

Analysis of men's knowledge about physiological childbirth

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Abstract

Introduction. Childbirth is composed of four periods: First period – of separation, the second period – excretion, III bearing period and IV – the early post-natal period. Duration of the entire labor, and individual periods is dependent on the number of their earlier labors. Women who give birth for the first time up to 12 hours, in multiparous to 8 hours. The purpose of alleviating pain in women giving birth is recommended to use non-pharmacological methods of pain relief for childbirth which include massage, acupuncture, aromatherapy, music therapy, transcutaneous electrical nerve stimulation (TENS) and water immersion.

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Materials and methods. The study was conducted among 170 men. The research tool was a questionnaire survey of his own authorship developed for this work. The results were statistically analyzed. The significance level was $p < 0.05$ indicating the existence of statistically significant differences or relationships.

Results. Based on the obtained results, it was found that 31.76% (N = 54) of men answered correctly that I stage of labor lasts 7-15 hours, 42.94% (N = 73) of respondents answered correctly that the second stage of labor lasts about 0.5-2 hours, while the third period of up to one hour (23.53%, N = 40). In addition, studies have shown that men aged 30 years and above, with higher education, attending classes at the antenatal classes had significantly greater knowledge about massage as a method of pain relief during labor physiological than respondents aged 29 years old, with primary/vocational and secondary education and not going to antenatal classes ($p < 0.05$).

Conclusions. Men do not have knowledge of the duration of periods of confinement. Among the known methods of pain relief childbirth exchange mainly massage and water immersions. There is a need for education of men on various aspects of the course of physiological childbirth.

Key words:

childbirth, labor pain, delivery, men knowledge

Admission

In the literature there are many definitions of physiological childbirth. Szymański and Dobrzyński [1] indicate that physiological birth is a series of spontaneous, occurring in succession processes that lead to expulsion from the uterus, by nature, the elements of the blastocyst. Childbirth physiological ends pregnancy when the fetus reaches the capacity for independent life outside the mother's body. On the other hand Widomska-Czekajska and Górajek-Jóźwik [2] defined the physiological delivery as one that takes place forces and spontaneous vaginal delivery, for example, approximately 94% of the longitudinal cephalic fetal position. According to the authors perinatal measures include minor surgery, for example, obstetric control of the uterine cavity, sewing ruptured cervical nicked or ruptured groin. In turn, according to the Minister of Health of 20 September 2012 concerning standards of medical practice in the award of health services in the field of perinatal care exercised over the woman during physiological pregnancy, physiological childbirth, postpartum and infant care [3] physiological childbirth is „spontaneous childbirth low from the start of the risk and keeping the degree of risk for the duration of labor,

resulting in the baby is born of the cephalic, between 37 completed and 42 week of pregnancy, and after the mother and baby are in good condition.” Childbirth is composed of four periods: first period – of separation, the second period – excretion, III – bearing period and IV – the early postnatal period. Duration of the entire labor, and individual periods is dependent on the number of their earlier labors. Women who give birth for the first time up to 12 hours, in multiparous to 8 hours.

The pain felt by women during childbirth is an individual, and its presence does not indicate a disease, but a procedure of labor. Alleviation of labor pain is an important activity not only for ensuring the comfort of a woman in labor, but also because of the beneficial effects on parturition and fetal well-being. The purpose of alleviating pain in women giving birth is recommended to use non-pharmacological methods of pain relief for childbirth which include massage, acupuncture, aromatherapy, music therapy, transcutaneous electrical nerve stimulation (TENS) and water immersion [4,5,6] .

The aim of the study was to investigate the knowledge man on the duration of labor periods physiological and non-pharmacological methods of pain relief during labor.

Material and methods

The study was conducted at the Clinic of Gynaecology and Obstetrics of the Provincial Hospital in Lublin and Non-public Health Care „Ovum” Fertility and Andrology in Lublin.

Participation in the study was voluntary and anonymous. The group, which has been tested consisted of 170 men. In terms of the age of greatest interest, ie 60% (N = 102) were surveyed under the age of 29 years, while the remaining 40% (N = 68) were men aged 30 years and above. Among the respondents, 44% (N = 75%) had secondary education, 35% (N = 59) higher education, while 21% (N = 36) basic education/training. In turn, 59% (N = 101) of men as a residence marked the village and 41% (N = 69) city. In the study group, 36% (N = 61) of men did not have offspring, 35% (N = 60) had one child, and 29% (N = 49) 2 or more children. The analysis of the study showed that 90% (N = 153) of men did not attend antenatal classes to, while 10% (N = 17) men took part in such activities.

The results were statistically analyzed. The values of measurable parameters analyzed are presented using frequencies and percentage. The significance level was $p < 0.05$ indicating the existence of statistically significant differences or relationships. Database and statistical tests were carried out on the basis of computer software Statistica 9.0 (StatSoft, Poland).

Results

Table 1 shows knowledge of men on the duration and period of delivery depending on the socio-demographic variables and reproductive experience. Based on the obtained results, it was found that 31.76% (N = 54) of men answered correctly that I stage of labor lasts 7-15 hours. In contrast, 30.59% of respondents (N = 52) felt that it lasts 2-3 hours, while 22.94% (N = 39) were of the opinion that it lasts 15-30 hours, while 14.71% (N = 25) believed that lasts 1-2 hours. A statistically significant relationship between the knowledge of men on the duration and period of birth and age ($p = 0.007$) and having children ($p = 0.006$). Men aged 30 years and above, and having one child had a greater knowledge of the duration and parturi-

tion than respondents aged 29 years, and not having children or having 2 or more children.

Table 2 shows the knowledge of men on the duration of the second stage of labor, depending on socio-demographic variables and reproductive experience. Research shows that 51.76% of men (N = 88) considered that the second stage of labor lasts about 2-3 hours. In contrast, 42.94% (N = 73) of respondents answered correctly that it lasts about 0.5-2 hours, while 2.94% (N = 5) were of the opinion that it takes about 5 minutes, and 2.35% (N = 4), it takes about 10 hours. A statistically significant relationship between the knowledge of men for the duration of the second stage of labor and the education of men ($p = 0.005$). Respondents with higher education had significantly greater knowledge than men with primary education/ training.

Knowledgeable men on the duration of the third stage of labor, depending on socio-demographic variables and experience reproductive shown in Table 3. Among the respondents, 48.24% (N = 82) of men said that the third stage of labor lasts for 20-30 minutes. In contrast, 24.71% (N = 42) of respondents were of the opinion that it takes up to 2 hours, while 23.53% (N = 40) of men answered correctly that lasts for 1 hour. Only 3.53% (N = 6) men felt that the third stage of labor lasts up to 5 hours. A statistically significant relationship between the knowledge of men for the duration of the third stage of labor and education ($p < 0.001$), place of residence ($p = 0.024$) and attending or not attending antenatal classes ($p = 0.037$). Respondents with higher education, living in the city and going to antenatal classes had a greater knowledge of the duration of the third stage of labor than men with primary education/training, living in the countryside and not going to schools giving birth.

The analysis of the results of the men of knowledge on methods of pain relief during labor, depending on the physiological socio-demographic variables and reproductive experience are presented in Table 4. Men aged 30 years and above, with higher education, attending classes at the antenatal classes had significantly greater knowledge about massage as a method of pain relief during labor physiological than respondents aged 29 years old, with primary/vocational and secondary and not attending classes for antenatal

Table 1.

Knowledge of men on the duration of the first stage of labor and socio-demographic variables and experience procreative

		First stage of labor					χ^2
			2-3 hours	7-15 hours	15-30 hours	1-2 hours	
Age	Up to 29 years	N	36	32	15	19	12,064 p = 0,007
		%	35.29%	31.37%	14.71%	18.63%	
	30 years and over	N	16	22	24	6	
		%	23.53%	32.35%	35.29%	8.82%	
Education	Primary/technical	N	12	7	9	8	5.296 p = 0.506
		%	33.33%	19.44%	25.00%	22.22%	
	Secondary education	N	25	26	15	9	
		%	33.33%	34.67%	20.00%	12.00%	
	Higher education	N	15	21	15	8	
		%	25.42%	35.59%	25.42%	13.56%	
Place of stay	Country	N	20	27	13	9	3.151 p = 0.369
		%	28.99%	39.13%	18.84%	13.04%	
	Village	N	32	27	26	16	
		%	31.68%	26.73%	25.74%	15.84%	
Offspring	Lack	N	25	20	5	11	17.902 p = 0.006
		%	40.98%	32.79%	8.20%	18.03%	
	1 child	N	17	21	14	8	
		%	28.33%	35.00%	23.33%	13.33%	
	2 or more children	N	10	13	20	6	
		%	20.41%	26.53%	40.82%	12.24%	
School of birth	He attended classes	N	2	9	5	1	6.199 p = 0.102
		%	11.76%	52.94%	19.41%	5.88%	
	He attended no classes	N	50	45	34	24	
		%	32.68%	29.41%	22.22%	15.69%	
Total		N	52	54	39	25	170

Table 2.

Knowledge of men on the duration of the second stage of labor and socio-demographic variables and experience procreative

			Second stage of labor				χ^2
			It takes about 2-3 hours	It takes about 0.5-2 hours	It takes about 5 minutes	It takes about 10 hours	
Age	Up to 29 years	N	57	40	4	1	4.534 p = 0.209
		%	55.88%	39.22%	0.98%	0.98%	
	30 years and over	N	31	33	1	3	
		%	45.69%	48.53%	4.41%	4.41%	
Education	Primary/technical	N	22	8	4	2	18.558 p = 0.005
		%	61.11%	22.22%	11.11%	5.56%	
	Secondary education	N	39	34	1	1	
		%	52.00%	45.33%	1.33%	1.33%	
	Higher education	N	27	31	0	1	
		%	45.76%	52.54%	0.00%	1.69%	
Place of stay	Country	N	33	35	0	1	5.805 p = 0.121
		%	47.83%	50.72%	0.00%	1.45%	
	Village	N	55	38	5	3	
		%	54.46%	37.62%	4.95%	2.97%	
Offspring	Lack	N	32	24	4	1	5.875 p = 0.437
		%	52.46%	39.34%	6.56%	1.64%	
	1 child	N	31	28	0	1	
		%	51.67%	46.67%	0.00%	1.67%	
	2 or more children	N	25	21	1	2	
		%	51.02%	42.86%	2.04%	4.08%	
School of birth	He attended classes	N	9	8	0	0	1.080 p = 0.782
		%	52.94%	47.06%	0.00%	0.00%	
	He attended no classes	N	79	65	5	4	
		%	51.63%	42.48%	3.27%	2.61%	
Total		N	88	73	5	4	170
		%	51.76%	42.94%	2.94%	2.35%	100%

Table 3.

Knowledge of men on the duration of the third stage of labor and socio-demographic variables and experience procreative

			Third stage of labor				X ²
			It takes up to 2 hours	It takes 20-30 minutes	It takes up to 1 hour	Lasts up to 5 hours	
Age	Up to 29 years	N	32	44	23	3	6.315 p = 0.097
		%	31.37%	43.14%	22.55%	2.94%	
	30 years and over	N	10	38	17	3	
		%	14.71%	55.88%	25.00%	4.41%	
Education	Primary/technical	N	15	10	6	5	25.909 p = 0.000
		%	41.67%	27.78%	16.67%	13.89%	
	Secondary education	N	18	40	17	0	
		%	24.00%	53.33%	22.67%	0.00%	
	Higher education	N	9	32	17	1	
		%	15.25%	54.24%	28.81%	1.69%	
Place of stay	Country	N	10	41	17	1	9.400 p = 0.024
		%	14.49%	59.42%	24.64%	1.45%	
	Village	N	32	41	23	5	
		%	31.68%	40.59%	22.77%	4.95%	
Offspring	Lack	N	19	25	14	3	6.881 p = 0.332
		%	31.15%	40.98%	22.95%	4.92%	
	1 child	N	15	31	14	0	
		%	25.00%	51.67%	23.33%	0.00%	
	2 or more children	N	8	26	12	3	
		%	16.33%	53.06%	24.49%	6.12%	
School of birth	He attended classes	N	0	13	4	0	8.455 p = 0.037
		%	0.00%	76.47%	23.53%	0.00%	
	He attended no classes	N	42	69	36	6	
		%	27.45%	45.10%	23.53%	3.92%	
Total		N	42	82	40	6	170
		%	24.71%	48.24%	23.53%	3.53%	100.00%

classes ($p < 0.05$). In addition, respondents living in the city and going to classes to birth schools demonstrated significantly greater knowledge on the possible use of acupuncture in relieving pain during childbirth physiological compared to men living in rural areas and not attending for antenatal classes ($p < 0.05$). It was also a statistically significant relationship between knowledge about pain relief during childbirth physiological using aromatherapy, music therapy and water immersion and education, place of residence and attending or not attending classes for antenatal classes ($p < 0.05$).

Discussion

The first stage of labor includes the time from the onset of regular uterine contractions that cause the wipeout and dilation of the cervix to the full opening [1,7,8,9]. Szymański and Dobrzyński [1] state that I parturition takes 7 – 15 hours, depending on the diversity women. In contrast, Martin and Hutchon [8] have identified the duration of from 5 to 14 hours depending also on whether the element is a nascent or wieloródka. In contrast, current Minister of Health of 20 September 2012 [3] does not specify the duration and parturition. The present studies show that men do not possess knowledge about the duration and parturition. Only 31.76% of the respondents granted the correct answer, that I stage of labor lasts 7-15 hours. On the other hand, 30.59% of the respondents felt that lasts 2-3 hours, 22.94%, that of 15-30 hours, while 14.71% indicated that 1-2 hours.

The second stage of labor is the period of expulsion, which begins at the moment of complete cervical dilatation and ends at birth the newborn [1,7,8,9,10,11]. According Szymański and Dobrzyński [1] the second stage of labor is from 0.5 to 2 hours. On the other hand, as in the case of I stage of labor, the Minister of Health of 20 September 2012 [3] does not specify the duration of the second stage of labor. Studies have shown that men do not have the knowledge on the duration of the second stage of labor. 51.76% of respondents said that it lasts about 2-3 hours, and 2.94%, it takes about 5 minutes, while the 2.35% that approximately 10 hours. The correct answer, the sec-

ond stage of labor lasts about 0.5 to 2 hours granted 42.94% of men.

The third stage of labor is different bearing period, beginning after the birth of a newborn baby and with separation and expulsion of the afterbirth [1,7,10,11,12]. The average duration of the third stage of labor and Szymański Dobrzyński [1] is estimated to be about 5 to 30 minutes, depending on the diversity woman. In contrast, [3] the applicable Ordinance of the Minister of Health on 20 September 2012. specifies that the duration of the third stage of labor should not exceed one hour. Based on the obtained results, it was found that 23.53% of the respondents had knowledge about the duration of the third stage of labor. Men responded correctly that it lasts for 1 hour. On the other hand, 48.24% of the respondents felt that the third stage of labor lasts for 20-30 minutes, and 3.53%, that for 5 hours.

In order to relieve pain during the active physiological labor are currently used different methods. The most frequently mentioned in the literature include conventional methods, based on the use of pharmacological and alternative methods [13]. Alternative methods of alleviating pain during labor are becoming increasingly popular, the most commonly mentioned are: acupuncture, massage, transcutaneous electrical nerve stimulation TENS, water immersion, aromatherapy and music therapy [6,13,14,15].

Acupuncture is often mentioned as an alternative method used to relieve pain in childbirth or as a method of further [16,17]. Recent research conducted by Borup et al. [16] have shown that acupuncture reduces the need for pharmacological agents without compromising parturition. On the other hand, Cho et al. [17] on the basis of their research indicate that it reduces to a large extent the pain during labor and significantly reduces the need for an epidural. Also, the study Lee et al. [18] show that acupuncture reduces the need for epidural anesthesia and other methods niekonwencyjonalnych, but it reduces the pain experienced by emerging. Our study showed that men did not have knowledge of the possibility of using acupuncture as a method used to reduce pain in labor. Only 13.53% of the respondents found this answer correct.

Table 4.

Knowledge of men on methods of pain relief during labor physiological and socio-demographic variables and experience procreative

			Methods of pain relief					
			Massage	Acu-puncture	Aroma-therapy	Music therapy	TENS	Water immer-sion
Age	Up to 29 years	N	64	13	18	28	11	22
		%	62.65%	12.75%	17.65%	27.45%	10.78%	21.57%
	30 years and over	N	56	10	21	25	10	30
		%	82.35%	14.71%	30.88%	36.67%	14.71%	44.12%
	χ^2		6.641 $p = 0.010$	0.019 $p = 0.891$	3.329 $p = 0.608$	1.244 $p = 0.265$	0.274 $p = 0.601$	8.738 $p = 0.003$
Education	Primary/technical	N	19	3	4	5	4	5
		%	52.78%	8.33%	11.11%	13.89%	11.11%	13.89%
	Secondary education	N	54	8	13	18	8	20
		%	72.00%	10.67%	17.33%	24.00%	10.67%	26.67%
	Higher education	N	47	12	22	30	9	27
		%	79.66%	20.34%	37.29%	50.85%	15.25%	45.76%
χ^2		7.912 $p = 0.019$	3.695 $p = 0.158$	11.054 $p = 0.004$	17.454 $p = 0.000$	0.707 $p = 0.702$	11.670 $p = 0.003$	
Country	Country	N	53	16	26	33	13	32
		%	76.81%	23.19%	37.68%	47.83%	18.84%	46.38%
	Village	N	67	7	13	20	8	20
		%	66.34%	6.93%	12.87%	19.80%	7.92%	19.80%
	χ^2		1.691 $p = 0.193$	7.924 $p = 0.005$	12.905 $p = 0.000$	13.727 $p = 0.000$	3.563 $p = 0.059$	12.413 $p = 0.000$
Offspring	Lack	N	37	8	9	14	6	10
		%	60.66%	13.11%	14.75%	22.95%	9.84%	16.39%
	1 child	N	44	10	16	21	10	22
		%	73.33%	16.67%	26.67%	35.00%	16.67%	36.67%
	2 or more children	N	39	5	14	18	5	20
		%	79.59%	10.20%	28.57%	36.73%	10.20%	40.82%
χ^2		5.030 $p = 0.081$	0.977 $p = 0.614$	3.663 $p = 0.160$	3.038 $p = 0.219$	1.597 $p = 0.450$	9.247 $p = 0.010$	

Continued on next page

Table 4. Continued

School of birth	He attended classes	N	16	8	15	16	8	12
		%	94.12%	47.06%	88.24%	94.12%	47.06%	70.59%
	He attended no classes	N	104	15	24	37	13	40
		%	67.97%	9.80%	15.69%	24.18%	8.50%	26.14%
	χ^2		3.856	15.107	41.542	31.692	17.603	12.218
			$p = 0.050$	$p = 0.000$	$p = 0.000$	$p = 0.000$	$p = 0.000$	$p = 0.000$
Total	N	120	23	39	53	21	52	
	%	70.59%	13.53%	22.94%	31.18%	12.35%	30.59%	

Among the methods of childbirth pain relief is frequently mentioned TENS transcutaneous nerve stimulation, which should be applied in the first instance or in combination with other methods of pain relief [19]. According Dudenhausen'a and Pschyrembel'a [20] reduces the use of other painkillers. However, studies by Mello et al. [21] did not provide evidence that TENS during labor reduces the use of additional anesthesia. Also Gaca [14] states that in 2/3 patients who were treated with percutaneous nerve stimulation, there was a need to perform anesthesia. Based on the obtained results, it was found that the respondents had no knowledge about the possible use of transcutaneous nerve stimulation TENS for pain relief during childbirth. Only 12.35% of men felt that this method can be used to reduce the intensity of pain during childbirth.

Kubicka-Kraszyńska et al. [4] reported that massage can reduce the pain during childbirth contractions. Also, according to a team of experts of the Polish Society of Pain and Polish Gynecological Society [22] Massage can reduce the flow of pain impulses related to uterine activity or may even be abolished. Huntley et al. [23] reported that massage significantly reduced the intensity experienced by women giving birth pain. In turn, Mortazavi et al. [24] on the basis of studies have found that massage reduces pain levels, and increases in labor satisfaction. An analysis of studies show that 70.59% of men felt that massage can reduce the perception of pain by giving birth.

A team of experts of the Polish Society of Pain and Polish Gynecological Society [22] as one of the

non-pharmacological methods of pain management during labor exchange aromatherapy and indicate its sedative and relaxing effects. Tournaire and Theau-Yonneau [13] also reported that it reduces the perceived anxiety and stress. In turn, Burns et al. [25] showed that aromatherapy has limited perception of pain at root during childbirth. Based on the obtained results, it was found that 22.94% of men said they aromatherapy application may affect the reducing labor pain.

Music is used to control pain in a variety of situations. Tournaire and Theau – Yonneau [13] indicate that music therapy may apply during childbirth. It can encourage relaxation nascent in the first stage of labor and to mobilize the effort in subsequent stages. Phumdoung and Good [26] conducted a study that showed that women who listen to music during labor felt significantly less pain than giving birth in the control group. The present studies show that 31.18% of men felt music therapy as a method capable of reducing the sensation of pain by a woman in labor.

Analgesic effect of hot water is well known and often reported in the literature. Kubicka-Kraszyńska et al. [4] describe the positive impact of a warm bath for a woman in labor. In addition, Barbosa da Silvia et al. [27] on the basis of studies have shown that water immersion contributed to alleviate labor pain and limited use of pharmacological agents. Studies Smith [28] reported that water immersion decreased pain during the first stage of labor and increased satisfaction of women, compared to emerging which such methods have not benefited. Our study showed that

only 30.59% of the men knew that water immersion has analgesic during labor.

Conclusions

1. Men do not have knowledge of the duration of periods of confinement. Among the known methods of pain relief childbirth exchange mainly massage and water immersions.
2. There is a need for education of men on various aspects of the course of physiological childbirth.

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