

Impact of an Educational Program about Preeclampsia for Maternity Nurses on their Performance and Pregnancy Outcomes

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Abstract

Background: Preeclampsia and eclampsia are the most common causes of morbidity affecting mothers and their fetus. Aim: The aim of this study was to evaluate the impact of an educational program about preeclampsia for maternity nurses on their performance and pregnancy outcomes. Subject and methods: A quasi-experimental design was used. The subjects of the study include two groups as the following: a convenience sample of all nurses (30) who work in the obstetric and gynecological departments in Port Said Hospitals and all inpatient women diagnosed Aim: The aim of this study was to evaluate the impact of an educational program about preeclampsia for maternity nurses on their performance and pregnancy outcomes. Subject and methods: A quasi-experimental design was used. The subjects of the study include two groups as the following: a convenience sample of all nurses (30) who work in the obstetric and gynecological departments in Port Said Hospitals and all inpatient women diagnosed with preeclampsia who attended during the period of the program conduction (20 women). Results: The results showed that there was an improvement in the nurses' skills in providing nursing care for patients with preeclampsia. Also, a statistically significant improvement for both the mothers and newborn outcomes receiving educational program implementation.

Index terms— educational program, preeclampsia, nurses' performance, pregnancy outcomes

1 Introduction

Women's health is essential for the development of a healthy family, and consequently, a healthy community.

During pregnancy, many complications may affect women's health. (Preeclampsia and eclampsia are the most common causes of morbidity affecting mothers in developing countries. They are contributing to the occurrence of high-risk pregnancies, which carries hazards to the health of women and their fetuses). Hypertensive disorders are the most common medical complication of pregnancy. WHO, 1995; Martin et al., 2003). The American College of Obstetricians and Gynecologists (ACOG, 1999) define preeclampsia as either a systolic blood pressure of >140 mmHg or a diastolic blood pressure >90mmhg observed in two occasions at least 6 hours apart. Ideally, the blood pressure should be compared with a baseline established in the first trimester. In the absence of baseline values, a blood pressure of 140/90 has been accepted as hypertension. Karnath, 2002).

The incidence of hypertensive disease associated with pregnancy varies widely in epidemiological studies due to variations in definitions, and the differences in data collection. Pregnancy-induced hypertension continues to be important in the United States. In recent studies, these conditions were to be the second leading causes of maternal death. It is estimated that hypertensive complications approximately 10% of all pregnancies. The prevalence is increasing as many as 20 to 40% of pregnancies in women with chronic hypertension. (Berry, 2006; Martin et al., 2003). In Egypt pregnancy-induced hypertension is considered a major cause of maternal death,

42 associated with 27% of direct obstetric death and 22% of all maternal deaths (National Maternal Mortality
43 Study 2000 Study NMMS, 2001).

44 When Pre-eclampsia is diagnosed in its early stages, bed rest is usually advised for the mother and, her BP
45 should be monitored closely. However, if the disease progresses, the doctor would be left without a choice but
46 to induce labor or deliver by Caesarean, regardless of whether the baby has matured to full term or not. The
47 blood pressure would then return to normal within 2-3 days (Williams, 2007; Sibila et al., 2007). Preeclampsia
48 can affect the arteries carrying blood to the placenta. When this happens, the fetus receives less oxygen and
49 nutrition, resulting in slow growth, low birth weight, pre-maturity or, stillbirth. Pre-eclampsia also increases
50 the risk of the placenta separating from the inner wall of the uterus before delivery (abruption). This can cause
51 uncontrollable bleeding and be lifethreatening for both mother and baby. Another complication is Eclampsia
52 (Pre-eclampsia plus seizures) that happens when Pre-eclampsia is uncontrolled. This is associated with maternal
53 mortality (Reeder et al., 1997). a) Significance of the study Wacker et al (1998) have emphasized on the fact that
54 early prenatal care, identification of pregnant women at risk for preeclampsia, as well as recognition and reporting
55 of physical warning signs, are essential components in the optimization of maternal and prenatal outcome .in
56 this regard, nurse's role is essential. Moreover, nurses can do much in the advocacy role. Measurements should
57 be done to improve public education and to access antenatal care. Counseling, referral to community resources,
58 mobilization of support system, and providing a component of care. The nurse's role as an educator is important
59 in informing the women about her condition and responsibilities preeclampsia management, whether at home or
60 hospital (Lowdermilk et al., 2000). Prevention of diseases is a key concept to nursing where barriers sometimes
61 present in prenatal care, the role of the nurse is very important to assess the condition of the mother, identify
62 deviation from normal and intervene accordingly, and provide care.

63 2 II.

64 3 Aim of Study

65 The aim of this study is to evaluate the impact of preeclampsia an educational program on maternity nurses'
66 performance and maternal and neonatal outcome.

67 4 III.

68 5 Material and Methods

69 6 Research Design

70 This study was carried out using a quasiexperimental (pre & posttest) research design was used to evaluate the
71 impact of an educational program about preeclampsia for maternity nurses on their performance and maternal
72 and neonatal outcomes.

73 7 Study Setting

74 The study was carried out at Port-Fouad General hospital and Specialized Women and Obstetrics Hospital in
75 Port-Said city. These are hospitals providing outpatient and inpatient obstetrical and gynecological services.

76 8 Study subjects

77 The subjects of the study include two groups as the following: group1 all nurses (30 nurses) in the inpatient
78 (obstetric and gynecological department) at three hospitals located in Port Said city mentioned setting before.
79 Group 2 all inpatient women diagnosed with preeclampsia (20 women) who attended the mentioned setting before
80 during the period of the program conduction.

81 9 IV.

82 10 Tools for Data Collection

83 The researcher designed an interview questionnaire form, an initial examination sheet, and an observation
84 checklist for maternal and fetal outcomes. Two tools of data collection developed and used by the researcher
85 based on. This tool designed mainly to collect data related to the nurse's performance regarding the nursing care
86 for women with mild and severe preeclampsia and eclampsia during labor and post partum.

87 11 VI.

88 12 Tool ii Structured Interviewing

89 Questionnaire for Women:

90 13 Validity and reliability

91 Tools were reviewed by a panel of seven experts in the field of Obstetrics and Gynecological Nursing to test
92 its content validity; modifications were done accordingly based on their judgment. Reliability was done by
93 Cronbach's Alpha Coefficient Test, which revealed that each item of the utilized tools consisted of relatively
94 homogeneous items.

95 14 Ethical considerations

96 An official letter from the Faculty of Nursing, Port Said University, was directed to the responsible authorities to
97 obtain their permission to conduct the study after explaining its purpose. The aim of the study was explained
98 to every study subjects, and an oral agreement for participation in the study was gained. Those who agreed to
99 participate were assured about confidentiality, privacy and their right to leave the study at any time.

100 15 A pilot study

101 A pilot study was carried out on 10% of the sample, to clarify the validity and reliability of the questionnaire.
102 Then modification was done, and to test the research feasibility, clarity, and objectivity of the tools as well to
103 estimate the time needed for data collection.a) b) c) d) c) b) e) Field of

104 16 the work

105 Following this pilot study, the process of data collection and give of the educational program consumed four
106 months from May 2019 to August 2019. The data were collected according to the following phases:

107 Assessment phase: During this phase, the process of sampling was done. The data were collected from the
108 maternity nurses and pregnant women with preeclampsia who gave their consent to participate using the data
109 collection form and observational checklist. The collected data served as a pre-test for baseline comparison with
110 posttest data. It also helped the researcher to identify the educational needs of the participants in order to design
111 the program.

112 17 Design of the educational program:

113 The educational program aimed at improving nurse's performance related to nursing care for women with
114 preeclampsia and pregnancy outcome was designed by the researcher based on the scientific background, and
115 in the light of the needs identified in the pre-test assessment. The guideline included information regarding the
116 important nursing care given to the patient with preeclampsia during pregnancy, labor, and postpartum. It
117 involved both theoretical and practical training.

118 Implementation phase: The program was given to all maternity nurses.

119 Evaluation phase: Evaluation of nurses' performance care was done during pregnancy, labor, and postpartum
120 using the same tools. Additionally, pregnancy outcomes (women & fetus) were compared between the study and
121 control groups.

122 Statistical analysis: Data entry and statistical analysis were performed using computer software: the statistical
123 package for social sciences (SPSS), version 20. Suitable descriptive statistics were used, such as; frequency,
124 percentage, median, range, mean and standard deviation. Continuous data were checked for normality by using
125 the Shapiro Walk test. For all the tests used, statistical significance was considered at p-value < 0.05.

126 18 VII.

127 19 Results

128 20 Table (1):

129 shows the nurses' sociodemographic and job characteristics. As regard age, half of the studied subjects (50%)
130 were in the age group ranging between 20 to less than 30 years, while those aged 50 or more constituted 6.7%
131 of the subjects. Concerning their educational level, the majority of the nurses (86.7%) had a nursing diplomas
132 and did not have a Certificate of specialization (93.3%). Regarding the experience in nursing, the mean years of
133 experience in nursing of the nurses were around 10.8 ± 9.3 .

134 Table (2): Shows the satisfaction of nursing care performance for pregnant women suffering from preeclampsia
135 throughout the study phases. It shows a statistically significant improvement between the adequate performance
136 of nursing care for pregnant women suffering from preeclampsia throughout the pre and post-program except
137 read the mother record, insert indwelling catheter as prescribed, administer the prescribed medication and collect
138 samples, and sent it to the lab. All nurses did not perform this care in different timings of the study.

139 21 Table (3):

140 Shows the nursing care during labor and postpartum for pregnant women suffering from preeclampsia throughout
141 the study phases. It shows a statistically significant improvement between the adequate performance of nursing
142 care for pregnant women pre and post-program, except in the assessment and care of the newborn. All nurses did

143 not perform this care in different timings of the study. ??) Shows the Socio-demographic characteristics of the
144 control and study groups. Regarding age, about the highest percent (60.0%) of the study subjects in the control
145 group had their age from 30 years to more than 40 years. While more than two thirds (70%) of the subjects in
146 the study group had age below 30 years. However, there was a statistically significantly difference between both
147 groups ($P < 0.037$).

148 22 Table (

149 Regarding the level of education, about half of mothers in both groups had Diploma levels of education. And
150 more than half of the study mothers were house wife; there were no statistically significant difference between
151 both groups regarding the level of education, and job status.

152 The characteristics of the obstetric history of the control and study mother's table ???. The number of
153 pregnancies in the two groups control and study, with about half of the mothers' primigravida.50% of the mothers
154 nullipara related to number of delivery. Thus, there was no statistically significant difference between the two
155 groups regarding the numbers of pregnancy and delivery.

156 As regards the duration of the current pregnancy, the mean score of subjects of the control group before
157 applying the program 32.9 ± 3.6 , compared to 36.5 ± 1.3 of the study group after applying for the program.
158 However, the mean score of the duration of the current pregnancy was statistically significant differences between
159 the two groups.

160 Table ?? shows the results of the examination of the control and study groups of mothers. As regards, the
161 blood pressure the mean score 154.1 ± 7.1 of systolic blood pressure (mmHg) of the mothers in the control group,
162 compared with 148.3 ± 7.2 of the mothers in the study group. Was statistically significantly different between the
163 two groups ($P < 0.015$).

164 As regards the degrees of edema the half of mothers in the control group had +2 degree of edema, compared
165 with 70.0% of the mothers in the study group. There was not statistically significantly different between the two
166 groups. According to the abdominal examination, the mean score of the duration of pregnancy to the mothers
167 in the control group 32.9 ± 3.6 , compared with 36.5 ± 1.3 to the mothers in the study group. Was statistically
168 significantly different between the two groups ($P < 0.001$). Regarding the fetal heart beats 60.0% the heart beats
169 of the fetus in the control group from 160 to more than 190 beats / min, while, more than half 55.0% the heart
170 beats of the fetus in the study group from 130 to less than 160 beats / min, there was a statistically significant
171 different between the two groups ($P < 0.014$). According to the current complications, the highest percent 75.0%
172 of the mothers in the control group suffering from complication the half of them complain from hemorrhage.
173 Compared with 30.0% of the mothers in the study group suffering from complications, there was a statistically
174 significant different between the two groups ($P < 0.0001$). According to post-partum complications the highest
175 percent 70.0% of the mothers in the control group are suffering from complications. More than two-third of
176 them complain from vaginal hemorrhage. Compared with 25.0% of the mothers in the study group suffering from
177 complications. There was a statistically significant different between the two groups ($P < 0.0001$).

178 Table ?? shows the characteristics of the newborn babies of the control and study groups of mothers.
179 statistically significantly babies are lives were observed among mothers in the study group (100.0%), compared to
180 mothers in the control group (95.5%), as seen in the table. The higher percentages of newborns of mothers in the
181 control group were suffering from respiratory distress (68.2%), compared to (27.3%) newborns of mothers in the
182 study group. Meanwhile, higher percentages (68.2%) preterm baby of mothers in the control group, Compared
183 to (13.6%) preterm baby of mothers in the study group.

184 As regards the Apgar score 45.5%, 72.7% at the first and fifth minute the score from 7 to 10, respectively, for
185 the newborns of mothers in the study group, compared to 18.2%, 36.4% at the first and fifth minute the score
186 from 7 to 10, respectively, for the newborns of mothers in the control group, there was a statistically significant
187 different between the two groups ($P < 0.0001$).

188 23 Discussion

189 Nurses have an important and effective role in the prevention of complications of preeclampsia, assistance in
190 early detection, and appropriate management of these disorders to minimize the adverse effects in both mother
191 & infant through attending the antenatal clinic periodically during pregnancy. Furthermore, collaborative efforts
192 from all members of the health team, as well as appropriate self-care practices of women with PIH is required.
193 The nurse should be knowledgeable and highly skillful in providing nursing care according to women's needs and
194 problems to save their lives (Gilbert & Hartman, 1995). Therefore, this study was undertaken to provide nurses,
195 as healthcare providers, with the skills necessary to provide care to women with preeclampsia.

196 Regarding nurses' performance about nursing care for preeclampsia pregnant women. The present study
197 revealed that the majority of nurses had the unsatisfactory and inadequate practice of the care for pre-eclampsia
198 before program implementation; while after the program most of them provide satisfactory nursing care for
199 women with preeclampsia. This is probably because that most nurses had basic deficit knowledge about nursing
200 care for women with preeclampsia. This may lead to an inability of nurses to provide satisfactory nursing care.
201 These results are in the same line with Tawfek (2002), who reported that most nurses did not perform nursing
202 care for women with hypertension disorder with pregnancy (HDP) before the training program.

203 Novak and Broom,1999, mentioned that nursing care of mild preeclampsia in the hospital includes the following:
204 Check and record vital signs (pulse, temperature and respiration), history is taken, documents risk factors, and
205 any symptoms outlined before blood pressure, and women's weight gain should be obtained, looks for evidence
206 of generalized edema or pitting edema. Ask women about warning signs and symptoms. Perform urine analysis
207 for protein as prescribed (using dipstick test). Assist doctor during a physical examination and monitoring of
208 fetal heart rate (FHR) and refer hypertensive women to perform their laboratory studied and other investigation
209 as ordered.

210 According to the study findings, the highest percent (60.0%) of the study subjects in the control group had
211 their age from 30 years to more than 40 years. At the same time about (70.0%) of the subjects in the study
212 group had their age below 30 years, with mean ages of 30.6 and 26.2, respectively. This finding is in agreement
213 with those of the previous studies Gida ??2002) reported that more than two-thirds of the preeclampsia mothers
214 in port said had their age ranging between 25 years and more. Moreover, Mabie and ??ibai (1992) found that
215 the highest incidence of preeclampsia was among pregnant females of 20 years or more. Alternatively, ??ibson
216 and Carson (2002) have reported that preeclampsia is more common at extremes of maternal age.

217 The present study findings showed that half of the mothers in both groups had Diploma levels of education.
218 Moreover, more than half of the study mothers were house wife. These characteristics are similar to those
219 documented for most preeclamptic women in many studies. Rooney (1994) reported that a uniform incidence
220 of toxemia had been found throughout all social classes. However, Whitfield (1995); Leifer (1999) reported
221 that patients with low socioeconomic classes are more likely to develop preeclampsia. The high incidence of
222 preeclampsia among low family income group may be related to bad nutrition, ignorance, and lack of medical
223 care and seeking of regular prenatal care among this group.

224 In the present study, as regards the risk factors of preeclampsia experienced by women was found that, about
225 more than one third of women in both groups had previous history of preeclampsia. The characteristics of
226 obstetric history of the study subjects of both groups were similar in some aspects to those of preeclampsia
227 women discovered in many others studies. These findings are in line of Abbas et al. ??1999) who stated that
228 women with a history of preeclampsia are at increase risk of preeclampsia in later pregnancies.

229 Furthermore, women whose mothers suffered from preeclampsia are three times more likely to develop
230 symptoms associated with preeclampsia than other women ??Murray et al., 2002). In the present study, about
231 one third of the studied women in both groups had a family history of preeclampsia.

232 Gravidity has been considered, in many studies, as risk factor in pregnancy-induced hypertension. In the
233 present study, about half of the studied women in both groups were primigravida and nullipara. Wallenburg
234 ??1990) reported that nulliparous women are twice as likely to develop preeclampsia as multiparas, and this risk
235 is particularly high at extremes of age. Multiparous women who have suffered from preeclampsia in previous
236 pregnancies are at increased risk, compared to multiparas who have not.

237 According to Churchill and Beevers (1999) who stated that maternal age an important factors and clearly
238 for preeclampsia. Preeclampsia is very common in very young women who had poor antenatal care, with an
239 important contribution from social class. Also, it is common in the first pregnancy (in primipara it was 13.5%
240 compared with 7.1% in multipara) and women over the age of 30 years because of associated multiparty and
241 differences in social class. This is supported by the finding of the present study. There are several factors as
242 age, parity, education and socioeconomic factors. It was found that, women with lower socio-economic factors
243 are reported to have a higher incidence of PIH, also, the primigravida and nullipara women, the incidence is
244 increased.

245 One of the objectives of this study was to test the hypothesis that women with pregnancy-induced hypertension
246 who receive nursing care after applying nursing program will have better maternal and fetal outcomes during
247 pregnancy and after delivery, compared to women with the same diagnosis who receive nursing care before
248 applying the nursing programs. Accordingly, both mothers and their fetuses were assessed during pregnancy and
249 the postnatal period.

250 Regarding the results of the examination of the mother's in study and control groups. A statistically significant
251 improvement in blood pressure monitoring was found among mother's study group compared to those in the
252 control group ($P < 0.015$). For the mothers in the post-program group, the main systolic and diastolic blood
253 pressure are decreased. in this respect, Kyngas and Lahdenpera (1999) discovered a statistically significant
254 connection between compliance with medication and the diastolic blood pressure reading. Those who had good
255 compliance with medication had lower diastolic blood pressure than patients with poor compliance.

256 On the same line and in agreement with the present study finding, Dickason and Siiverman ??1995) have
257 reported that preeclampsia mothers who were treated at the hospital, and monitored by frequent medical and
258 nursing care, showed more improvement in the level of blood pressure and fetal outcome. Similar results were
259 reported by ??l-Said (1993). The author has attributed these results to mother's compliance with the health
260 instructions which given by the nurses throughout the nursing intervention.

261 The presence of edema with excessive weight gain is a problem in preeclampsia. The present study results
262 showed a slight decrease in the proportion of women in the study group suffering from edema (20.0%) had
263 +3 degree of edema compared with more than one third (35.0%) of mothers in the control group. A similar
264 finding was reported by El-Said ??1993). The degree of edema did not show more improvement in the nursing
265 intervention group mothers, as no differences were noted between the edema assessments.

266 Depending edema is common in normal pregnancy, but generalized edema is a sign of preeclampsia. Pregnant
267 women could be taught to recognize generalized edema as a sign needing rapid referral to a center where blood
268 pressure and proteinuria can be measured, and treatment arranged ??Gibson and Carson, 2002). This might
269 explain the previous results. However, since excessive weight gain with excessive edema is a major problem for
270 patients with severe preeclampsia, more attention should be given to the daily measurements of patient's weight,
271 as well as instructing her to care for edema.

272 Urinalysis to detect proteinuria is also recommended in women with pregnancy induced hypertension, as
273 this is an important prognostic factor. A very small percentage of women who develop preeclampsia may
274 show proteinuria before the rise in blood pressure ??Pernoll, 1995; ??runwald, 1997). In the present study,
275 improvement of the main score 2.2 ± 0.5 of proteinuria was observed for the mothers in the study group, compared
276 with 3.0 ± 0.7 to the mothers in the control group. There was a statistically significant difference between the
277 two groups ($P<0.0001$). This result is in agreement with El-Said ??1993). Who found a decrease in proteinuria
278 among women in the nursing intervention group, whereas proteinuria had increased markedly among women in
279 the control group.

280 Regarding the current complications, the highest percent 75.0% of the mothers in the control group suffering
281 from complications, half of them complains from hemorrhage. Compared with 30.0% of the mothers in the study
282 group are suffering from complication. There was a statistically significant difference between the two groups
283 ($P<0.0001$). A similar finding was reported by El-Said ??1993). Who found that the majority of the study sample
284 in the control group suffering from bleeding during pregnancy. However, 40% of the mothers in the intervention
285 group suffering from bleeding during pregnancy.

286 Concerning the type labor and postpartum examinations of the mothers in study and control groups. According
287 the type of delivery, the majority of the study sample 95.0%, 90.0% of the mothers in the pre and post program,
288 respectively, had Cesarean section delivery. However, this difference was not statistically significant between the
289 two groups. El-Said (1993) has reported similar results as regards the mode of delivery slightly more cesarean
290 section deliveries were found in the intervention group, although the difference was not statistically significant.

291 Natal care is very important to reduce the complications of preeclampsia and improve the maternal and
292 newborn outcome. ??impson and Creehan (2001) reported that it is important to be alert for signs and symptoms
293 of complications of preeclampsia such as postpartum hemorrhage and HELLP syndrome. The finding of the
294 present study was noticed that the highest percent 70.0% of the mothers in the control group are suffering from
295 complications after labor; more than twothird of them complains from vaginal hemorrhage. Compared with
296 25.0% of the mothers in the study group suffering from complication. There was a statistically significantly
297 difference between the two groups ($P<0.0001$). This is possibly due to the mothers received good nursing care
298 before, during and after labor.

299 In the present study, a statistically significant different between women in the two study groups regarding
300 their fetal outcome. No case of stillbirth infants, were reported among women in the study group, while; only one
301 case of stillbirth infant was reported among women in the control group. Moreover, 6 cases of respiratory distress
302 among women in the study group, Compared to 14 cases in the control group. As regards premature infants 3
303 cases was reported among women in the study group, compared to 15 cases in the control group. However, as
304 regards infant's growth at birth, all growth measurements for infants of pregnancy induced hypertensive women
305 in the study group were statistically significantly better than those of infants of mothers in the control group
306 ($P<0.0001$).

307 In agreement with the preceding findings of the present study, Wong et al. ??1998) have reported that
308 women with hypertensive diseases who receive inadequate care experience particularly greater risk of subsequent
309 prematurity and low birth weight infant. This may be related to the progress of maternal condition that reflects
310 directly on fetal health. Moreover, in agreement with the present study findings, Abd Rabo (1992) has reported
311 rates of neonatal losses of 20.0% and 2.0% in the control and intervention groups, respectively. There were
312 statistically significant differences between the two study groups.

313 Many others, Lowdermilk& Perry,2006 And Chen and Chang, 1995, mentioned that nursing care of severing
314 preeclampsia represents emergency obstetric care. Immediate and continuous care by nurses aimed to prevent
315 maternal and fetal mortality. The nurse should be place the patient in absolute bed rest on her side. Check
316 and remove denture, record and report blood pressure frequently (at least every 4 hours) or with a continuous
317 monitoring device to detect any increase, Obtain blood studies as ordered (i.e. complete blood count, platelet
318 count, liver function, blood urea nitrogen, and creatine and fibrin degradation products) to assess renal and liver
319 function and the development of DIC, assess and recorded the degree of edema, perform urine analysis for protein
320 as prescribed, collect 24 hrs, urine as ordered, measure and recorded woman's weight. She should assess for signs
321 of labor, assess deep tendon reflexes every shift, and Observes dangerous signs and symptoms.

322 **24 IX.**

323 **25 Conclusion**

324 **26 Based on the results of the present study, it can be concluded**
325 **that**

326 Educational program for nurses working in the maternity units showed a great impact on their performance with
327 mothers suffering from preeclampsia. With the perspective of the impact of the educational program on maternal
328 and the fetal and newborn health conditions, the study revealed a statistically significant improvement to the
329 mother's receiving nursing care after nursing educational program implementation. It was particularly obvious
330 in the lower of blood pressure, proteinuria, and prenatal and postnatal complications. Similarly, fetal outcome
331 was statistically significant improvement in the mothers group receiving nursing care after nursing educational
332 program implementation as regards newborn measurements, and prenatal and postnatal complications.

333 X.

334 **27 Recommendations**

335 Encourage nurses to attend continuing education in the form of workshops, conferences, training programs and
336 review update nursing care related to preeclampsia. Standardized protocols for the treatment of emergency
337 obstetric, including preeclampsia, should be developed for the legal protection of nurses during their clinical
338 practices. Frequent and scheduled In-services training should be applied at the hospital. Establish a library with
339 recent scientific books and periodicals in the Arabic language. Future research regarding study the psychological
340 aspects of women with preeclampsia. And studying factors affecting women with preeclampsia self-care practices.

341 ¹

(

	Time
Nursing care performance of pre-eclampsia	Pre Post (n=30)
Greeting the mother.	(n=30) 23 76.726
Read the mother record.	30 100.00
Place the mother in the on bed in her side.	15 50.015
Year Assist doctor during local physical examination	22 73.330
2020 Monitor Vital signs as prescribed	27 90.030
4 Assess degree of edema.	0 0.0 30
Global Socio-demographic characteristics Age (years) Less than 20 Start IV infusion as prescribed	30 100.0 30

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Figure 1: Table (1

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*[Note: X²: Chi-Square test FEP: Fisher's Exact test *significant at P<0.05 -NA-: Not applicable]*

Figure 2: Table (3

(

Impact of an Educational Program about Preeclampsia for Maternity Nurses on Their Performance and

Diploma

Nursing Care Performance during Labor and Post -Partum University Employment All are live in urban

Monitor the blood pressure MCP: Monte Carlo test X2: Chi-Square test *significant at P?0.05 22 73.3 30

Check for edema

0 Table (5): Obstetric history of the cor

(Detect protein urea levels Prepare equipment and intravenous lines Obstetric History Label bottles Durin

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F

Personal characteristics Age (years) Systolic blood pressure (mmHg) Range Mean±SD Diastolic blood pr

Less than 20 General condition

20-Degrees of edema

+1 +2

30-<40 Range Mean±SD

+3

+4

Educational level

Read and write

Primary Preparatory Abdominal examination Duration of pregnancy (gestational weeks)

(

Range								24-37
Mean±SD								32.9±3.6
Fetal heart beats (beats/min)	100-130-160-<190							^Number is more than that of mothers as two babies
Yes #								15 75.0
Year	Intra uterine fetal growth retardation							8 2 40.0 10.0 50.0 25.0
2020	Eclampsia Hemorrhage No							10 5
8								
Volume	Postpartum complications No Yes #							
XX	hemorrhage Convulsions Bleeding disorder							6 14 30.0 70.0 64.4 7.1 50.0 Study
Is-								9 1 7
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(D	Characteristics of A newborn Babies							
D D								Group (n=20) Group (n=20)
D)								
F								
Medical	Fate of pregnancy Living Stillbirth Respira-	No.	%					No. % 22 100.0 0 0.0 16 72.7
Re-	tory distress No	21	95.5					
search		1 8	4.5					
			36.4					
Global	Yes Preterm labor Pre-term Full-term Apgar	14	63.6					6 3 19 3 27.3 13.6 86.4 13.6
Jour-	score at 1 st minute 0-3	15	68.2					
nal		7 7	31.8					
of			31.8					
	4-6	11	50.0					9 40.9
	7-10	4	18.2					10 45.5
	Range	2-7						3-8
	Mean±SD	4.1±1.2						5.9±1.4
	Apgar score at 5 th minute							
	0-3	1	4.5					0 0.0
	4-6 7=10	13	59.1					6 16 27.3 72.7
		8	36.4					

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Figure 4: Table (7

- 342 [Achieving Reproductive Health for All. Geneva: The Role of WHO publication World Health Organization ()]
 343 'Achieving Reproductive Health for All. Geneva: The Role of WHO publication'. *World Health Organization*
 344 1995. p. .
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