

Husband's Support for Postpartum Mothers (Study of The Mother with Vaginal Birth and Section Caesarea)

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Abstract

Purpose: This study aims to determine the picture of husband support for postpartum mothers with vaginal birth and sectio caesarea..

Methodology. This research is quantitative research with a Cross-Sectional approach. The sample of this study is postpartum mothers in the Kartasura Health Center work area in 2022. Purposive sampling with a total sample of 54 postpartum mothers. Data collection used the postpartum social support questionnaire (PSSQ) and analyzed using the Independent T-test.

Results: The results of the analysis in this study showed the characteristics of respondents aged 20-41 years, with an average baby born at 39 weeks gestation, high school education as many as 30 respondents (56%), mothers who lived with their husbands as many as 49 respondents (90.7%), did not experience complications of childbirth (88.9%), most multipara mothers were 38 respondents (70.4%). In this study, a statistical value of p = 0.952 was obtained. The sig value (p)>(0.05) means that there is no difference in husband support in mothers who give birth in the normal way and husband support in mothers who give birth in secio caesarea ways.

Applications/Originality/Value. The difference between this research and pre-existing research lies in the research respondents, the time of the study, measuring instruments, the literature used, the theory used and the results of the research.

Introduction Section

After childbirth, the postpartum period is a crucial moment in the life of the mother. Because of the multiple problems that postpartum mothers experience, the postpartum period becomes a crucial period (Nisak & Rahayuningsih, 2018). Many maternal deaths occur due to late assistance or simple first aid provided inadequately because the husband does not understand the problems during pregnancy and childbirth; childbirth readiness is an essential process in birth planning and anticipation of actions to prevent maternal complications(Durmazoğlu et al., 2021). The world-scale maternal mortality rate based on World Health Organization (WHO) research in 2017 still shows a high number with a total of 289,000 people. In Southeast Asia, Indonesia is ranked first with the number of maternal deaths reaching 190/100,000 live birth rates, followed by Vietnam with 49/100,000 live birth rates, Malaysia with 29/100,000 live birth rates, Brunei Darussalam with 27/100,000 live birth rates, and Thailand with 26/100,000 live births, and Thailand with 26/100,000 live births (World Health Organization, 2020).

Most of expectant mothers view childbirth as a complicated process that may be accompanied by anxiety and worries. (Mortazavi & Mehrabadi, 2021). Giving birth by sectio caesarea is scary because it can cause death (Chen & Tan, 2019). Sectio caesarea mothers have long-term and short-term risks after giving birth will affect their quality of life. Especially mothers who are giving birth for the first time because they need a lot of information and help in this period. Factors that affect childbirth readiness in pregnant women are age, parity, education, family support and husband support.

The type of delivery according to the mode of delivery is based on two categories, namely vaginal birth and caesarean section. The method of delivery is the method chosen by the mother during giving birth or by the health worker who handles it. There are two possibilities that the mother will give birth normally: if she is happy with her husband's assistance and if she is happy with her pregnancy. This suggests that women who experience trouble-free pregnancies and mothers who get their husbands' support during the pregnancy are more likely to deliver their babies normally. A protective factor against pervaginal labor is satisfaction with

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marital or sexual activity(Mortazavi & Mehrabadi, 2021). In many nations, the rise in caesarean deliveries has raised social issues. Originally intended to address issues related to challenging childbirth, cesarean sections are today used without restriction(Chen & Tan, 2019) There is a widespread misconception that vaginal birth might impact sexual enjoyment or function. Women who are content with their marital or sexual relationship are more likely to deliver by cesarean section. According to the most recent findings of qualitative research conducted in Iran, the husband's concerns about sexual function as well as the fear of permanent harm to the urogenital organs and sexual function are factors in requests for cesarean sections(Mortazavi & Mehrabadi, 2021).

In general, women in the puerperium require assistance from others around them to fulfill their new responsibilities as parents and to care for themselves while they adjust to the puerperium and attempt to regain their pre-pregnancy state. Birth and pregnancy are periods of developmental crises. During this time, stress levels may increase. Social support can come from a variety of people, including partners, families, friends, coworkers, healthcare professionals, and neighbors. Husband support is a crucial element since it helps puerperal mothers feel more confident and self-assured. (Winarni et al., 2018).

Social support is the conviction that one's social network will offer resources, such as genuine knowledge and emotional support, when needed(Hijazi et al., 2021). Women require the family's support to adjust throughout the early stages of becoming parents. (Rahayuningsih & S, 2018). Postpartum depression may develop as a result of a lack of social support (Yu et al., 2021). Social support during the postpartum period includes both emotional and instrumental help. Emotional support includes empathy, love, care, and trust in caring for the baby, as well as support for oneself and personal issues(Rahayuningsih et al., 2015). Husband support is the aid provided by the husband to his wife. It can take the form of physical support, such as meeting the wife's requirements and assisting her in completing a task or difficulty, or psychological support, such as providing his wife with encouragement, praise, and support. The husband's support can also be demonstrated in other ways, such as by soothing the wife, providing touch, or using words that inspire the wife. (Puspitasari, 2020)

Based on the description provided above, researchers are interested in studying how husband support varies depending on the style of vaginal delivery and if the mother had a secio caesarean section. The test of this study is to find out whether there is a difference in husband support in mothers who give birth by pervagina and husband support in mothers who give birth by secio caesarea.

Method

Responden

This research was conducted in the working area of the Kartasura Health Center, Sukoharjo regency. The population of this study was puerperal mothers in the Kartasura Health Center work area who met the inclusion criteria and were willing to be respondents. Purposive sampling with a total sample of 54 puerperal mothers.

Method

This research is quantitative descriptive research with a Cross Section approach. The instrument in this study used a modified postpartum social support questionnaire (PSSQ) from Miller et al and Hopkins & Campbell that had been modified. A modified version of Miller et al's and Hopkins & Campbell's social support questionnaires was translated into Indonesian which was further tested on a group of postpartum mothers of the Kartasura region to ensure understanding, to measure husbandly support in puerperal mothers. The variables used in this study are independent variables. What will be studied is a picture of husband support in normal childbirth mothers and SC which is assessed from the postpartum social support questionnaire (PSSQ) with a total of ten questions. The ten questions have 5 scales which are scale 1: never, 2: Rare, 3: Sometimes, 4: Often, 5:Always. The independent variables studied were the support of the husband by means of normal childbirth and sectio caesarea and maternal characteristics. Maternal characteristics include Age, week of pregnancy, education, cohabitation, type of work, pregnancy complications and parity.

Ethical Considerations

The study was conducted with the approval of the Regional General Hospital (RSUD) Dr. Moewardi (1,273/X/HREC/2022). This research guarantees the anonymity and confidentiality of participants, no names or personally identifiable information written on questionnaires or demographic forms. Participation in this study was voluntary, and participation was the consent of the respondents. All participants have the right to voluntarily participate in the study without adverse consequences and to receive a full description of the nature of the study. Participants are convinced that they have the right to withdraw from the research at any time without questioning.

Static Analysis

The obtained data is entered into an Excel spreadsheet and then exported to an SPSS spreadsheet for data calculations. Furthermore, a normality test and homogeneity test are carried out to find out whether the data distribution is normal or not and to find out whether the data studied have the same characteristics or not. Normality and homogeneity tests are carried out as a condition for conducting an Independent T-test. After testing normality and homogeneity, the results were obtained that the data were distributed normally and the data had the same characteristics. Furthermore, the authors conducted an Independent T-test between husband support data on mothers who gave birth normally and husbands' support in mothers who gave birth by caesarea.

Result

Table 1 Age distribution and week of pregnancy of respondents No Variable Mean SD SE Min – Mak Median 20 – 41 1. Age 29.04 5,359 0,729 28.50 2. Baby born in 39.00 1,229 0,167 36 - 42 week 39,00

Table 1 The results of the analysis obtained the average age of the mother was 29.04 years, the median was 28.50 years with a standard deviation of 5.359 years and a standard error of 0.729. The youngest age of the mother is 20 years and the oldest age is 41 years. Then for the results of the analysis of the week of maternal pregnancy, the average baby was born at 39.00 weeks of gestation, the median baby was born at the age of 39.00 weeks with a standard deviation of 1.229 weeks. The smallest birth week is 36 weeks and the largest gestation week is 42 weeks.

Table 2 Distribution of Respondent Characteristics Percentage			
Variable	Frequency (n=54)	Presentase (%)	
Education			
Bachelors	19	35	
Senior High School	30	56	
Junior High School	5	9	
Living With			
Original Family	5	9,3	
Husband	49	90,7	
Employment			
Work	23	42,6	
Doesn't Work	31	57,4	
Complications			
Yes	6	11,1	

No	48	88,9
Parity		
Primipara	16	29,6
Multipara	38	70,4

Table 2 Based on the table above, it can be seen that most mothers have a high school education with 30 respondents (56%) followed by universities with 19 respondents (35%) and a small number of mothers with junior high school education with 5 respondents (9%). Most mothers live with their husbands, namely 49 respondents (90.7%) and a small percentage of mothers live with their original families with 5 respondents (9.3%). Most of the mothers did not work or became housewives, namely 31 respondents (57.4%) and a small percentage of working mothers with 23 respondents (42.6%). Most mothers had no complications while pregnant (88.9%) a small percentage of mothers experienced complications while pregnant (11.1%). Most of the multipara mothers were 38 respondents (70.4%) a small percentage of primiparous mothers with a total of 16 respondents (29.6%).

Table 3 frequency distribution of pervagina and secio caesarea types of labor			
Variabel	Frekuensi (n=54)	Persentase(%)	
Vaginal Birth	27	50,0	
Sectio Caesarea	27	50,0	

Table 3 From the table above shows 27 puerperal mothers giving birth normally with a percentage of 50%, and another 27 respondents giving birth by sectio caesarea with a percentage of 50%.

Variable	p-Value	Information
Vaginal Birth	0,115	Normal
Sectio Caesarea	0,604	Normal

Table 4. Test for normality of husband support in mothers of pervagina and secio caesarea birth

Table 4. In the table above, the results of the normality test with the shapiro-Wilk test found that the signification value of husband support in normal childbirth mothers is p=0.115. For the signification value of husband support in mothers giving birth to secio caesarea is p=0.604. Based on the data above, it can be concluded that the data is normally distributed with a sig value (p)>(0.05). In this study, a homogeneity test using the Levene' test method obtained a signification value of p = 0.168, based on the data above it can be concluded that the data has the same variance as the sig value of p>(0.05). so this study used the Independent T-test.

Table 5. Independent T-test Results						
Variable	Mean	SD	SE	P Value	Ν	
Vaginal Birth	39,89	3,59 8	0,693	0,952	27	
Sectio Caesarea	39,81	5,27 0	1,014		27	

In table 5. The results of the Independent T-test analysis obtained the average husband support in mothers who gave birth normally was 39.89 with a standard deviation of 3.598, while for mothers who gave birth to sectio caesarea the average husband support was 39.81 with a standard deviation of 5.270. From the average results of husband support, there was an average difference of 0.07 greater husband support for mothers who gave birth by pervagina. The results of the statistical test obtained a value of p = 0.952. The value of sig (p)>(0.05)

then from the data above there is no significant difference in the average husband support in mothers who give birth in a normal way and who give birth by sectio caesarea.

Discussion

Husband support is a type of communication that involves a genuine exchange of gifts and favors; as a result, it encourages people to show their spouses love and care (Hijazi et al., 2021). An external factor that may have an impact on moms' postpartum stress is their husbands' support. (Megasari & Rahayuningsih, 2018). The age characteristics of mothers are in the range of 20-41 years with the educational status of most mothers having a high school education, followed by college and a small percentage of mothers with a junior high school education. Based on research conducted by Durmazoglu et al, there is a signification difference between age and education with the support of the husband, namely the sig value p = < 0.05 was found that the younger age group and the level of high school education and below were less supportive of the mother in childbirth(Durmazoğlu et al., 2021). To give their children the best care possible, mothers' education levels are crucial. (Rahayuningsih et al., 2021).

In this study, the majority of mothers gave birth without any difficulties. Pregnancy and childbirth are most risk-free for women between the ages of 20 and 35. Women under 20 and women over 35 have a higher risk of difficulties during pregnancy and childbirth(Sulastri et al., 2019). The characteristics of the week of pregnancy in this study were that the average mother gave birth to a baby at 39 weeks gestation. The safe gestational age for the mother is 20-35 years. The vulnerable age for pregnancy is under 20 years old and over 35 years old(Rahayuningsih et al., 2021). Premature mothers experience more anxiety during the postpartum period and require more social assistance. (Shafie et al., 2018)

In this study, most mothers were multipara and most mothers lived with their husbands and did not work which allowed mothers to get support from their husbands, Primipara mothers needed more support than multipara mothers from environments such as husbands, parents/family, friends and health workers. In some studies primipara mothers have fear in facing the delivery period compared to multipara mothers (Mortazavi & Mehrabadi, 2021). In multipara mothers who give birth by pervagina because the birth canal has been passed by the baby, then stretching and opening are faster. In the lightening process, for example, the decrease in the presentation of the baby into the minor pelvis, in primiparous occurs before delivery, because the birth canal is still narrow, so the pain has been felt, while the sign of childbirth is not yet there. Ignorance of this condition has caused primipara confusion and stress(Yu et al., 2021). In terms of childbirth experience, primipara has never had the experience of giving birth, therefore primiparous mothers tend to experience postpartum depression higher than multipara mothers. The results of the 2021 Satrianegara study showed that around 50-60% of postpartum depression occurred in primipara. Therefore, primipara needs greater support than mothers who have had previous childbirth experience(Satrianegera et al., 2021).

The results of this study showed that there was no difference in husband support in mothers who gave birth to pervagina and husband support in mothers who gave birth by caesarea p=0.952 (p=>0.05), this is in accordance with research conducted in Turkey with a couple support score according to the type of delivery found that the average score of childbirth by cesarean section was 166.00 ± 8.73 and the average score for pervaginam delivery was 135.00 ± 11.20 . However, when the MPQLQ score was examined, it was found that the difference between the mean scores of birth types was insignificant (p > 0.05)(Women, 2018). This can be because most of the respondents live with their husbands and husbands are the closest people who are responsible for providing a sense of comfort, security, a sense of respect, a sense of worth, a passion to complete pregnancy and childbirth well and full of happiness(Yu et al., 2021). Childbirth is a process of struggle between life and death for a woman so that a wife really needs support from various parties, especially the support of the husband. The existence of husband support can make it easier for mothers during the puerperium(Satrianegera et al., 2021).

Husband support is the factor most associated with postpartum blues events (Astri et al., 2020). For new mothers, social support is crucial since it can help prevent postpartum depression. (Shantanam & MUELLER, 2018). In this study there was a difference in the average support of husbands by giving birth to pervagina and

secio caesarea, the difference was very small, namely 0.07 greater the average in husband support in mothers who gave birth pervagina this is in accordance with the research of Mortazavi & Mehtazavi which stated that from the variables studied predicting normal birth is a form of satisfaction from husband support(Mortazavi & Mehrabadi, 2021). The health and happiness of the mother and child are greatly influenced by the husband or father (Ambarwati & Ihtiarini, 2019).

Based on research conducted by Mortazavi & Mehtazavi showed that there is no relationship between the way of birth and the support of the husband. This may be because the respondents consisted of women who planned to give birth by pervagina and give birth by secio caesarea. Women with a high fear will probably choose to do secio caesarea. pervaginam delivery, that is, satisfaction with the support of the husband and satisfaction with pregnancy. In puerperal mothers who get the support of their husbands since pregnancy are more likely to give birth normally. Satisfaction with marital/sexual intercourse is a protective factor for pervaginam labor(Mortazavi & Mehrabadi, 2021).

Conclusion

In puerperal mothers, husband support is an important component in the puerperium because with the support of the husband in the mother, it can increase self-esteem and self-confidence. In this study, it can be described that there is no difference between husband support in puerperal mothers by pervagina childbirth and sectio caesarea. This can be caused because the husband is the closest person who is responsible for providing a sense of comfort, security, a sense of respect, a sense of worth, a passion to complete pregnancy and childbirth well and full of happiness. And in this study, some respondents lived together with their husbands. The characteristics of the mother in this study can also affect the dukugan in the husband. The results of statistical tests in this study obtained the average husband support in mothers who gave birth normally was 39.89 while for mothers who gave birth to secio caesarea the average husband support was 39.81. From the average results of husband support, there was an average difference of 0.07 greater husband support for mothers who gave birth by pervagina.

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References

- Ambarwati, W. N., & Ihtiarini, R. (2019). First Time Experience of Being a Father in Adapting to Postpartum Period in Indonesia Setting. *Jurnal Berita Ilmu Keperawatan*, *12*(1), 37–42. https://journals.ums.ac.id/index.php/BIK/article/view/11249/pdf
- Astri, R., Fatmawati, A., & Gartika, G. (2020). Dukungan Sosial Pada Ibu Postpartum Primipara Terhadap Kejadian Postpartum Blues. *JURNAL KESEHATAN PERINTIS (Perintis's Health Journal)*, 7(1), 16–21. https://doi.org/10.33653/jkp.v7i1.417
- Chen, H., & Tan, D. (2019). Cesarean section or natural childbirth? Cesarean birth may damage your health. *Frontiers in Psychology*, *10*(FEB), 1–7. https://doi.org/10.3389/fpsyg.2019.00351
- Durmazoğlu, G., Çiçek, Ö., & Okumuş, H. (2021). The effect of spousal support perceived by mothers on breastfeeding in the postpartum period. *Turkish Archives of Pediatrics*, *56*(1), 57–61. https://doi.org/10.14744/TurkPediatriArs.2020.09076
- Hijazi, H. H., Alyahya, M. S., Al Abdi, R. M., Alolayyan, M. N., Sindiani, A. M., Raffee, L. A., Baniissa, W. A., & Al Marzouqi, A. M. (2021). The impact of perceived social support during pregnancy on postpartum

infant-focused anxieties: A prospective cohort study of mothers in Northern Jordan. *International Journal of Women's Health*, *13*(October), 973–989. https://doi.org/10.2147/JJWH.S329487

- Megasari, R. R., & Rahayuningsih, F. B. (2018). *Hubungan Antara Fungsi Keluarga Dengan Postpartum Blues* pada Ibu Postpartum. 11(2), 67–72. https://journals.ums.ac.id/index.php/BIK/article/view/9617/pdf
- Mortazavi, F., & Mehrabadi, M. (2021). Predictors of fear of childbirth and normal vaginal birth among Iranian postpartum women: a cross-sectional study. *BMC Pregnancy and Childbirth*, *21*(1), 1–12. https://doi.org/10.1186/s12884-021-03790-w
- Nisak, K., & Rahayuningsih, F. B. (2018). Perbedaan Kualitas Hidup Postpartum Berdasarkan Jenis Persalinan Di Rsud Dr. Soeratno Gemolong. *Mewujudkan Masyarakat Madani Dan Lestari*, 89–100. https://dspace.uii.ac.id/handle/123456789/11440
- Puspitasari, E. (2020). Hubungan Dukungan Suami Dan Keluarga Dengan Intensitas Nyeri Persalinan Kala I. Jurnal Kesehatan, 12(2), 118–124. https://journals.ums.ac.id/index.php/jk/article/view/9768/5092
- Rahayuningsih, F. B., Fitriani, N., Dewi, E., Sudaryanto, A., Sulastri, S., & Jihan, A. F. (2021). *Knowledge about Care of Pregnant Mothers during the Covid-19 Pandemic. 9*, 266–272. https://doi.org/10.3889/oamjms.2021.6845
- Rahayuningsih, F. B., Hakimi, M., Haryanti, F., & Anganthi, N. R. N. (2015). Social Support and Postpartum Quality of Life During The Postpartum Period. *Journal of Health Journal, 15*(2011), 88–93. http://iiste.org/Journals/index.php/JHMN/article/viewFile/24457/25033
- Rahayuningsih, F. B., & S, E. Z. (2018). Social Support for the Quality of Life Postpartum Mothers in Sukodono Subdistrict Sragen Regency. *Indonesian Nursing Journal of Education and Clinic (Injec), 1*(1), 45. https://doi.org/10.24990/injec.v1i1.51
- Satrianegera, M. F., Hadju, V., & Kurniati, Y. (2021). The Importance of Husband Support During Childbirth in Indonesia. *Al-Sihah: The Public Health Science Journal*, *13*(1), 74. https://doi.org/10.24252/al-sihah.v13i1.21398
- Shafie, M., Davoodizadeh Jolgeh, H., Dabirifard, M., Dabirifard, S., & Shafiee, M. (2018). The Relationship Between Social Support and Postpartum Depression in Mothers with Premature Babies. *The Journal of Tolooebehdasht, 4*, 81–93. https://doi.org/10.18502/tbj.v17i4.188
- Shantanam, S., & MUELLER. (2018). Postpartum Depression and Social Support in a Racially and Ethnically Diverse Population of Women.HHS Public Access. *Physiology & Behavior*, *176*(1), 139–148. https://doi.org/10.1007/s00737-018-0882-6.Postpartum
- Sulastri, S., Maliya, A., Mufidah, N., & Nurhayati, E. (2019). Kontribusi Jumlah Kehamilan (Gravida) Terhadap Komplikasi Selama Kehamilan dan Persalinan. *Jurnal Ilmu Keperawatan Maternitas, 2*(1), 9. https://doi.org/10.32584/jikm.v2i1.202
- Winarni, L. M., Winarni, E., & Ikhlasiah, M. (2018). Pengaruh Dukungan Suami Dan Bounding Attachment Dengan Kondisi Psikologis Ibu Postpartum Di Rsud Kabupaten Tangerang Tahun 2017. *Jurnal Ilmiah Bidan*, *3*(2), 1–11. https://ibi.or.id/journal/index.php/jib/article/view/50/55
- Women, A. (2018). *How Does Spousal Support Affect Women's Quality of Life in the Postpartum Period in Turkish Culture? 34*(3), 29–45.https://doi.org/10.14431/aw.2018.09.34.3.29
- World Health Organization. (2020). *Maternal mortality Evidence brief*. *1*, 1–4. https://www.who.int/news-room/fact-sheets/detail/maternal-mortality
- Yu, M., Sampson, M., Liu, Y., & Rubin, A. (2021). A longitudinal study of the stress-buffering effect of social support on postpartum depression: a structural equation modeling approach. *Anxiety, Stress and Coping, 34*(6), 751–765. https://doi.org/10.1080/10615806.2021.1921160
- Konzack, S., Radonjic, R., Liewald, M., & Altan, T. (2018). Prediction and reduction of springback in 3D hat shape forming of AHSS. *Procedia Manufacturing*, 15, 660-667. doi:https://doi.org/10.1016/j.promfg.2018.07.296
- Nakagawa, Y., Mori, K.-i., Yashima, S., & Kaido, T. (2018). Springback behaviour and quenchability in hot stamping of thick sheets. *Procedia Manufacturing, 15*, 1071-1078. doi:https://doi.org/10.1016/j.promfg.2018.07.385

- Radonjic, R., & Liewald, M. (2019). New process design for reduction of springback by forming with alternating blank draw-in. *Procedia Manufacturing, 29*, 217-224. doi:https://doi.org/10.1016/j.promfg.2019.02.129
- Ren, H., Xie, J., Liao, S., Leem, D., Ehmann, K., & Cao, J. (2019). In-situ springback compensation in incremental sheet forming. *CIRP Annals*. doi:https://doi.org/10.1016/j.cirp.2019.04.042
- Suttner, S., Schmid, H., & Merklein, M. (2019). Cross-profile deep drawing of magnesium alloy AZ31 sheet metal for springback analysis under various temperatures. *Procedia Manufacturing, 29*, 406-411. doi:https://doi.org/10.1016/j.promfg.2019.02.155
- Wang, J. L., Fu, M. W., Shi, S. Q., & Korsunsky, A. M. (2018). Influence of size effect and plastic strain gradient on the springback behaviour of metallic materials in microbending process. *International Journal of Mechanical Sciences*, 146-147, 105-115. doi:https://doi.org/10.1016/j.ijmecsci.2018.07.027
- Zhan, M., Xing, L., Gao, P. F., & Ma, F. (2019). An analytical springback model for bending of welded tube considering the weld characteristics. *International Journal of Mechanical Sciences, 150*, 594-609. doi:https://doi.org/10.1016/j.ijmecsci.2018.10.060
- Zhang, F., Ruan, J., Zhang, J., He, K., & Du, R. (2018). Experimental study of springback behavior in incremental bending process. *Procedia Manufacturing*, *15*, 1290-1297. doi:https://doi.org/10.1016/j.promfg.2018.07.356
- Zhu, Y. X., Chen, W., Li, H. P., Liu, Y. L., & Chen, L. (2018). Springback study of RDB of rectangular H96 tube. *International Journal of Mechanical Sciences, 138-139*, 282-294. doi:https://doi.org/10.1016/j.ijmecsci.2018.02.022