis of data. Normality of continuous variables such as age, gestational age and duration since marriage was evaluated using Shapiro–Wilk test and reported as median (IQR) or mean $\pm$ standard deviation as appropriate. Categorical variables such as parity, educational status, residence, employment status, pregnancy intention, pregnancy outcomes and psychological impact were reported as frequencies and percentages. The prevalence of unplanned pregnancy and its outcomes was analysed by age, parity, length of marriage, education levels, living area and employment status as potential effect modifiers. We used the Chi-square test or Fisher's exact test as appropriate to determine associations between categorical variables. A p-value of ≤ 0.05 was considered statistically significant.

RESULTS

A total of 217 pregnant women were included in the study. The mean age of participants was 27.4 ± 4.2 years, with a median duration since marriage of 5 years (IQR: 3–8 years). The majority of participants were multiparous, had formal education, resided in urban areas, and were housewives. Out of all participants, 123 (56.7%) women reported their current pregnancy as unplanned, whereas 94 (43.3%) reported a planned pregnancy. Contraceptive use at the time of conception was reported by 52 (24.0%) women, while 165 (76.0%) women had not used contraception.

The baseline characteristics of participants are summarized in **Table 1**. Among the study population, 128 (59.0%) women were multiparous and 89 (41.0%) were primiparous. Formal education was present among 142 (65.4%) participants, while 75 (34.6%) were illiterate. Most participants belonged to urban areas (156; 71.9%), and 181 (83.4%) women were housewives.

Table 1: Baseline characteristics of study participants (n=217)

Variables	n (%)
Age group (years)	
18–25	72 (33.2)
26–35	145 (66.8)
Parity	

Primiparous	89 (41.0)
Multiparous	128 (59.0)
Education status	
Illiterate	75 (34.6)
Formal education	142 (65.4)
Area of residence	
Rural	61 (28.1)
Urban	156 (71.9)
Employment status	
Housewife	181 (83.4)
Working woman	36 (16.6)
Status of pregnancy	
Planned	94 (43.3)
Unplanned	123 (56.7)
Use of contraception at conception	
Yes	52 (24.0)
No	165 (76.0)

Among women with unplanned pregnancies (n=123), pregnancy outcomes were assessed until six weeks postpartum. Vaginal delivery was the most common mode of delivery, while cesarean delivery was observed in a smaller proportion of women. Preterm labor occurred among 21 (17.1%) participants, whereas abortion was reported among 12 (9.8%) women. **Table 2**

Table 2: Outcomes of unplanned pregnancy (n=123)

Outcomes	n (%)
Mode of delivery	
Vaginal delivery	76 (61.8)
Cesarean section	47 (38.2)
Preterm labor	
Yes	21 (17.1)
No	102 (82.9)
Abortion (spontaneous/induced)	
Yes	12 (9.8)
No	111 (90.2)

Psychological impact was assessed using the Edinburgh Postnatal Depression Scale (EPDS). A score of ≥ 13 was considered indicative of depression. Among women with unplanned pregnancies, 38 (30.9%) participants screened positive for depression, while 85 (69.1%) did not meet the criteria for depression. **Table 3**

Table 3: Psychological impact of unplanned pregnancy based on EPDS score (n=123)

Psychological impact	n (%)
Depression (EPDS ≥ 13)	38 (30.9)
No depression (EPDS < 13)	85 (69.1)

Women with no contraceptive use had a higher frequency of unplanned pregnancy compared with those who used contraception. Age group, area of residence, and employment status were also assessed; however, their association with pregnancy intention was determined based on statistical significance testing. **Table 4**

Table 4: Association of baseline characteristics with status of pregnancy (n=217)

Variables	Planned pregnancy n (%)	Unplanned pregnancy n (%)	p-value
Age group (years)			
18–25	37 (51.4)	35 (48.6)	0.082
26–35	57 (39.3)	88 (60.7)	
Parity			
Primiparous	50 (56.2)	39 (43.8)	0.003
Multiparous	44 (34.4)	84 (65.6)	
Education status			
Illiterate	24 (32.0)	51 (68.0)	0.001
Formal education	70 (49.3)	72 (50.7)	
Area of residence			
Rural	23 (37.7)	38 (62.3)	0.245
Urban	71 (45.5)	85 (54.5)	
Employment status			
Housewife	74 (40.9)	107 (59.1)	0.091

Working woman	20 (55.6)	16 (44.4)	
Use of contraception at conception			
Yes	34 (65.4)	18 (34.6)	<0.001
No	60 (36.4)	105 (63.6)	

DISCUSSION

The present study aimed to assess the fate of unplanned pregnancy and psychological impact of unplanned pregnancy on pregnant women, especially focusing on maternal characteristics, pregnancy outcomes and depression measured using the Edinburgh Postnatal Depression Scale (EPDS). Over half of the women in this study experienced an unplanned pregnancy and about a third of women who had an unplanned pregnancy had a positive depression screen. This finding illustrates that unwanted pregnancy continues to be a significant reproductive health concern, which can impact not only obstetric outcomes but also on maternal psychological wellbeing.

The findings of the current study regarding the relationship between unplanned pregnancy and depressive symptoms are similar to previous studies. Among a socioeconomically disadvantaged and diverse population, Czech et al. noted that unplanned pregnancy was related to higher risk of perinatal depression, suggesting that pregnancy intention may impact emotional adaptation during pregnancy [11]. In a similar vein, Beumer and her colleagues found that women who keep their unplanned pregnancies can also have negative psychological effects, thus showing that the psychological impact of an unplanned pregnancy is not just limited to the ante-natal stage of pregnancy [12].

Multiparity and non-use of contraceptive were significant factors that were associated with unplanned pregnancy in the present study. These results could be a consequence of difficulties with access to contraceptives, reproductive decision-making, and family planning. Unintended pregnancy has been found to have long-term effects on mental health and wellbeing for mothers previously. According to Herd et al., the effects of unintended pregnancies on mental health are not limited to the immediate pregnancy period, as unintended pregnancy was associated with worse mental health outcomes later in life [13]. In a similar vein, Hall et al. pointed out that unwanted pregnancy is associated with psychological distress and negative mental health outcomes for women, but that the strength of the association will depend on social and health care settings [14].

In the present study pregnancy outcomes such as mode of delivery, preterm labour and abortion were also evaluated. While the majority of women having unplanned pregnancies went on to complete their pregnancies - often beyond the point of viability, a percentage of them suffered negative consequences. Unintended pregnancy was found to be related to adverse psychological outcomes for mothers and the authors emphasized the need to include pregnancy intention as a component of maternal health [15]. Moreover, the results of systematic review evidence by Fellenzer and Cibula showed that intendedness of pregnancy is an important factor affecting the psychological adjustment and emotional wellbeing of mothers [16].

Women experiencing unplanned pregnancies might be susceptible to depression due to many factors such as emotional stress, monetary issues, lack of support, and doubts about being a mother. Lancaster et al. found psychosocial stressors to be important factors in depressive symptoms during pregnancy and thus early psychological assessment of vulnerable women is required [17]. Biaggi et al. also pointed out that risk factors in biological, psychological and social aspects affect antenatal anxiety and depression and that early identification and intervention is important [18].

Pregnancy intention might also affect the course of psychological symptoms over the course of pregnancy and postpartum. Bayrampour et al. found that psychosocial factors during pregnancy are important predictors of depressive and anxiety symptom patterns in the perinatal period [19]. Further, unintended pregnancy can contribute to parental wellbeing and family functioning, as was noted by Gipson et al. who detailed the larger impacts of unintended pregnancy on parents and children, including emotional and developmental impacts [20].

The current study possessed a number of strengths. First, it evaluated both obstetric and psychological outcomes of an unplanned pregnancy and offered a full picture of the impact of an unplanned pregnancy. Second, depression was assessed with a validated screening tool (EPDS) which enabled standardized assessment of maternal psychological wellbeing. Third, sampling was done systematically in a tertiary care setting, which helped in the recruitment of eligible participants. Moreover, women with a history of depression were excluded to minimize potentially confounding psychiatric disorders.

Limitations Of Study: There were some limitations to this study. A cross-sectional design prevented the possibility of drawing conclusions about temporal and causal relationships between unplanned pregnancy and psychological outcomes. This study was done at one tertiary care facility, which may limit the ability to extrapolate the results to women who receive care elsewhere in the health care system or in other communities. Psychological assessment was done on the screening basis instead of clinical psychiatric diagnosis. Additionally, there was limited measure of the quality of the relationship with the spouse, the level of social support, and cultural influences.

RECOMMENDATIONS

Multicentre Longitudinal studies are warranted for the assessment of psychological outcomes across pregnancy and postpartum. Incorporate routine screening of depression and anxiety into antenatal care, especially for women

who are having an unplanned pregnancy. Increased family planning counselling, better availability of contraceptive methods and psychosocial support services can help mitigate the negative impacts of unintended pregnancies.

CONCLUSION

Unplanned pregnancy is accompanied by significant psychological and emotional distress, and can lead to poor pregnancy outcomes. Women with unplanned pregnancies and reproductive counselling and mental health care may enhance pregnancy outcomes and maternal wellbeing if appropriately identified.

REFERENCES

1. Muskens L, Boekhorst MGBM, Kop WJ, van den Heuvel MI, Pop VJM, Beerthuisen A. The association of unplanned pregnancy with perinatal depression: a longitudinal cohort study. *Arch Womens Ment Health*. 2022;25(3):611-620. doi:10.1007/s00737-022-01225-9.
2. Nelson HD, Darney BG, Ahrens K, Burgess A, Jungbauer RM, Cantor A, et al. Associations of unintended pregnancy with maternal and infant health outcomes: a systematic review and meta-analysis. *JAMA*. 2022;328(17):1714-1729. doi:10.1001/jama.2022.19097.
3. Schonewille NN, Rijkers N, Berenschot A, Lijmer JG, van den Heuvel OA, Broekman BFP. Psychiatric vulnerability and the risk for unintended pregnancies: a systematic review and meta-analysis. *BMC Pregnancy Childbirth*. 2022;22:153. doi:10.1186/s12884-022-04452-1.
4. Sasaki N, Ikeda M, Nishi D. Long-term influence of unintended pregnancy on psychological distress: a large sample retrospective cross-sectional study. *Arch Womens Ment Health*. 2022;25(6):1119-1127. doi:10.1007/s00737-022-01273-1.
5. Smith I, McCauley M, Lassi ZS, et al. Associations between unintended pregnancy and mental health problems among fathers: a systematic review and meta-analysis. *BMC Pregnancy Childbirth*. 2023;23:420. doi:10.1186/s12884-023-05782-0.
6. Beumer WY, van Ditzhuijzen J, van der Pal-de Bruin KM, van der Wal MF, Steegers EAP. Carrying an unintended pregnancy to term and long-term maternal psychological health outcomes. *J Psychosom Obstet Gynecol*. 2023;44(4):1-10. doi:10.1177/17455057231213737.
7. Ohashi Y, et al. Is your pregnancy unwanted or unhappy? Psychological characteristics of expectant women experiencing difficulties adjusting to pregnancy. *Healthcare (Basel)*. 2023;11(15):2196. doi:10.3390/healthcare11152196.
8. Beumer WY, van der Pal-de Bruin KM, van der Wal MF, et al. Long-term effects of unintended pregnancy on children's psychosocial development. *Soc Sci Med*. 2024;347:116820. doi:10.1016/j.socscimed.2024.116820.
9. Kaneko H, Makino Y, Nakano M, Takahashi Y, Matsui M, Ogawa K. The effects of unintended pregnancy on maternal bonding from pregnancy to postpartum period: a prospective longitudinal study. *BMC Pregnancy Childbirth*. 2025;25. doi:10.1186/s12884-025-07642-9.
10. Khodadoust M, et al. How does an unplanned pregnancy affect maternal stress, anxiety, and depression? A cross-sectional study. *BMC Pregnancy Childbirth*. 2025;25. doi:10.1186/s12884-025-07458-y.
11. Czech KA, Hamil J, Taple BJ, et al. Unplanned pregnancy and perinatal depression: secondary exploratory analyses from a racially and ethnically diverse, low-income sample of birthing people in the United States. *BMC Pregnancy Childbirth*. 2025;25:870. doi:10.1186/s12884-025-08009-w.
12. Beumer WY, Roseboom TJ, van Ditzhuijzen J. Mental health after unintended pregnancy: psychological consequences of carrying unintended pregnancies to term. *Arch Womens Ment Health*. 2026;29(4). doi:10.1007/s00737-026-01745-8.
13. Herd P, Higgins J, Sicinski K, Merkurieva I. The implications of unintended pregnancies for mental health in later life. *Am J Public Health*. 2016;106(3):421-429. doi:10.2105/AJPH.2015.303006.
14. Hall KS, Dalton VK, Johnson TRB, Harris LH, Finer LB. Unintended pregnancy and mental health outcomes among women: evidence from population-based studies. *Contraception*. 2017;95(6):549-555. doi:10.1016/j.contraception.2017.02.008.
15. Bahk J, Yun SC, Kim YM, Khang YH. Impact of unintended pregnancy on maternal mental health: a prospective cohort study. *BMC Pregnancy Childbirth*. 2015;15:206. doi:10.1186/s12884-015-0505-4.
16. Fellenzer JL, Cibula DA. Intendedness of pregnancy and maternal mental health outcomes: systematic review. *J Psychosom Obstet Gynecol*. 2014;35(4):105-112. doi:10.3109/0167482X.2014.967804.
17. Lancaster CA, Gold KJ, Flynn HA, Yoo H, Marcus SM, Davis MM. Risk factors for depressive symptoms during pregnancy: a systematic review. *Am J Obstet Gynecol*. 2010;202(1):5-14. doi:10.1016/j.ajog.2009.09.007.
18. Biaggi A, Conroy S, Pawlby S, Pariante CM. Identifying the women at risk of antenatal anxiety and depression: a systematic review. *J Affect Disord*. 2016;191:62-77. doi:10.1016/j.jad.2015.11.014.
19. Bayrampour H, Tomfohr L, Tough S. Trajectories of perinatal depressive and anxiety symptoms: pregnancy intention and psychosocial predictors. *J Affect Disord*. 2016;197:169-176. doi:10.1016/j.jad.2016.03.014.
20. Gipson JD, Koenig MA, Hindin MJ. The effects of unintended pregnancy on infant, child, and parental outcomes: a review of evidence. *Stud Fam Plann*. 2008;39(1):18-38. doi:10.1111/j.1728-4465.2008.00151.x.