The primipara respons based on individual personality type to the intensity of delivery pain

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ABSTRACT

Delivery period is one of periods that can cause stress to the mother and the fetus. This period is the natural common phenomenon that for some women subjectively can be considered as pain process that can cause simultaneous anxiety and pain. Psychology research has shown that pain is not only connected to physical respond, the culture that teaches and nurtures us also play important role in coping the pain. These two factors shape different personality for each individual. The objective of this study is to find out the primipara respons based on individual personality type to the intensity of delivery pain.

The method of this study was analytical method with survey cross sectional approach. The data was collected prospectively from interview and questionnaire in the same time to find out the correlation between individual personality type and the intensity of delivery pain based on inclusive and exclusive period February 1st 2009 to April 30th 2009.

The result with chi-square test and spearman rank test showed significant correlation between individual personality type and the intensity of delivery pain (X2= 8,571 ; p = 0,014). There is the negative correlation between extrovert individual personality and intensity of delivery pain (rs= -0,730; p <0,001), and there is the positive correlation between introvert individual personality type and intensity of delivery pain (rs = 0,726; p <0,001). Based on mann whitney, showed significant difference between extrovert personality type and introverts personality type to intensity of delivery pain (Z M-W: 3,050, p: 0,002). Based on chi-square test showed significant correlation between knowledge based on individual personality type to the intensity of delivery pain (X2= 4,418; p = 0,036)

The conclusion of these study are the more extrovert individual personality type the less intense the delivery pain would be, the more introvert individual personality type then the more intense delivery pain would be. The intensity of delivery pain on extrovert personality type was less than the pain of delivery pain on introverts personality type, and there is the significant correlation between knowledge based on individual personality type to the intensity of delivery pain.

Keywords: Delivery Pain, Extroverts, Introverts, Personality

INTRODUCTION
Giving birth could be a stressful time to mothers and their babies. It is a natural phenomenon that, for most women, is considered a process of pain that causes anxiety and fear at the same time.

The intensity of delivery pain for a woman is affected by her personal experience. Her feeling and care during pregnancy also influence a woman in dealing with the pain. Various psychological factors are known to influence a woman's perception of delivery pain and her ability to cope with it. One of the psychological factors that influence the intensity of delivery pain to a woman is her own personality. Based on this observation, we are interested in conducting a research entitled "The Response of Primipara Mothers to the Intensity of Delivery Pain Based on Individual Personality Type"

SUBJECT AND METHODS
For this research we use analytical method with the survey cross sectional approach. Data is collected prospectively from interviews and questionnaires conducted simultaneously at the same time in order to collect the response of primipara mothers to the intensity of delivery pain based on individual personality.

The population of this research is all primipara mothers at the first stage of labour who gave birth at the Maternity Hospital of Community Health Center in Central Jakarta. The sample of this research is all primipara mothers with extrovert and introvert type personality at the first stage of labour since we

started selection of subject. The sample matches the inclusion and exclusion criteria and the number of sample that is a minimum of 30 persons were obtained by the sample-selection method of consecutive sampling.

The tool used for this research is the Eysenck Personality Inventory (EPI) to measure the individual personality type and the Visual Analogue Scale to measure the ratio of delivery pain.

The result of the research is analysed with the Chi-Square test and the Spearman Rank to find the correlation between the individual personality types with the intensity of delivery pain. The Mann-Whitney test is used to see the ratio between the extrovert and introvert personality with the intensity of delivery pain and the Chi-Square test to find the correlation between individual personality types based knowledge with the intensity of delivery pain.

RESULTS
The number of subject of this research is 30 persons (15 of extrovert personality and 15 of introvert personality). The subject of this research is selected based on the pre-determined inclusion and exclusion criteria.

Table 1 Correlation between Individual Personality Type and the Intensity of Delivery Pain

Personality Type	Intensity of Delivery Pain			Number	Significance
	Mild	**Moderate**	**Heavy**	**N (%)**	
Extroversion	6 (40%)	5 (33.3%)	4 (26.7%)	15 (100)	X^2= 8,571 ; p = 0,014
Introversion	0 (0%)	5 (33.3%)	10 (66.7%)	15 (100)	
Total	**6 (20%)**	**10 (33.3%)**	**14 (46.7%)**	**30 (100)**	

From the above table 1, we can conclude that the Chi-Square test shows the value of p<0,05 which means that there is a significant correlation between individual personality type with the intensity of delivery pain i.e. there is a significant difference of the intensity of delivery pain for the extrovert and introvert personality types.

The Rank Spearman correlation analisys finds r_s = -0,730 ; p <0,001 (very significant) which means there is a negative relation between extrovert personality with the intensity of delivery pain. The more extrovert a woman, the milder the intensity of pain she experiences. (Table 2).

Table 2 Correlation of the Extrovert Personality with the Intensity of Delivery Pain

Intensity of Pain	Degree of Extrovert Personality			Significance
	$\bar{x}$ (SD)	Median	Range	
Mild	72.08 (2.45)	71.25	70 - 75	r_s= -0.730 ; p <0.001 (very significant)
Moderate	50.6 (13.46)	49.25	32.50 - 70	
Heavy	39.67 (14.14)	35	25 − 72.50	

The Rank Spearman correlation analisys finds r_s = 0, 726 ; p <0,001 (very significant) which means there is a positive relation between the introvert personality with the intensity of delivery pain. The more introvert a woman, the higher is the intensity of her delivery pain. (Table 3).

Table 3 Correlation of the Introvert Personality with the Intensity of Delivery Pain

Intensity of Pain	Degree of Extrovert Personality			Significance
	$\bar{x}$ (SD)	Median	Range	
Mild	29.58 (3.32)	30	25 - 35	r_s= -0.726 ; p <0.001 (very significant)
Moderate	49.5 (13.52)	51.25	30 − 67.5	
Heavy	60.39 (14.061)	65	27.5 − 75	

Table 4 with the Mann-Whitney test shows a significant difference of the intensity of delivery pain between the extrovert and introvert personality (Z $_{M-}$ $_W}$: 3, 050, p: 0,002). Extrovert individuals have milder intensity of pain compared to the intensity of pain for introvert individuals.

Table 4 Comparison of the Intensity of Delivery Pain between Extrovert and Introvert Personality

The Intensity of Delivery Pain	Individual Personality Type		Significance
	Extroversion	Introversion	
$\bar{x}$ (SD)	2.49 (1.595)	4.20 (1.082)	Z_{M-W} : 3.050 P: 0.002
Median	2	5	
Range	1-5	2-5	

The result of the data analysis with the Chi-Square shows a significant relations between women's level of knowledge with individual personality types and the intensity of delivery pain (p<0,05).

Table 5 Correlation between Knowledge for Individual Personality Types with the Intensity of Delivery Pain

Level of Knowledge	Personality Type	Intensity of pain			Total	Significance
		Mild	Moderate	Heavy		
Know	Extroversion	5 (50%)	3 (30%)	2 (20%)	10 (100%)	X^2= 4.418 P=0.036
	Introversion	0 (0%)	4 (50%)	4 (50%)	8 (100%)	
	Total	5 (27.8%)	7 (38.9%)	6 (33.3%)	18 (100%)	
Do Not Know	Extroversion	1 (20%)	2 (40%)	2 (40%)	5 (100%)	X^2= 2.818 P=0.093
	Introversion	0 (0%)	1 (14.3%)	6 (85.7%)	7 (100%)	
	Total	1 (8.3%)	3 (25%)	8 (66.7%)	12 (100%)	

DISCUSSION

The Relation of Individual Personality Type and the Intensity of Delivery Pain and The Comparison between the Intensity of Delivery Pain of Extrovert and Introvert Personality

The main cause of difference between extroversion and introversion is the cortical arousal level (CAL) which is a physiological condition that is mainly hereditary. CAL is the image of how cortex reacts to sensory stimulation. Low level CAL means that the cortex is insensitive and reacts mildly. On the other hand if the CAL level is high, the cortex gets stimulated easily. An extrovert personality has a low level of CAL and requires significant sensory stimulation to activate the cortex. On the contrary an introvert personality has high level of CAL and only requires a little stimulation to activate the cortex [4-7]. Based on this theory we can assume that extrovert personality will have less intense labour pain because of the cortex is less sensitive to stimulant (low CAL) that the pain experienced is milder. On the contrary, introvert personality is highly sensitive to the cortex arousal (CAL tinggi), therefore they will feel stronger intensity of pain compared to extrovert personality. We can conclude that the more extrovert an individual the intensity of pain experienced will be milder and the more introvert the stronger the intensity of pain experienced.

An extrovert individual has a strong self-control. When faced with traumatic stimulation, the extrovert brain will control itself, i.e. the brain does not think much of the trauma being experienced and does not remember much what happened therefore when the body responds to pain the brain does not feel it much because of the brain power to hold itself from traumatic stimulants. [12,13].

An extrovert individual will require significant strong sensory stimulant to stimulate the cortex in responding to pain therefore the intensity of pain experienced is milder compared to an introvert individual. An introvert individual shows an emotional regulation of a self-oriented individual or introversive. This individual tends to view things only from his/her own perspective and often too sensitive and depressive. This individual will pull himself/herself from the social surrounding, is speculative or spiritual. He/she tends to develop conflicts and anxieties and seems to be unsatisfied compared to an outgoing individual who is of extrovert personality [11]. From this we can conclude that an introvert individual feels greater pain because they are too sensitive and depressive.

The Relation of Knowledge and the Intensity of Delivery Pain

Mothers of extrovert and introvert personality with knowledge of labour pain and the technique to reduce the pain will have milder pain intensity (the visual analogue scale points to moderate and mild) compared to respondents of extrovert and introvert personality who do not know (do not have the knowledge) about delivery pain and the techniques to reduce the pain; whose visual analoge scale points to moderate and heavy which cause stronger intensity of delivery pain.

The level of knowledge and the preparation for childbirth are related to the intensity of delivery pain (the degree of pain) experienced by a woman in labour. This is in accordance with several theories stating that if a woman in labour has some knowledge of the delivery pain she will experience from the childbirth preparation, she will usually feel milder sensation and intensity of pain compared to one who is not prepared during her pregnancy [1-4]. The mother is prepared mentally during every pregnancy check-up visit and is usually accompanied by her husband. This psychoprophylactic method, if performed properly, is the ideal method to reduce delivery pain [1-5].

A research found that one technique to reduce delivery pain that is recognised by most respondents is breathing technique with 38,9% of the total respondents, relaxation technique with 27,2%, positioning and skin stimulation with 16,7% each.

The above data is according to the study conducted on 34 women who used deep breathing during contraction and shallow breathing when pushing the head out. These respondents said that breathing exercise really helps them to relax and is a form of distraction for them because they have to concentrate on the breathing [1-5]. Therefore can they

adapt better to the pain that it becomes less of a torment to them.

Another study that is in line with the above result is one conducted on 17 of 51 women who used the structured relaxation technique where they participated in antenatal class beforehand and therefore they experienced milder intensity of birthing pain. Another study shows that this non-pharmacological method was used by 38 women during delivery and they experienced milder intensity of pain because they have had knowledge of how to reduce the delivery pain [5].

CONCLUSIONS

1. There is a negative relation between the extrovert personality and the intensity of delivery pain i.e. the more extrovert an individual the milder is the intensity of delivery pain and a positive relation between the introvert personality and the intensity of delivery pain i.e. the more introvert an individual the stronger is the intensity of delivery pain.
2. A woman in labour with extrovert personality has a milder intensity of delivery pain compared to the intensity of delivery pain for one of introvert personality.
3. There is a significant relation between knowledge for individual personality type and the intensity of delivery pain.

SUGGESTION

1. It is necessary to improve the documentation system on midwifery care by including the data of psychological study on women at first delivery relating to the delivery pain experienced by the particular woman.
2. It is necessary to conduct evaluation of the intensity of pain using a pain scale (Visual Analogue Scale) on every woman in labour in order to determine the level of intensity of pain experienced for the use of midwifery care in future.
3. It is a good idea to measure the personality type of a woman in labour to know which personality is the most dominant in order to provide care and information pertaining to the particular personality type and as anticipatory measure for

the future pregnancy so that when the woman falls pregnant again and experiences labour pain, she can be given proper care to reduce the pain based on her personality type.

4. A birthing support system by a medical personnel especially a midwife is needed to assist mothers, both extrovert and introvert, in delivery with midwifery care so that the mothers feel more comfortable during the delivery process.
5. It is essential that medical personnel, especially a midwife, provide information about labour pain and the knowledge of how to reduce the pain to pregnant women so that they can prepare themselves for birthing pain and understand how to reduce that pain, so that they are more cooperative when given midwifery care process.
6. It is necessary that mothers in labour, both extrovert and introvert, are given the chance to express the sensation of their pain in any way they wish without discrimination on the race, cultural background and clients nor judgement by the medical personnel, especially the midwife.

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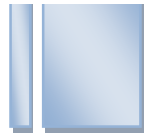
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