Original Article
Effect of humanistic nursing in obstetrics on delivery mode and satisfaction of maternal care

Peng Sun¹, Jinmei Yu², Lin Liu³, Luo Li⁴

Departments of ¹Gynecology, ²Surgery, Binzhou Hospital of Traditional Chinese Medicine, Binzhou, Shandong Province, China; ³Intracardiac Catheterization Room, ⁴Scientific Research Office, Zibo Central Hospital, Zibo, Shandong Province, China

Received October 2, 2019; Accepted December 10, 2019; Epub February 15, 2020; Published February 28, 2020

Abstract: Objective: This study aimed to explore the effect of humanistic nursing on delivery mode and nursing satisfaction of maternity. Methods: Altogether 89 pregnant women diagnosed in our hospital from January 2018 to January 2019 were analyzed. Among them, 43 pregnant women with conventional nursing were included in group A, and 46 pregnant women with humanistic nursing based on conventional nursing in group B. The labor process, puerperium knowledge, delivery outcome (delivery mode, postpartum 2 h-hemorrhage, uterine recovery time, adverse condition, neonatal Apgar score), bad mood, and quality of life were compared. Results: The first, second and third stage of labor and SAS, SDS levels in group B were significantly lower than those in group A (P<0.001). The puerperal knowledge of group B was significantly better than that of group A (P<0.05). The vaginal delivery rate in group B was significantly higher than that in group A, and the cesarean section rate was significantly lower than group A (P<0.05). The postpartum hemorrhage and uterine recovery time in group B were significantly shorter than those in group A, and the incidence rate of adverse events in group B was significantly lower than that in group A (P<0.001). There was no significant difference in Apgar score between the two groups (P>0.05). The physical health, mental health, material life and social function of group B were significantly higher than those in group A (P<0.001). Conclusion: The humanistic nursing intervention has better effect on improving the mental health and quality of life and reducing the probability of cesarean section, and the acceptance of the relevant parturient is also high, which is worthy of wide clinical promotion.

Keywords: Humanistic nursing, obstetrics, delivery mode, nursing satisfaction

Introduction
Parturient women are prone to anxiety and fear in the process of labor. Some of them will suffer severe pain during delivery and even resist vaginal delivery, requiring cesarean section. Different delivery methods not only affect the physical health of the parturient, but also directly affect the health of the newborn, so obstetric care has certain particularity [1, 2]. The research shows that the parturient should have a correct understanding of the delivery process and attentions, and should be given humanistic care and healthy psychological guidance, which are of great significance to maintain the emotional stability of parturients [3, 4]. Therefore, in order to improve the bad mood of parturients, better psychological intervention based on routine obstetric care is an important measure to improve the compliance of parturients during labor process [5]. Humanized nursing is a new, human-centered and omni-directional nursing model. Research shows that humanized nursing intervention can better assist the safe delivery of parturient and meet aspects of psychological and physiological needs of parturient [6].

With the continuous development of social economy, the concept of nursing has also developed continuously. Relevant medical environment and medical level require continuous improvement of maternal psychology and quality of life [7]. Research shows that different nursing measures are of great significance for improving the quality of life of parturients [8]. Due to the lack of targeted humanistic nursing intervention such as more standardized psychological counseling for parturients, the traditional nursing mode has caused great psychological problems in puerperal period and seriously affected the quality of life [9]. Maternal
treatment process will produce pain and corresponding financial burden, patients will bear tremendous physical and psychological pain, resulting in bad mood. The humanistic nursing intervention on the basis of traditional nursing model and innovative measures have great clinical significance in reducing the pain interference in the process of maternal treatment and improving the quality of life of the patients [10, 11]. This study aimed to compare routine nursing intervention with humanistic nursing intervention, and to explore the influence of humanistic nursing intervention on the delivery mode, nursing satisfaction and quality of life of parturients.

Methods and materials

General information

Altogether 89 pregnant women diagnosed and treated in our hospital from January 2018 to January 2019 were prospectively analyzed. Among them, 43 pregnant women who received conventional nursing were included in group A, and 46 pregnant women who received humanistic nursing based on conventional nursing were included in group B. The average age of group A was 24.10±5.20, while that of group B was 24.30±5.40. Inclusion and exclusion criteria: All confirmed parturients were in accordance with the clinical full-term pregnancy standard [12]; parturients with immune system diseases, family genetic diseases and other tumors, cancer; parturients with liver or kidney dysfunction, past coagulation disorders; parturients with other complications; parturients with conscious, cognitive and other mental disorders. Before this study was carried out, all parturients and their families were informed in advance, and this study has been approved by the hospital Ethics Committee.

Nursing methods

Group A parturients were given routine nursing care and adopted routine nursing method. The vital signs, prenatal preparation, prenatal education and perioperative nursing of the parturients were observed by the medical staff and adjusted according to the actual situation of different parturients.

In group B, the human-friendly nursing mode was accepted on the basis of routine nursing: (1) Humanistic hospitalization environment: under the conditions permitted by the hospital, a family-style nursing delivery room was set up to pay attention to the personal privacy of the parturient. Each parturient was provided with a separate space. In combination with the actual situation of the parturient, additional furnishings were added to help the parturient relieve the pain of psychological fear and give birth smoothly. (2) Psychological intervention: relevant nurses communicated with the parturients and their families more, explained the problems encountered in the delivery process and the solutions patiently to the parturients, and informed the parturients of the corresponding prognosis nursing work after delivery. When the parturient had resistance, the nurses patiently and carefully understood the psychological fear and needs of the parturient, and gave different measures according to the specific psychological problems. Suggestive language was used to appease the parturient, and appropriate examples of successful spontaneous labor cases were given to the parturient to enhance the treatment confidence of the parturient, and eliminate the anxiety or depression of the parturient and their ideological burden. (3) Humanistic nursing concept: relevant nurses focused on parturient, understood the actual situation of different parturient, and communicated with the family members of parturient before and after delivery to ensure that the family members of the parturient actively cooperate with the hospital’s nursing requirements after parturition, and to better carry out nursing measures. (4) Post-delivery nursing: after all vital signs of the parturients were stable, relevant medical staff told the parturients and their family about newborn nursing knowledge, guided breast feeding, told the parturients to avoid spicy and stimulating foods in diet but more fresh fruits and vegetables, and let the parturients to have more rest. For parturients undergoing caesarean section, the nursing staff provided nursing care to the parturients to avoid infection of surgical wound. All parturients had one-month telephone follow-up after discharge from hospital, and relevant medical staff continued to provide various nursing guidance.

Observation indicators

The general clinical data, labor process, puerperal knowledge, and maternal delivery outcomes (maternal delivery mode, 2 h postpartum hemorrhage, uterine recovery time, adverse maternal conditions, neonatal Apgar score) of group A and group B were compared.
Application of humanistic nursing in obstetrics

[13]. The mental health status of group A and group B was assessed with self-rating depression scale (SDS) [14] and self-rating anxiety scale (SAS) [15] to evaluate the adverse emotions of parturients in group A and group B. Those with a total score lower than 50 were normal, 50-60 were mild, 61-70 were moderate, and more than 70 were severe. The score was directly proportional to the degree of anxiety and depression. QOL-C30 [16] Comprehensive Quality of Life Scale was used to compare the quality of life (including physical health, mental health, material life and social function) of parturients in group A and group B. The score of each latitude was proportional to the quality of life, and the high score was closely related to the high quality of life. The nursing satisfaction of parturients in group A and group B was compared. Satisfaction = (very satisfied + satisfied + general)/the total number ×100%. The follow-up time of the parturient was one month.

Statistical methods

SPSS 19.0 (Asia Analytics Formerly SPSS China) was used for statistical analysis. The counting data was expressed as [n (%)], and X² test was used for the counting data between the two groups. Measurement data were expressed as (Mean ± SD). Paired t test was used for comparison before and after treatment in the group, and independent sample t test was used for comparison between the two groups. When the P value is less than 0.05, the difference is statistically significant.

Results

General clinical data of group A and B

There was no significant difference in age, sex, delivery, BMI, smoking, drinking, household registration, and educational level between the two groups (P>0.05). See Table 1 for details.

Parturient labor process of group A and group B

The first stage of labor in group A was 598.50±73.80 min, the second stage was 99.40±11.00 min, the third stage was 28.60±2.40 min. The first stage of labor in group B was 412.20±47.82 min, the second stage was 63.60±5.40 min, the third stage was 11.60±2.50 min. The first, second and third stage of labor in group B was significantly lower than those in group A (P<0.001). See Figure 1A, 1B.

Mental health status of group A and B before and after nursing

SAS changes before and after nursing care of parturients in group A and group B: The SDS of group A before and after nursing intervention was 56.12±5.20 and 32.46±5.70 respectively. There was no significant difference in SAS level between the two groups before nursing (P>0.05). The SDS of group B before and after nursing intervention was 56.31±4.75 and 32.74±6.63 respectively. The SDS level of the two groups after nursing was significantly lower than that before nursing (P<0.001). The SDS...
The SDS of group A before and after nursing intervention was 58.42±4.73 and 48.14±5.62 respectively. There was no statistical difference in the level of SDS before the two groups (P>0.05). The SDS of group B before and after nursing intervention was 59.14±4.82 and 35.61±5.22 respectively. The SDS level of the two groups after nursing was significantly lower than that before nursing (P<0.001). The SDS level in group B after nursing was significantly lower than that in group A (P<0.001). See Figure 2B for details.

Comparison of puerperal knowledge between group A and group B

After nursing intervention, the postpartum activity, breast care, postpartum contraception, perineal care, Huang’s observation, breastfeeding, umbilical care, and lochia were observed. The puerperal knowledge of group B was significantly better than that of group A (P<0.05). See Table 2 for details.

Postpartum outcomes between group A and B

Comparison of delivery modes between group A and group B: After nursing intervention, the vaginal delivery rate in group B was significantly higher than that in group A, and the cesarean section rate was significantly lower than that in group A (all P<0.05). See Table 3 for details.

Postpartum neonates in group A and B: The Apgar scores of newborns in group A and group B were 9.49±0.43 and 9.18±0.36, respectively. There was no significant difference in the Apgar scores between the two groups (P>0.05). See Figure 3C.

Comparison of quality of life of parturients in group A and group B

The QOL-C30 scale scores of maternal physical health, mental health, material life and social function in group A were 69.20±7.92, 65.19±7.34, 64.38±6.90, and 61.23±5.71 respectively, those in group B were 79.76±6.42, 79.22±6.11, 77.24±5.38, and 75.32±5.84, respectively. The scores of physical health, mental health, material life and social function in group B were significantly higher than those in group A (P<0.001). See Figure 4A, 4B for details.
Application of humanistic nursing in obstetrics

Figure 1. Delivery of parturients in group A and group B. A. The first stage of labor in group B was significantly shorter than that in group A (P<0.001). B. The third stage of labor in group B was significantly shorter than that in group A (P<0.001). C. The third stage of labor in group B was significantly shorter than that in group A (P<0.001).

Figure 2. Changes of SAS and SDS before and after nursing in group A and group B. A. SAS changes before and after nursing care of parturients in group A and group B. The SAS level of the two groups after nursing was significantly lower than that before nursing (P<0.001). The SAS level in group B after nursing was significantly lower than that in group A (P<0.001). Note: ***, ### indicates P<0.001. B. SDS changes before and after nursing in group A and group B. The SDS level of the two groups after nursing was significantly lower than that before nursing (P<0.001). The SDS level in group B after nursing was significantly lower than that in group A (P<0.001). Note: ***, ### indicates P<0.001.

Nursing satisfaction in group A and B

The total nursing satisfaction of parturients in group B was significantly higher than that in group A (P<0.05). See Table 5 for details.

Discussion

At present, with the continuous development of new concepts and modes of obstetric care, the humanistic nursing mode based on the princi-
Table 2. Comparison of puerperal knowledge between group A and group B

<table>
<thead>
<tr>
<th>Group</th>
<th>A (n=43)</th>
<th>B (n=46)</th>
<th>X²</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postpartum activity</td>
<td>23 (53.49)</td>
<td>44 (95.65)</td>
<td>21.230</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Breast nursing</td>
<td>24 (55.81)</td>
<td>43 (93.48)</td>
<td>16.940</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Postpartum contraception</td>
<td>25 (58.14)</td>
<td>44 (95.65)</td>
<td>17.950</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Perineal nursing</td>
<td>30 (69.77)</td>
<td>45 (97.83)</td>
<td>3.633</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Jaundice observation</td>
<td>30 (69.77)</td>
<td>46 (100.00)</td>
<td>16.290</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Breast feeding</td>
<td>31 (72.09)</td>
<td>46 (100.00)</td>
<td>14.840</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Umbilical nursing</td>
<td>28 (65.12)</td>
<td>42 (91.30)</td>
<td>9.078</td>
<td>0.003</td>
</tr>
<tr>
<td>Lochia observation</td>
<td>29 (67.44)</td>
<td>41 (89.13)</td>
<td>6.226</td>
<td>0.013</td>
</tr>
</tbody>
</table>

Table 3. Comparison of delivery outcomes between group A and B

<table>
<thead>
<tr>
<th>Group</th>
<th>A (n=43)</th>
<th>B (n=46)</th>
<th>X²</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transvaginal natural labour</td>
<td>30 (69.77)</td>
<td>41 (89.13)</td>
<td>5.165</td>
<td>0.023</td>
</tr>
<tr>
<td>Transvaginal delivery</td>
<td>1 (2.33)</td>
<td>1 (2.17)</td>
<td>1.701</td>
<td>0.192</td>
</tr>
<tr>
<td>Cesarean section</td>
<td>12 (27.91)</td>
<td>4 (8.70)</td>
<td>5.563</td>
<td>0.018</td>
</tr>
</tbody>
</table>

Table 4. Comparison of adverse conditions between group A and B

<table>
<thead>
<tr>
<th>Group</th>
<th>A (n=43)</th>
<th>B (n=46)</th>
<th>X²</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rheumatism</td>
<td>5 (11.63)</td>
<td>1 (2.17)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fever</td>
<td>4 (9.30)</td>
<td>2 (4.35)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Hysteralgia</td>
<td>6 (13.95)</td>
<td>1 (2.17)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Profuse sweating</td>
<td>12 (27.91)</td>
<td>4 (8.70)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Postpartum urinary retention</td>
<td>9 (20.00)</td>
<td>2 (4.35)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total adverse incidence</td>
<td>36 (83.72)</td>
<td>10 (21.73)</td>
<td>34.190</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

The application of people-oriented is gradually implemented in parturients [17]. In recent years, studies have shown that the introduction of humanistic nursing mode in obstetrical nursing can not only improve the quality of obstetric nursing service, but also form a good doctor-patient relationship and to a certain extent increase the satisfaction degree of maternal nursing, which has great influence on improving the development of obstetric medical services [18].

Maternal and infant health is closely related to the obstetric care mode. In the past, the conventional obstetric care mode lacked the puerperal knowledge and the whole process was operated by the relevant nursing staff, which could not mobilize the subjective initiative of the pregnant and maternal women, resulting in strong fear, anxiety, depression and other negative emotions of natural childbirth, leading to the occurrence of adverse prognosis of pregnant and lying-in women. Due to the lack of knowledge and bad emotions, some parturients choose cesarean section for delivery [19, 20]. Cesarean section has adverse effects on the health of both mother and infant [21]. This study shows that, after nursing intervention, the puerperal knowledge of pregnant women who received humanized nursing intervention is significantly better than that of pregnant women who received conventional obstetric care. The SAS and SDS levels of all parturients after nursing were significantly lower than those before nursing, and the levels of the parturient after humanistic nursing were significantly lower than those of the parturient after routine nursing. Therefore, we believe that the implementation of humanistic intervention nursing mode for pregnant and maternal women is better than that of routine nursing in regulating the unhealthy mood. Anxiety and depression, as a kind of emotional disorder, are commonly found in adverse complications after delivery [22]. A large number of clinical studies have shown that anxiety and depression have a great influence on the physical recovery rate of parturients. Proper obstetric care can improve the anxiety and depression of parturients [23, 24]. All these prove the importance of the research results in this paper. Research on humanistic nursing proves that the improvement of anxiety, uneasiness and other bad emotions is better when humanistic nursing is adopted on the basis of routine nursing.

The emotions of pregnant and lying-in women directly affect the mode of physical delivery, adverse reactions and pregnancy outcomes. Humanistic whole-course nursing, through the integration of psychology and environment, enables the pregnant women to establish self-confidence in natural delivery. At the same
time, it improves the maternal compliance with medical staff in the delivery process, greatly improves the natural delivery rate, reduces the adverse symptoms of postpartum, and improves the quality of life of parturients and newborns [25]. In this study, the stages of labor, delivery outcomes and quality of life after one month were compared. The results showed that the probability of spontaneous delivery, postpartum 2 h-hemorrhage, uterine recovery, adverse conditions and neonatal Apgar score of humanistic nursing intervention were better than those of conventional obstetric nursing. The QOL-C30 scale results show that the quality of life scores of humanistic nursing intervention on maternal physical health, mental health, material life and social function are significantly higher than those of routine nursing. Physical health and mental health are both important aspects that reflect the prognosis of parturients and are indispensable. Good mental state also promotes the physical health of parturients. Parturients who are expected to give birth need to bear the combined effects of pain, fear of death and great economic pressure [26]. Similar studies have confirmed that the relevant medical and nursing staff, while continuously improving the quality of nursing services, carry out reasonable psychological education for the lying-in women to improve the unhealthy psychology, which have a positive impact on the physical health and social functions [27]. Therefore, we believe that humanistic nursing intervention has better effect and greater value in improving maternal quality of life than conventional nursing.

Finally, we counted the nursing satisfaction of group A and group B. The results showed that the total nursing satisfaction of group B was significantly higher than that of group A, and the difference was statistically significant. Therefore, we believe that the acceptance and approval of humanistic nursing intervention on the basis of routine nursing are far higher than those of routine nursing intervention. In recent years, relevant clinical studies have also confirmed that the satisfaction of puerpera or their

Figure 3. Comparison of delivery outcomes between group A and B. A. The amount of postpartum 2 h-hemorrhage in group A and group B. The amount of postpartum hemorrhage in group B was significantly less than that in group A (P<0.001). Note: ***indicates P<0.001. B. Postpartum uterine recovery time of group A and group B. The recovery time of postpartum uterus in group B was significantly shorter than that in group A (P<0.001). Note: ***indicates P<0.001. C. Postpartum newborns in group A and group B. There was no significant difference in Apgar score between the two groups (P>0.05).
families with humanistic nursing intervention is higher than that of routine obstetric nursing intervention [28].

In this study, there are still some deficiencies, such as not showing the biochemical indexes of parturients. The nursing plan formulated this time was also affected by the local medical level and may differ from other regions. The follow-up time was too short. In view of these defects, we will continue to pay attention to the latest relevant research results in the later period and regularly review the prognosis of pregnant women, so as to continuously improve the research.

To sum up, the implementation of humanistic nursing intervention has a better effect on improving the mental health and quality of life of the parturient, reduces the probability of cesarean section to a certain extent, and has a higher acceptance of the relevant parturient, which is worthy of wide clinical promotion.
Application of humanistic nursing in obstetrics

Disclosure of conflict of interest

None.

Address correspondence to: Luo Li, Scientific Research Office, Zibo Central Hospital, No. 54 Gongqing League West Road, Zhangdian District, Zibo 255036, Shandong Province, China. Tel: +86-0533-2360279; E-mail: lluo109@163.com

References

Application of humanistic nursing in obstetrics


