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Perception of preparedness among primiparous on self-care and infant care before

discharge in a private hospital in Malaysia



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Abstract: Primiparous refers to a woman who has given birth for the first time to an infant or infant, alive or stillborn. These primiparous mothers have concerns pertaining to their self-care and their newborn infants' care. These expectations and concerns of Primiparous mothers are unlikely to be met due to a lack of preparedness for information about self-care and infant care. This study aimed to identify the perception of preparedness for self-care and infant care among the primiparous before discharge and the information needs, after delivery in a private hospital in which this study was conducted. This study adopted a cross-sectional and descriptive design to achieve the research objective. The target population was primiparous who had given birth to a healthy baby in a private hospital in Penang. There was a total of 72 participants in this study. Data was collected using a selfdevelop questionnaire with a 5-point Likert scale to generate quantitative data. Data was analyzed using SPSS version 23.0. The findings of this study revealed that the perception and understanding of primiparous towards the information provided before discharge from the hospital has not reached a satisfactory level as primiparous were not confident enough with some of the information provided and the needs to be prepared themselves before discharge. Hence, this study concludes that future studies are needed to explore new practices to enhance the quality of maternal health care and promote positive maternal experience and well-being for mother and infant.

Introduction

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Primiparous refers to a woman who has given birth for the first time to an infant or infant, alive or stillborn (Lindblad et al., 2022). They expect postpartum care will reduce their anxiety by providing them with the skills and the confidence to care for themselves and their baby. Women undergoing early labor benefit from professional treatment and coping mechanisms (Mueller and Grylka-Baeschlin, 2023; Bay et al., 2022). Health care professionals should implement relevant interventions to lessen anxiety and increase childbirth

self-efficacy in primiparous women (Shakarami et al., 2021). However, a study conducted by Malouf et al. (2019) has shown that these expectations are unlikely to be met due to a lack of preparedness on information such as knowing how frequently to breast-feed and techniques of breast-feeding, how often to pick up their baby when crying and how often to change their nappy. A mother's knowledge of infant care during the neonatal period can raise the mother's confidence regarding infant care, and it can reduce false and traditional beliefs about neonatal care, thereby reducing neonatal morbidity and mortality rates (Memon et al., 2019; Tsakiridis et al., 2022). Postpartum depression occurs in approximately 13% of primiparous (Silverman et al., 2017). The prevalence rate of anxiety was 8.0% in the postnatal period (Shorey et al., 2018). Previous studies among Nepalese women in urban areas have found similar rates of depression (12%) (Gautam et al., 2021; Guintivano et al., 2018). education program on self-care and infant care provided to mothers effectively reduced the maternal anxiety level and improved the feeling of self-satisfaction and confidence (Çinar and Öztürk, 2014; Aslan and Uzun, 2008). O'Brien et al. (2011) reported that ensuring primiparous are satisfied with their self-care is vitally important as childbirth causes the biggest transition in life, and can significantly impact the childbearing experience and well-being of the whole family.

Studies (Sehati Shafaie et al., 2017; Hughes et al., 2022) show that primiparous women who received prenatal information throughout their stay in the hospital regarding self-care and infant care can alleviate concerns and boost their confidence levels, while evidence available that addresses the health outcomes of inhospital education and preparedness is limited. However, evidences (Weiss and Lokken, 2009; Herval et al., 2019; Citak Bilgin et al., 2020) found that poor quality discharge education and preparedness was associated with more newborn visits to emergency room or urgent care visits. Barimani et al. (2014) reported that 17% of mothers sought help in the emergency unit due to a lack of preparedness in the first two weeks after childbirth due to an infant's health problems, postdelivery complications, or breast-feeding problem. About 40% of mothers experience postpartum complications, among whom 15% face serious long-term consequences (Ejaz and Ahmad, 2013; Kamineni et al., 2017).

Bravo et al. (2011) reported that one of the purposes of postpartum hospitalization by primiparous is to provide the necessary support to the primiparous for her return home postpartum care. During such hospital stays, information provided to primiparous mothers about self-care and infant care can allay concerns and boost their confidence levels (Buchko et al., 2012). The educational package on preparedness for self and infant care enhances mothers' physical and emotional well-being and decreases medical expenses through the implementation of telephone follow-up for supporting moms of infants (Debelie et al., 2021; Okhovat et al., 2022). Limited evidence is available that addresses the health outcomes of in-hospital education and preparedness. Hence, this study aims to identify the preparedness for self-care and

infant care among the primiparous before discharge and the information needs among primiparous after delivery in a private hospital in which this study will be conducted.

Methods and Materials

A descriptive, cross-sectional design is utilized in this study to determine the perception of preparedness among primiparous on self-care and infant care after delivery and before discharge. The study was conducted in a private hospital in Malaysia. This hospital consisted of a maternity ward where the target population was more stable and their length of stay was ideal for the study. The reason for choosing this study was based mainly on the feasibility of the study. The target population for this study is primiparous admitted in the maternity ward at Adventist Medical Centre in Penang who fulfill the study's inclusion criteria. Convenient sampling was used to select participants for the study. The recommended sample size of 72 mothers was selected for the study. The subjects included in this study are: Pregnant mother who had delivered baby for the first time; Age above 18 years old; Term pregnancy (mother who had delivered after completing 37 weeks gestation); No history of Gestational Diabetes and Hypertension; and Able to converse and understand English/Malay language. The subjects excluded in this study are Pregnant mothers who have delivered a baby more than once time; Age below 18 years old; in Preterm labor (mother who had delivered below 37 weeks gestation); had a history of Gestational Diabetes and Hypertension; and Unable to converse and understand English/Malay language. The instrument used in this study is a self-developed questionnaire based on the study hospital's postpartum discharge checklist and the articles that are in the literature review. The questionnaires for the primiparous contained 28 items. 5 of these items collect demographic data and were contained in section A of the questionnaire. Section B of the questionnaire contained 11 questions that were on self-care and 12 questions on infant care in section C of the questionnaire. The data from the pilot study was used to check the internal consistency by using Cronbach's alpha reliability test. The reliability test scores of the questionnaires in the pilot study were above 0.935, indicating that the questionnaires were consistent and reliable. The self-developed questionnaire was duly validated by the panel of content experts for its subject knowledge. The research proposal was presented and sought approval from the Board of Ethical Committee of the hospital, Malaysia. Informed consent was obtained from every subject and voluntary participation. All

information obtained through the study remained private and confidential, safely kept in closed file and passcode protected.

Results and Discussion

The majority of the study participants (n+29, 39%), aged ranged from 21 to 40 years, were married, Chinese

information provided on breast-feeding and breast care is sufficient and able to follow, whereas there is only 1(1.4%) disagreed and 2 (2.8%) of the respondents unsure (Figure 1). However, 63 (87.5%) respondents agreed that information on wound care and personal hygiene given to them is clear but there are 7 (9.7%) remain unsure and 2 (2.8%) disagreed. 65 (90.2%)

Table 1. Health education and information on self-care were provided before discharge (n=72)

Self-care information	Strongly Disagree	Disagree	Unsure	Agree	Strongly agree
	n (%)	n (%)	n (%)	n (%)	n (%)
Breast care/feeding	1(1.4%)	-	2 (2.8%)	53 (73.6%)	16 (22%)
Wound care	1(1.4%)	1(1.4%)	7 (9.7%)	41 (56.9%)	22 (30.6%)
Pain mx/medication	1(1.4%)	-	6 (8.3%)	42 (58.3%)	23 (31.9%)
Diet	1(1.4%)	2 (2.8%)	13 (18.1%)	46 (63.9%)	10 (13.9%)
Daily activity	-	2 (2.8%)	6 (8.3%)	56 (77.8%)	8 (11.1%)
Exercise	13(18.1%)	12(16.7%)	19 (26.4%)	21 (29.2%)	7 (9.7%)
Emergency Contact	-	4 (5.6%)	8 (11.1%)	45 (62.5%)	15 (20.8%)
Future follow up	1(1.4%)	-	2 (2.8%)	50 (69.4%)	19 26.4%)
Discharge education	1(1.4%)	-	8 (11.1%)	49 (68.1%)	14 (19.4%)
Level of confident	1(1.4%)	1(1.4%)	5 (6.9%)	49 (68.1%)	16 (22.2%)

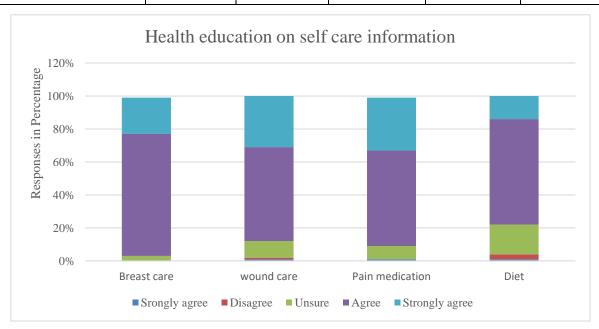


Figure 1. Percentage distribution of health education and information on self-care provided to primiparous women prior to discharge

(n = 50, 69.4%) and Malay (n = 11, 15.3%). There are 69 (95.6%) respondents agreed that the respondents agreed on pain management and medication information and 6 (8.3%) respondents were unsure.

Table 2. Health education and information on infant care provided before discharge (n=72)

Infant care information	Strongly Disagree	Disagree	Unsure	Agree	Strongly agree
	n (%)	n (%)	n (%)	n (%)	n (%)
Technique breast feeding	1(1.4%)	1(1.4%)	4 (5.6%)	47 (65.3%)	19 (26.4%)
Umbilical cord care	1(1.4%)	1(1.4%)	4 (5.6%)	44 (61.1%)	22 (30.6%)
Bathing/changing diapers	1(1.4%)	3(4.2%)	12 (16.7%)	41 (56.9%)	15 (20.8%)
Neonatal jaundice	3(4.2%)	5 (6.9%)	29 (40.3%)	29 (40.3%)	6 (8.3%)
Immunization schedule	1(1.4%)	1(1.4%)	9 (12.5%)	47 (65.3%)	14 (19.4%)
Doctor's exam/explanation	1(1.4%)	-	8 (11.1%)	48 (66.7%)	15 (20.8%)
Common problem in newborn	1(1.4%)	6 (8.3%)	25 (34.7%)	33 (45.8%)	7 (9.7%)
Emergency contact	1(1.4%)	-	11 (15.3)	47 (65.3%)	13 (18.1%)
Follow up	1(1.4%)	-	2 (2.8%)	47 (65.3%)	22 (30.6%)
Care of baby	1(1.4%)	-	6 (8.3%)	51 (70.8%)	14 (19.4%)
Level of confidence	1(1.4%)	1(1.4%)	4 (5.6%)	48 (66.7%)	18 (25%)

There were 66 (91.7%) respondents agreed on the technique of breast feeding and method of feeding, and information on baby's umbilical cord care. Both also

Findings from this study have revealed that most primiparous in this hospital perceived themselves as not well prepared in terms of preparedness towards self-care

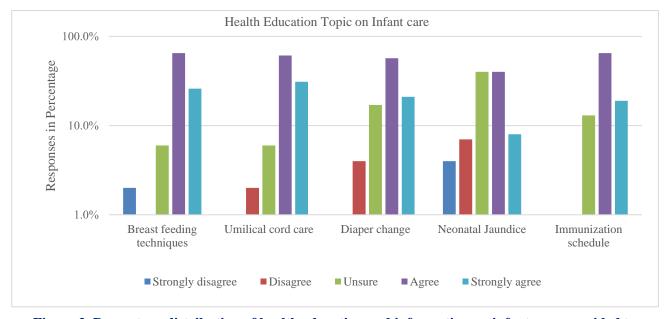


Figure 2. Percentage distribution of health education and information on infant care provided to primiparous women prior to discharge

remained 4 (5.6%) respondents unsure about this. However, 56 (77.7%) agreed on bathing, cleaning and changing diapers. Whereas 12 (16.7%) were unsure and 4 (5.6%) disagreed. Less than half of 35 (48.6%) of respondents agreed with the information on Neonatal Jaundice and management of phototherapy, 8 (11.1%) were disagreed and 29 (40.3%) unsure (Figure 2).

and infant care. Findings showed that only (22.2%) and (25%) of primiparous strongly agreed with the confidence level towards health care providers in self-care and infant care. Whereas the majority of primiparous (68.1%) and (66.7%) just agreed on this matter. Besides that, data analysis showed the information that most primiparous (36.1%) would like to know more

information regarding pelvic floor exercise followed by breast care and breast-feeding for self-care (Figure 3).

visits, telephone calls, postpartum discharge classes, referrals to other agencies and support groups, home video tapes on self and infant care procedures such as

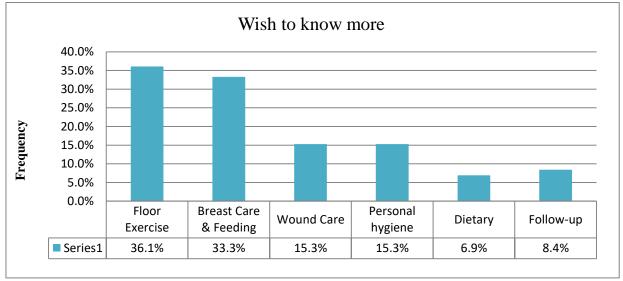


Figure 3. Percentage distribution of self-care needs that primiparous wish to know more prior to discharge

Thus, the findings of this study indicate that mothers have various needs and preparedness based on their parity. The results of the current study are supported by literature that revealed primparous mothers emphasized prior psychological, financial/economic, and physical preparation and readiness for pregnancy. Primiparas needed to know more about the physical care for the mother and infant than multiparas (Salarvand et al., 2020; Imaralu et al., 2020, Ju et al., 2022). Primiparous women who are prepared with basic information on how to obtain a birth certificate, how to manage time better now that they have another member in the family, and where they can get help when problems develop experience reduced anxiety and had positive effects towards self-care and infant care post-delivery (Yohai et al., 2018; Hassanzadeh et al., 2021). This would empower the Primiparous mothers to manage their problems efficiently. However, with regard to infant care, most of the primiparous wish to know more about neonatal jaundice, followed by how to recognize common problems in newborns.

Conclusion

This study highlighted the importance of providing professional postnatal care and information to primiparous before discharge from the hospital. Though information from this study cannot be generalized to all primiparous, it indicates nurses need to assess each mother's information needs and provide teaching and support to assist mothers in preparing for self-care and infant care. Some of the ways nurses can help new mothers to be knowledgeable and prepared are home

bathing, medical care, etc., and booklets and pamphlets.

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Conflict of Interest

The authors declare no conflict of interest.

Consent

Written consent was obtained from all the participants.

References

Aslan, F., & Uzun, S. (2008). Analysis of postnatal education and consultancy services given by nurses. *Turkish Clinics Journal of Medical Sciences*, 28, 736–742

Barimani, M., Oxelmark, L., Johansson, S.E., Langius-Eklöf, A., & Hylander, I. (2014). Professional support and emergency visits during the first 2 weeks postpartum. *Scand. J. Caring. Sci.*, 28(1), 57-65. https://doi.org/10.1111/scs.12036.

Bay, H., Erkal Aksoy, Y., & Dereli Yılmaz, S. (2022). Factors Affecting Primiparous Pregnant Women's Prenatal Attachment Levels, Childbirth Self-Efficacy Beliefs, and Labor Worry Levels. *Clinical Nursing Research*, 31(5), 952–959. https://doi.org/10.1177/10547738221078900

Bravo, P., Uribe, C., & Contreras, A. (2011). Early postnatal hospital discharge: the consequences of

- reducing length of stay for women and newborns. *Rev. Esc. Enferm. USP.*, 45(3), 758-63. https://doi.org/10.1590/s0080-62342011000300030.
- Buchko, Barbara L., Connie H. G., & Elizabeth, T. J. (2012). Improving Quality and Efficiency of Postpartum Hospital Education. *The Journal of Perinatal Education*, 21(4), 238–247. https://doi.org/10.1891/1058-1243.21.4.238
- Çinar, İ. Ö., & Öztürk, A. (2014). The Effect of Planned Baby Care Education Given to Primiparous Mothers on Maternal Attachment and Self-Confidence Levels. *Health Care for Women International*, 35(3), 320–333.

https://doi.org/10.1080/07399332.2013.842240

- Citak, B.N., Ak, B., Ayhan, F., Kocyigit, F., Yorgun, S., & Topcuoglu, M. A. (2020). Effect of childbirth education on the perceptions of childbirth and breastfeeding self-efficacy and the obstetric outcomes of nulliparous women. *Health Care for Women International*, 41(2), 188–204. https://doi.org/10.1080/07399332.2019.1672171
- Debelie, T. Z., Abdo, A. A., Anteneh, K. T., Limenih, M. A., Asaye, M. M., Lake, A.G., Ambaw, W. M., Kassie, B. A., & Abebe, S. M. (2021). Birth preparedness and complication readiness practice and associated factors among pregnant women in Northwest Ethiopia: 2018. *PLOS ONE*, 16(4), e0249083.
 - https://doi.org/10.1371/journal.pone.0249083
- Ejaz, S., & Ahmad, Kh. (2013). Postpartum care utilization among primigravida: A study in Rural Punjab, Pakistan. *Journal of Humanities and Socia Sciences*, *3*(4), 10-19.
- Gautam, P., Dahal, M., Ghimire, H., Chapagain, S., Baral, K., Acharya, R., Khanal, S., & Neupane, A. (2021). Depression among Adolescents of Rural Nepal: A Community-Based Study. *Depression Research and Treatment*, 2021, 1–9. https://doi.org/10.1155/2021/7495141
- Guintivano, J., Manuck, T., & Meltzer-Brody, S. (2018).

 Predictors of Postpartum Depression: A
 Comprehensive Review of the Last Decade of
 Evidence. *Clinical Obstetrics & Gynecology*,
 61(3), 591–603.
 - https://doi.org/10.1097/GRF.0000000000000368
- Hassanzadeh, R., Abbas-Alizadeh, F., Meedya, S., Mohammad-Alizadeh-Charandabi, S., & Mirghafourvand, M. (2021). Primiparous women's knowledge and satisfaction based on their attendance at childbirth preparation classes.

- *Nursing Open*, 8(5), 2558–2566. https://doi.org/10.1002/nop2.787
- Herval, Á. M., De Oliveira, F. P. S. L., Machado, K. M., Vasconcelos, M., Ferreira, R. C., Ferreira, E. F. E., Amaral, J. H. L. D., Vargas, A. M. D., & Gomes, V. E. (2019). Mothers' perception about health education in Brazilian primary health care: A qualitative study. *International Journal of Paediatric Dentistry*, 29(5), 669–676. https://doi.org/10.1111/ipd.12489
- Hughes, C. S., Kamanga, M., Jenny, A., Zieman, B., Warren, C., Walker, D., & Kazembe, A. (2022). Perceptions and predictors of respectful maternity care in Malawi: A quantitative cross-sectional analysis. *Midwifery*, 112, 103403. https://doi.org/10.1016/j.midw.2022.103403
- Imaralu, J., Ani, I., Olaleye, A., Jaiyesimi, E., Afolabi-Imaralu, A., & Odugbemi, O. (2020). Maternal and perinatal outcomes of birth preparedness and complication readiness in recently delivered women of a Southwestern Nigerian Town. *Annals* of *African Medicine*, 19(1), 60. https://doi.org/10.4103/aam.aam_29_19
- Kamineni, V., Murki, A., & Kota, V. (2017). Birth preparedness and complication readiness in pregnant women attending urban tertiary care hospital. *Journal of Family Medicine and Primary Care*, 6(2), 297. https://doi.org/10.4103/2249-4863.220006
- Ju, D., Zhang, K., Yuan, M., Li, B., & Zeng, T. (2022). Childbirth readiness mediates the effect of social support on psychological birth trauma of primiparous women: A nationwide online cross-sectional study in China [Preprint]. In Review. https://doi.org/10.21203/rs.3.rs-2314441/v1
- Lindblad, V., Melgaard, D., Jensen, K., Eidhammer, A., Westmark, S., Kragholm, K., & Gommesen, D. (2022). Primiparous women differ from multiparous women after early discharge regarding breastfeeding, anxiety, and insecurity—A prospective cohort study. *European Journal of Midwifery*, 6, 1–11.

https://doi.org/10.18332/ejm/146897

- Malouf, R., Henderson, J., & Alderdice, F. (2019). Expectations and experiences of hospital postnatal care in the UK: A systematic review of quantitative and qualitative studies. *BMJ Open*, *9*(7), e022212. https://doi.org/10.1136/bmjopen-2018-022212
- Memon, J., Holakouie-Naieni, K., Majdzadeh, R., Yekaninejad, M. S., Garmaroudi, G., Raza, O., & Nematollahi, S. (2019). Knowledge, attitude, and

- practice among mothers about newborn care in Sindh, Pakistan. BMC Pregnancy and Childbirth, 19(1), 329. https://doi.org/10.1186/s12884-019-2479-0
- Mueller, A. N., & Grylka-Baeschlin, S. (2023). Selfmanagement, care needs and clinical management of primiparous mothers during early labour – a qualitative content analysis. BMC Pregnancy and Childbirth, 23(1), 191.

https://doi.org/10.1186/s12884-023-05453-4

- O'Brien, B., Chalmers, B., Fell, D., Heaman, M., Darling, E. K., & Herbert, P. (2011). The Experience of Pregnancy and Birth with Midwives: Results from the Canadian Maternity Experiences Survey. Birth, 38(3), 207–215.
 - https://doi.org/10.1111/j.1523-536X.2011.00482.x
- Okhovat, F., Okhovat, S., Karimiankakolaki, Z., & Yoshany, N. (2022). The effect of educational support intervention including peer groups for infant care on the growth rates of infants, breastfeeding self-efficacy and quality of life of their mothers in Iran: Study protocol. Reproductive Health, 19(1), 214. https://doi.org/10.1186/s12978-022-01523-6
- Salarvand, S., Mousavi, M.-S., Esmaeilbeigy, D., Changaee, F., & Almasian, M. (2020). The Perceived Health Needs of Primiparous Mothers Referring to Primary Health Care Centers: A Qualitative Study. *International* Journal Women's Health, Volume 12, 745-753. https://doi.org/10.2147/IJWH.S258446
- Silverman, M. E., Reichenberg, A., Savitz, D. A., Cnattingius, S., Lichtenstein, P., Hultman, C. M., Larsson, H., & Sandin, S. (2017). The risk factors for postpartum depression: A population-based study: S ILVERMAN ET AL. Depression and Anxiety, 34(2), 178–187. https://doi.org/10.1002/da.22597

- Sehati Shafaie, F., Mirghafourvand, M., & Bagherinia, M. (2017). The Association Between Maternal Self-confidence and Functional Status Primiparous Women During Postpartum Period, 2015-2016. International Journal of Women's Health and Reproduction Sciences, 5(3), 200–204. https://doi.org/10.15296/ijwhr.2017.36
- Shakarami, A., Mirghafourvand, M., Abdolalipour, S., Jafarabadi, M. A., & Iravani, M. (2021). Comparison of fear, anxiety and self-efficacy of childbirth among primiparous and multiparous women. BMC Pregnancy and Childbirth, 21(1), 642. https://doi.org/10.1186/s12884-021-04114-8
- Shorey, S., Chee, C. Y. I., Ng, E. D., Chan, Y. H., Tam, W. W. S., & Chong, Y. S. (2018). Prevalence and incidence of postpartum depression among healthy mothers: A systematic review and meta-analysis. Journal of Psychiatric Research, 104, 235-248. https://doi.org/10.1016/j.jpsychires.2018.08.001
- Tsakiridis, I., Zerva, C., Mamopoulos, A., Kalogiannidis, I., Athanasiadis, A., & Dagklis, T. (2022). Maternal perception of fetal movements: Onset and associated factors. Journal of Perinatal Medicine, 1174–1179. https://doi.org/10.1515/jpm-50(9), 2021-0606
- Weiss, M. E., & Lokken, L. (2009). Predictors and Outcomes of Postpartum Mothers' Perceptions of Readiness for Discharge after Birth. Journal of Obstetric, Gynecologic & Neonatal Nursing, 38(4), 406-417. https://doi.org/10.1111/j.1552-6909.2009.01040.x
- Yohai, D., Alharar, D., Cohen, R., Kaltian, Z., Aricha-Tamir, B., Ben Aion, S., Yohai, Z., & Weintraub, A. Y. (2018). The effect of attending a prenatal childbirth preparedness course on labor duration and outcomes. Journal of Perinatal Medicine, 46(1), 47–52. https://doi.org/10.1515/jpm-2016-03

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