



The impact of childbirth on female sexuality

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Abstract

Objective: To compare variables related to sexual functioning, namely: sexual desire, arousal, orgasm, pain, sexual satisfaction and sexual function in women during the pregnancy and 3 months after delivery. *Methods:* This is an exploratory and descriptive, quantitative study. A non-probability, convenience sample of 62 women in the first stage, and of 52 women in the second stage, was used. The two groups were not significantly different regarding socio-demographic aspects. The main outcome measures used were the female sexual function as assessed by the Female Sexual Function Index (FSFI) and a Socio-demographic and Clinical Questionnaire. *Results:* The women presented higher mean levels of sexual satisfaction after birth, than during the pregnancy presenting statistically significant differences. Also they had lower mean levels of sexual desire, sexual arousal and vaginal lubrication after delivery. Regarding the orgasm, they presented higher mean levels in the postpartum period. The overall sexual function after childbirth did not present significant differences when comparing the pregnancy period to the postpartum, but presented higher mean levels during the pregnancy. Pain levels were higher during the pregnancy. *Conclusion:* We found no significant differences between the two groups, in most of the studied variables. However, Sexual Arousal and Sexual Satisfaction presented statistically significant differences.

Keywords: sexual function; female sexuality; childbirth.

Introduction

The physiological changes that occur after childbirth are unique to every woman, and the course of the pregnancy, labour and delivery of the baby significantly affect these changes (Harrison, 2000).

In a medical perspective, the postpartum period refers to the period of time required, after the childbirth, for the reproductive organs to return to their pre-pregnancy state, which takes about six weeks (McGovern et al., 2006). However, it is important to note that the resumption of the sexual life, after childbirth, does not depend only on the female physical

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recovery and comfort, both partners must feel prepared (Byrd, Hyde, DeLamater, & Plant, 1998).

Most studies that assessed the impact of childbirth on the female sexual life, focused primarily on the short term physical changes involved, but their results were divergent (Botros et al., 2006; Rogers, Borders, Leeman, & Albers, 2009). However, most authors agree that the couple's sex life is unavoidably influenced by the birth of a baby (Lourenço, 2002).

Spouses have difficulties in harmonizing their parental roles with their sexual life (Colman & Colman, 1994), this leading to a reduction in the frequency of sexual intercourse and in sexual desire (Costa, Figueiredo, Magarinho, & Pacheco, 2006; Ryding, 1984). Thus the birth of a child is usually associated to a decrease in the intimacy and marital satisfaction (in general and specific aspects) (Relvas, 1996).

In other studies, women justified the decrease, or absence, of sexual desire (in the postpartum period) with the lack of time and fatigue derived from the tasks related to the baby, as well as vaginal lacerations and breastfeeding, breasts no longer have solely a sexual connotation, being related with feeding the baby (Olsson, Lundqvist, Faxelid, & Nissen, 2005). Also there seems to be a decrease in the sexual response, a poor vaginal lubrication (Barrett et al., 2000), and the intensity of the orgasm usually decreases, due to a diminished vasocongestion (Figueiredo & Silva, 2005).

Moreover, several studies refer that dyspareunia has a negative impact on the female sexual function (e.g. Paterson, Davis, Khalifé, Amsel, & Binik, 2009); however, the results as for the duration of the pain are not consensual. A systematic review study of literature published in English between the years of 1950 and 2004, indicates that, three months after delivery, a large number of women refer still having perineal pain (Hartmann et al., 2005). Some authors report that perineal pain affects most women, but it does not extend beyond a two-month period (Andrews, Thakar, Sultan, & Jones, 2008), while others (Buhling et al., 2006) mentioned that the persistent dyspareunia does not last more than six months. Opposing these findings, a study by Paterson et al. (2009) showed that, the genital and perineal pain lasted for more than a year in a significant percentage of their sample. The authors also concluded that these levels of pain have a moderately negative impact on the sexual function, particularly regarding the frequency of sexual activity, desire, arousal and sexual satisfaction.

Furthermore, it is important to highlight the psychological component of pain. In this sense, Brauer, Kuile, Janseen and Laan (2007) concluded that, the assessment women make of particular situations determines their sexual response, thus, the fear of pain reduces the sexual, genital and subjective response in women.



Hence, the time between labour and resuming sexual activity varies, being that, once more, there is no consensus among authors. In a study developed in 2006, the majority of women began their sexual life eight weeks after delivery (Buhling et al., 2006). However, other studies reported that most women resume sexual activity only 12 weeks after delivery (Handa, 2006; Dahlen & Homer, 2008).

Considering what is known about the impact of childbirth on women and on the couples' sexual lives, our aim with this study is to compare the pregnancy period with the postpartum period, and infer the differences in the experience of female sexuality after childbirth, concerning particularly the following variables: sexual desire and arousal, orgasm, pain, sexual satisfaction and sexual function.

Method

Participants

This study was conducted with a non-probabilistic, convenience sample of 52 Portuguese women in two stages of data collection, a first during the hospitalization in the Obstetrics and Gynaecology Service of Setubal's Hospital Centre at the time of childbirth, and a second stage that took place three months after childbirth.

Their ages ranged from 25 to 43 years old; most women were married (51.9%) or in cohabitation (38.9%), and lived with their partners (69.7%). Regarding schooling, the majority had a high schooling level (44.4%). Most had planned the pregnancy (74.1%), and all were supervised during the gestation period; in most cases, they had a full term delivery (75.9%), being this their third (33.3%) or fourth (46.3%) child. The majority of the participants declared not being questioned by their doctor about their sexuality (66.7%).

The inclusion criteria for this study were: being an adult puerperal women; having given birth by eutocic delivery; primiparous or multiparous women in the early puerperium; women without any pathological or obstetric complications during the pregnancy or childbirth; having had a vaginal birth without medio-lateral episiotomy or episiorrhaphy of the perineum; women who had a sexual partner during pregnancy and that maintained the same partner.

Material

Data on sexual functioning was collected with the “The Female Sexual Function Index” (FSFI), and with two other questionnaires developed for this study.

The FSFI is a multidimensional self-report instrument, aimed at assessing the female sexual function. This instrument was developed in order to assess the domains of sexual functioning (Rosen et al., 2000), having been adapted for the Portuguese population in 2007 (Hentschel, Alberton, Capp, Goldim, & Passos, 2007). This instrument is composed by 19 items, which assess 6 different dimensions of the female sexual function: desire, arousal, lubrication, orgasm, satisfaction and pain (dyspareunia), concerning the 4 weeks prior to its application. The study of data reliability, for the Portuguese population revealed a good internal consistency (total Cronbach’s $\alpha = 0.96$; individual factors had $0.87 \leq \alpha \leq 0.96$) (Pereira, Silva, & Freitas, 2009).

The Female Sexual Function Questionnaire was developed solely for this study, in order to assess the female sexual function. It is a 25-question instrument focused on: sexual behaviour, desire/arousal, orgasm, pain, impact of episiotomy on the sexual response and sexual satisfaction.

A Socio-demographic and Clinical Questionnaire was developed to characterize this sample. It has 8 socio-demographic questions, and 11 questions that enabled an obstetric and medical characterization of this sample.

Procedure

Data Collection Procedure

After getting the authorization from the Ethics Committee, of Setubal’s Hospital Centre, to conduct the study, we distributed the questionnaires between the 20th of January and the 30th of June 2010. The participants met all the inclusion criteria for this study.

All measuring instruments were pre-tested to assess difficulties in a group of 19 mothers at the time of discharge from the Obstetrics and Gynaecology unit.

The participants (puerperal women) were first contacted during their stay at the hospital. At this point the scope of the study was explained, and they were asked for their informed consent. Each participant received an envelope with the informed consent form, explaining the objectives of this research, and the data collection instruments. In this first



stage we distributed 70 questionnaires and they were all returned, however 8 were removed from this study for being incomplete.

Later, we asked the participants to take part in a second stage of this study (three months after giving birth), sending, via mail, the same instrument, to fill in with information concerning the postpartum period. These instruments were accompanied by a prepaid reply envelope, so that they could be returned.

In this stage, we mailed 62 questionnaires, and 54 questionnaires were completed and returned, of which 2 were removed from the study for being incomplete.

Data Analysis Procedure

Differences in variables regarding the sexual functioning of women pre- and post-delivery were assessed with a paired samples t-test. Data normality was assessed with the Kolmogorov-Smirnov test with Lilliefors correction. We also assumed the robustness of these parametric tests to mild violation of data distribution assumptions for large samples, rather than using non-parametric alternatives. Given that the number of complete questionnaires for the first stage was higher than those from the second, we chose to analyse only 52 from both stages.

Results

Our results regarding the mean levels of Sexual Desire showed that they were lower after delivery when compared to the gestation period, however these differences were not statistically significant ($M = 2.71$; $SD = 0.98$ vs. $M = 3.45$; $SD = 0.85$ respectively) ($t(51) = 3.88$; $p < 0.001$) (Table 1).

On the other hand, statistical significant differences were found between the levels of Sexual Arousal after delivery ($M = 4.28$; $SD = 0.81$), as compared to the pregnancy period ($M = 4.72$; $SD = 0.93$) ($t(51) = 2.58$; $p < 0.05$) (Table 1).

Furthermore, regarding Sexual Interest 3 months after childbirth, most participants reveal having a moderate (36.5%) or low (30.8%) sexual interest (Figure 1). Despite the levels of sexual interest, 46.3% of the participants sometimes have sexual fantasies or erotic dreams.

Table 1

Comparison between the pregnancy period and the postpartum regarding the study's variables

Variables	N		Mean		Standard Deviation		Standard Error of the Mean	
	Pregnancy	Postpartum	Pregnancy	Postpartum	Pregnancy	Postpartum	Pregnancy	Postpartum
Sexual Desire	52	52	34.500	27.115	0.8558	0.9833	0.1187	0.1364
Sexual Arousal	52	52	47.192	42.750	0.9282	0.8056	0.1287	0.1117
Vaginal Lubrication	52	52	34.731	34.154	0.3163	0.2732	0.0439	0.0379
Orgasm	52	52	36.000	39.538	0.67679	0.47957	0.09385	0.0665
Pain	52	52	18.154	15.923	0.88371	0.63117	0.12255	0.08753
Sexual Satisfaction	52	52	49.692	55.615	160.459	0.65444	0.22252	0.09075
Sexual Function Level	52	52	220.269	215.096	343.746	22.273	0.47669	0.30887

The women in our sample presented similar levels of vaginal lubrication during the pregnancy ($M = 3.47$; $SD = 0.32$) and after birth ($M = 3.42$; $SD = 0.27$), presenting no statistically significant differences ($t(51) = 0.89$; $p > 0.05$) (Table 1).

Regarding the orgasm's levels, in the postpartum, these women presented a higher orgasm mean level ($M = 3.95$; $SD = 0.48$) than during the gestation period ($M = 3.6$; $SD = 0.68$), but the differences between the two moments did not reach statistical significance ($t(56) = -4.64$; $p < 0.001$) (Table 1). Moreover, most women reported no changes in the orgasm's duration (67.3%), although a great percentage of the participants referred it was shorter in the postpartum (64.7%). Concerning the orgasm's intensity most women felt it was more intense (75%) or that there was no significant alteration (63%).

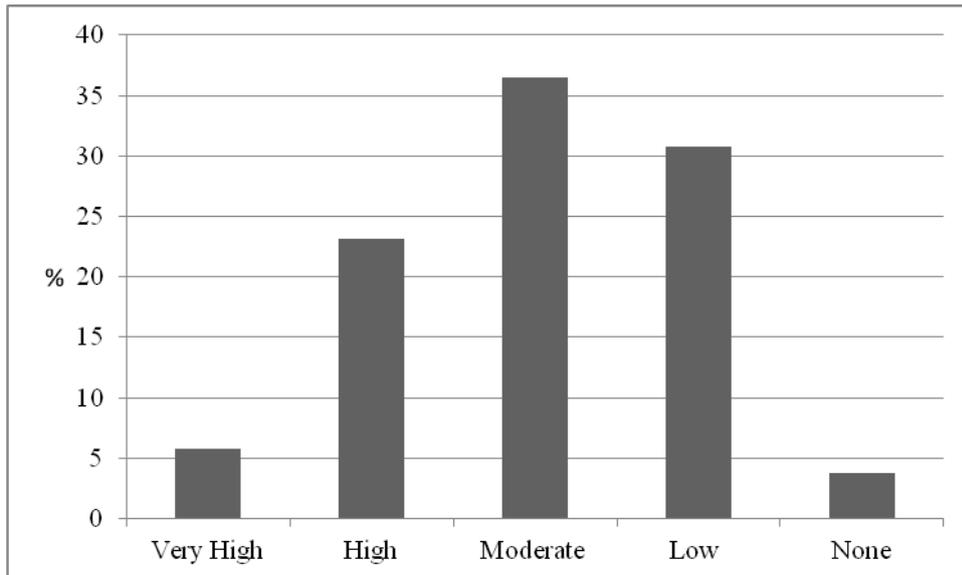


Figure 1. Interest in sexual activity three months after childbirth

When comparing the pain mean levels in the postpartum period ($M = 1.59$; $SD = 0.63$) with the ones during the pregnancy ($M = 1.82$; $SD = 0.88$) we can observe that the pain occurrence did not change between the two moments sampled ($t(51) = 1.59$; $p > 0.05$) (Table 1). However, most women did report a low (36.5%) or moderate (30.8%) pain intensity during the first intercourse, being the location of the pain mostly in the abdomen (42.3%). Despite this, pain never (61.5%) or rarely (35.5%) interferes with sexual intercourse.

The participants presented higher mean levels of sexual satisfaction after childbirth ($M = 5.56$; $SD = 0.65$), than during the pregnancy ($M = 4.97$; $SD = 1.60$). These differences were statistically significant ($t(51) = -2.97$; $p < 0.05$) (Table 1). Despite this, most women reported moderate sexual satisfaction (46.3%) (Figure 2); being sexual life of moderate (44.4%), or high (31.5%) importance, and sexual intercourse of moderate importance for most women (57.4%).

These women had an average level of sexual function after childbirth of 21.51 ($SD = 2.23$), while the average level of sexual function during the pregnancy is of 22.03 ($SD = 3.43$). These differences were not statistically significant ($t(51) = 0.79$; $p > 0.05$) (Table 1).

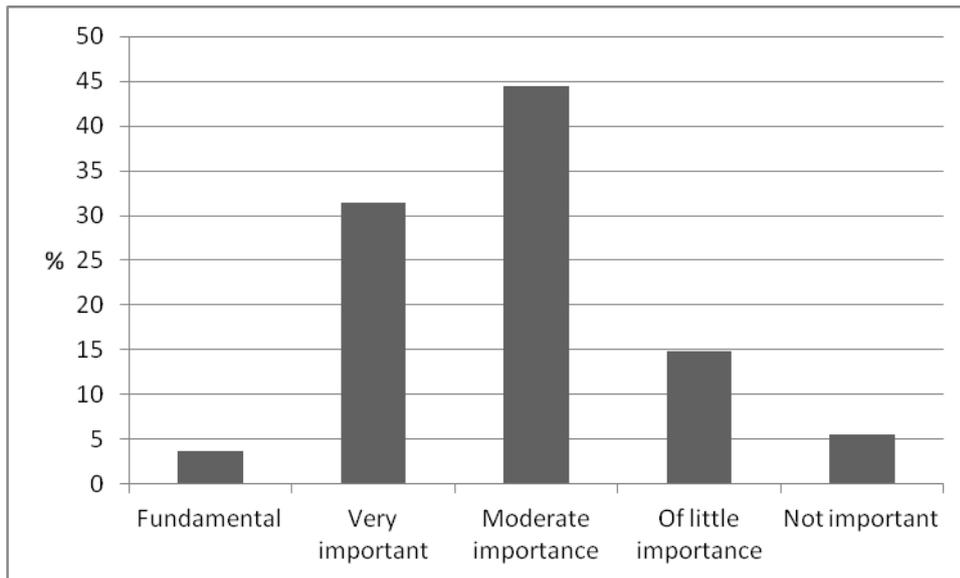


Figure 2. Importance of sexual life three months after childbirth

Discussion

Barrett et al. (2000) demonstrated that sexual desire is decreased in the first three months of the postpartum period, increasing until the 6th month, although even then it does not reach the levels previous to birth. Furthermore, several authors refer that sexual desire tends to decrease, for a number of reasons, in the transition to parenthood (Costa et al., 2006; Colman & Colman, 1994; Figueiredo & Silva, 2005; Lourenço, 2002; Olsson, Lundqvist, Faxelid, & Nissen, 2005; Ryding, 1984). This goes against our results, which show no significant differences between the sexual desire during the pregnancy and in the postpartum.

Also, our results show that women present higher levels of sexual arousal three months after delivery than during the gestation, a conclusion that was not previously obtained in other studies, which have shown that sexual arousal is adversely affected after childbirth (Paterson et al., 2009).

Regarding vaginal lubrication, no statistical differences were found between the two groups. This is not in accordance with what is found in the literature, as hormonal changes, during the lactation process, tend to originate a decrease in vaginal lubrication, dyspareunia and libido reduction (Braden, 2000).

Furthermore, based on the statistical analysis we can observe that in the period after childbirth, the orgasm was not significantly affected, when compared to the same group of women during the gestation period. This evidence goes in the same direction as the results



reported by Tolor and DiGrazia (1976) and Connolly, Thorp and Pahl (2005), who mention that the ability to reach orgasms is acquired shortly after delivery. In this sense, the authors reported that six weeks after delivery, most women reported their ability to have orgasms had improved when compared to the period prior to pregnancy. However, other studies oppose our results. Barrett et al. (1999) concluded that the difficulty in having orgasms was most evident in the three months following the birth, gradually returning to pre-pregnancy levels. Von Sydow (1999) mentions that during the first intercourse after delivery, only 20% of women can reach an orgasm; being that 3-6 months after delivery 75% of women regain their pre-pregnancy levels. Moreover, Signorello, Harlow, Chekos and Repke (2001) state that six months after delivery 73.8% of the women that participated in their study were as or more likely to reach orgasms when compared with the period prior to pregnancy.

The topic of pain/dyspareunia during sexual intercourse after delivery has been widely studied, but the results are contradictory. In our research, most women reported having had low or moderate pain during the first intercourse and, when compared to the pregnancy period, there were no significant differences regarding the levels of pain, being its location mostly in the abdomen. Furthermore, three months after childbirth, the women in our sample report little or no interference of pain during sexual intercourse. This contradicts the results presented by Paterson et al. (2009), who mention that almost all of women included in their sample reported genital pain in the postpartum period; of these, 62.5% reported pain in the perineal region and the same percentage of women reported pain in the vagina. Also several other studies (Barrett et al., 2000; Buhling et al 2006; Hartmann et al, 2005; Paterson et al. 2009) presented different results, reporting that pain during sexual intercourse in the postpartum affects most women and, in some studies, it can go from a few months to one year.

The participants in our study also presented significantly higher sexual satisfaction levels three months after delivery when compared to the pregnancy period. This data is not consistent with that reported by Paterson et al. (2009), who mention that sexual satisfaction is negatively affected after childbirth.

Finally, most women reported that their level of sexual satisfaction is "moderate", as is the importance of their sex life and of sexual intercourse, which goes in the same direction as an investigation conducted by Signorello et al. (2001) that showed that women with intact perineum also have higher levels of sexual satisfaction.

We find that it is important to point out some limitations of this study, namely the fact that we used a convenience sample, which was not representative of this population. Also we used a non-validated instrument for data collection.

However, we believe this study contributed with additional information regarding female sexuality in the postpartum period, as part of the results we obtained, even when not statistically significant, were new or provided different information from that found in the literature.

Conclusion

In general, we did not find statistically significant differences in most of the studied variables. However, there were two exceptions Sexual Arousal and Sexual Satisfaction, which present statistically significant differences, presenting higher levels in the postpartum. We believe to have contributed with new information on female sexuality in the postpartum period.

References

- Andrews, V., Thakar, R., Sultan, A. H., & Jones, P. (2008). Evaluation of postpartum perineal pain and dyspareunia – a prospective study. *European Journal of Obstetrics and Gynecology and Reproductive Biology*, *137*(2), 152-156. doi:10.1016/j.ejogrb.2007.06.005
- Barrett, G., Pendry, E., Peacock, J., Victor, C., Thakar, R., & Manyonda, I. (1999). Women's sexuality after childbirth: a pilot study. *Archives of Sexual Behavior*, *28*(2), 179-191.
- Barrett, G., Pendry, E., Peacock, J., Victor, C., Thakar, R., & Manyonda, I. (2000). Women's sexual health after childbirth. *British Journal of Obstetrics and Gynaecology*, *107*(2), 186-195. doi:10.1111/j.1471-0528.2000.tb11689.x
- Botros, S. M., Abramov, Y., Miller, J. J., Sand, P. K., Gandhi, S., Nickolov, A., & Goldberg, R. P. (2006). Effect of parity on sexual function: an identical twin study. *Obstetrics & Gynecology*, *107*(4), 765-770. doi:10.1097/01.AOG.0000207677.03235.76



- Braden, P.S. (2000). *Enfermagem materno-fetal* (2nd ed.). Rio de Janeiro: Reichmann & Affonso Editores.
- Brauer, M., Kuile, M., Janseen, S., & Laan, E. (2007). The effect of pain-related fear on sexual arousal in women with superficial dyspareunia. *European Journal of Pain, 11*, 788-798. doi:10.1016/j.ejpain.2006.12.006
- Buhling, K. J., Schmidt, S., Robinson, J. N., Klapp, C., Siebert, G., & Dudenhausen, J. W. (2006). Rate of dyspareunia after delivery in primiparae according do mode of delivery. *European Journal of Obstetrics & Gynecology and Reproductive Biology, 124*, 42-46. doi:10.1016/j.ejogrb.2005.04.008
- Byrd, J. E., Hyde, J. S., DeLamater, J. D., & Plant, E. A. (1998). Sexuality during pregnancy and the year postpartum. *Journal of Family Practice, 47*, 305-308.
- Colman, A., & Colman, L. (1994). *Gravidez: a experiência psicológica*. Lisboa: Edições Colibri.
- Connolly, A., Thorp, J., & Pahel, L. (2005). Effects of pregnancy and childbirth on postpartum sexual function: a longitudinal prospective study. *International urogynecology journal and pelvic floor dysfunction, 16*, 263-267. doi:10.1007/s00192-005-1293-6
- Costa, R., Figueiredo, B., Magarinho, R., & Pacheco, A. (2006). Qualidade das relações significativas da mulher na gravidez. *Psicologia: teoria, investigação e prática, 1*, 3-25.
- Dahlen, H., & Homer, C. (2008). Perineal Trauma and postpartum perineal morbidity in Asian and Non-Asian primiparous women giving birth in Australia. *Journal of Obstetric, Gynecologic and Neonatal Nursing, 37*, 455-463. doi:10.1111/j.1552-6909.2008.00259.x
- Figueiredo, B., & Silva, A. I. (2005). Sexualidade na gravidez e após o parto. *Psiquiatria Clínica, 25*(3), 253-264.
- Handa, V. L. (2006). Sexual function and childbirth. *Seminars in Perinatology, 30*, 253-256. doi:10.1053/j.semperi.2006.07.004
- Harrison, J. (2000). Physiological changes of the puerperium. *British Journal of Midwifery, 8*, 483-488.
- Hartmann, K., Viswanathan, M., Palmieri, R., Gartlehner, G., Thorp, J., & Lohr, K. N. (2005). Outcomes of routine episiotomy: a systematic review. *Journal of the American Medical Association, 293*(17), 2141-2148. doi:10.1001/jama.293.17.2141

- Hentschel, H., Alberton, D. L., Capp, E., Goldim J. R., & Passos, E. P. (2007). Validação do Female Sexual Function Index (FSFI) para uso em Língua Portuguesa. *Revista HCPA*, 27(1) 10-14.
- Lourenço, M. C. (2002). Conjugalidade e parentalidade: continuar a díade na presença de um terceiro. *Psychologica*, 31, 25-42.
- McGovern, P., Down, B., Gjerdingen, D., Gross, C., Kenney, S., & Ukestad, L. (2006). Postpartum health of employed mothers 5 weeks after childbirth. *Annals of Family Medicine*, 4(2), 159-167. doi:10.1370/afm.519
- Olsson, A., Lundqvist, M., Faxelid, E., & Nissen, E. (2005). Women's thoughts about sexual life after childbirth: focus group discussions with women after childbirth. *Scandinavian Journal of Caring Sciences*, 19, 381-387. doi:10.1111/j.1471-6712.2005.00357.x
- Paterson, L. Q. P., Davis, S. N. P., Khalifé, S., Amsel, R., & Binik, Y. M. (2009). Persistent genital and pelvic pain after childbirth. *Journal of Sexual Medicine*, 6, 215-221. doi:10.1111/j.1743-6109.2008.01063.x
- Pereira, A., Silva, M., & Freitas, V. (2009). *Estudo psicométrico do Índice de Funcionamento Sexual Feminino (FSFI)*. Retrieved from 29/08/2009 em <http://www.psicologia.com.pt/artigos/textos/A0480.pdf>
- Relvas, A. P. (1996). *O ciclo vital da família: perspectiva sistémica*. Porto: Edições Afrontamento.
- Rogers, R. G., Borders, N., Leeman, L. M., & Albers, L. L. (2009). Does spontaneous genital tract trauma impact postpartum sexual function? *Journal of Midwifery & Women's Health*, 54(2), 98-103. doi:10.1016/j.jmwh.2008.09.001
- Rosen, R., Brown, C., Heiman, J., Leiblum, S., Meston, C, Shabsigh, R., ... D'Agostino, R. (2000). The Female Sexual Function Index (FSFI): a multidimensional self-report instrument for the assessment of female sexual function. *Journal of Sex & Marital Therapy*, 26(2), 191-208. doi:10.1080/009262300278597
- Ryding, E.-L. (1984). Sexuality during and after pregnancy. *Acta Obstetrica et Gynecologica Scandinavica*, 63, 679-682. doi:10.3109/00016348409154662
- Signorello, L. B., Harlow, B. L., Chekos, A. K., & Repke, J. T. (2001). Postpartum sexual functioning and its relationship to perineal trauma: a retrospective cohort study of primiparous women. *American Journal of Obstetrics and Gynecology*, 184, 881-888. doi:10.1067/mob.2001.113855



- Tolor, A., & DiGrazia, P. V. (1976). Sexual attitudes and behavior patterns during and following pregnancy. *Archives of Sexual Behaviour*, 5(6), 539-551. doi:10.1007/BF01541218
- Von Sydow, K. (1999). Sexuality during pregnancy and after childbirth: a metacontent analysis of 59 studies. *Journal of Psychosomatic Research*, 47(1), 27-49. doi:10.1016/S0022-3999(98)00106-8