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Title of the thesis: What are the obstacles to the development of male contraception? A review of the medical and social science literature.

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Summary : Introduction: Since the contraceptive revolution in the 1960s, the range of female contraceptives has continued to expand. Male contraceptive methods, on the other hand, remain limited to the old methods: withdrawal and condoms, to which is added a method of sterilisation: vasectomy. How can such an asymmetry between female and male contraceptive supply be explained in 2021?

Objectives: The objective of this work is to identify and analyse, through a review of the literature, the obstacles to the development of male contraception (MC).

Method: A literature review was carried out in the main medical and social science databases. After inclusion and reading of the articles, a list of potential barriers was drawn up and compared with the research data.

Results: 21 review articles, 214 clinical trials and acceptability studies and 38 sociological articles were included and analysed. The main potential barriers identified were efficacy, side effects, reversibility, acceptability, lack of investment in research, history of contraception and traditional gendered social representations.

Conclusion: More than 50 years of research have proven that effective, reversible CM without serious side effects is possible. Both men and women are willing to use a CM. The development of MC seems to be hindered by the lack of investment by the pharmaceutical industry and traditional social representations
gendered.

<u>Composition of the Jury</u> :

Chairman : Professor Sophie CATTEAU-JONARD

Assessors: Professor Arnaud VILLERS, Doctor Geoffroy ROBIN, Doctor Clara LEROY

Thesis Director: Doctor Roger MIEUSSET

Male thermal contraception				
Rock et al. 1965 (205)	137 H	Effects on spermatogenesis	Series 1: scrotal temp° measurement at room temperature in different positions n=36 Series 2: scrotal temp° measurement in euspermic H=21 vs H with oligo n=37 or with varicocele n=8 Series 3: measurement of scrotal temperature during bathing 38°C to 43°C during 2h n=8 Series 4: scrotal temperature measurement when wearing insulating underwear 6-14 wks n=7 Series 5: scrotal temperature measurement 20 H with oligo treated by scrotal baths between 43 and 45°C for 30 min to 1 hour for 6 consecutive days	Difference in rectal/scrotal temperature in supine position at room temperature = on average 2.38°C ↓ spz concentration from S3 onwards of wearing insulating underwear. Between S5 and S9 ↓ 5 to 25 M/mL. Reversibility after 3 to 12 weeks after stopping the method.
French et al. 1973 (206)	5 H	Suppression of spermatogenesis	↑ scrotal temp° to body temp° pdt 30 min/d or 15 min/d by the H themselves for 5 days	↓ spz concentration starting 7d after ↑ temp° in 3/5 H 1 failing to induce a ↑ of scrotal temp°; 1 in whom ↑ of T° was maintained 15 min.
Mieusset et al. 1985 (207)	14 H	Suppression of spermatogenesis	↑ testicular temp° of 1.5 to 2°C using the H body as a heat source with a specific jockstrap holding the testicles during the 15 daytime hours, over 12 months	Nbr spz: 3 to 10 M/mL between S7 and S13. Mobility: 21-34% between 7-13 weeks and 1-3 M/mL mobile spz at this time. No secondary effect reported during the study period. Total reversibility after 6-8 months after stopping the method.
Mieusset et al. 1987 (208)	19 H	Reversibility of effects on spermatogenesis	↑ temp° of 1.5 to 2°C testicular by means of a specific undergarment worn for 15 hours during the day for 6 to 24 months and then after stopping the method.	Spz concentration 5 to 18 M/mL M4 and M24 of exposure vs 89 M/mL at baseline. Mobility 18 to 36% at M4 and M24 of exposure vs 67% at baseline ↑ nbr morpho anomalies: initially <30% then approx 50% at M10. Mainly: head elongation, flagellum curvature. Persistence of morpho anomalies in nbr > initially until 14 to 18 months after stopping the method, but without csq on fertility

Mieusset et al. 1987 (209)	19 H	Suppression of spermatogenesis	↑ testicular temp° 1.5 to 2°C: Technique 1 n=13 Specific undergarment with hole in the centre allowing passage of penis and empty scrotal skin. Technique 2 n=6 Similar specific undergarment but hole reinforced with ring. Worn for 15 hours daytime for 6 to 24 months	2e technique more efficient in terms of ↓ nbr of spz and their mobility: 0.6 M/mL of spz on average at M12 and 7.5% of mobiles with technique 2 vs 6.7 M/mL of spz and 29% of mobility with technique 1
Shafik 1991 (210)	28 H	Suppression of spermatogenesis Contraceptive efficacy Reversibility	↑ testicular temp° 1.5 to 2°C. Grp I: chir fixation of testicles in suprascrotal position n=15. Grp II: holding in suprascrotal position with a jockstrap n=13. For 12 months	Azoo n=11 grp I and n=8 grp II, oligo <10M/mL n= 9 Return of normal spz concentration in 28 H within 6 months of stopping. ↓ motility with 8 to 18% motile spz at the end of the ttt, reversible in 9 months in all H. ↑ morpho anomalies reversible within 6 months in all H. ↓ T. 0 pregnancy occurred. Pregnancy in all partners wishing to have children after stopping of the ttt (n=19).
Shafik 1992 (211)	14 couples	Contraceptive efficacy	↑ testicular temp° 1.5 to 2°C by holding the testicles in a suprascrotal position by a polyester jockstrap, worn for a period of 12 months day and night.	0 pregnancies occurred. Long-lasting azoo observed in all H. Time to reach azoo: 120 to 160 days (avg 139.6 days).
Mieusset et al. 1994 (212)	9 couples	Contraceptive efficacy	↑ testicular temp° 1.5 to 2°C by technique1: specific undergarment with hole in the centre allowing passage of rod and empty scrotal skin, n=3 or technique 2: comparable specific undergarment but hole reinforced with soft rubber or rubber ring alone held with straps. n=6	Better spermatogenesis inhibition with technique 2. 0 pregnancies in 117 exposure cycles, i.e. 100% efficiency for technique 2. Mobile spz concentration <1M/mL in 86.4% of samples without ever exceeding 1.6 M/mL. No delayed 2ndary effect. Return to initial values 12 to 18 months after technical stop. 1 pregnancy occurred technique 1 (H had stopped wearing undergarment in 7 weeks). Average time of exposure to this technique as a contraceptive method for the 3 couples = 13.3 months. Average mobile spz concentration = 1.86 M/ml.
Moeloek 1995 (213)	10 H	Suppression of spermatogenesis	↑ testicular temp° 1.5 to 2°C by continuous wearing of a polyester jockstrap for 6 months	Oligo <20M/mL n=10H. Oligo <10M/mL n=3H. Oligo <5M/mL n=1H. ↓ of % normal forms 18.8 vs 57.85 at baseline.

Wang et al. 1997 (214)	21 H	Suppression of spermatogenesis	↑ moderate testicular temp° by Grp I: polyester hanger (single layer) or Grp II: double layer polyester hanger (1 layer polyester + 1 layer aluminium impregnated polyester) or Grp III: double layer hanger polyester layer. Pdt 52 weeks	Hanger not worn for an average of 0.74 hours. ↑ of 0.8 to 1°C of scrotal temp° while wearing the jockstrap No significant change in sperm parameters

Zhu and al. 2010 (215)	12 H	Effects on spermatogenesis	Proteomic analyses on testicular biopsies at different times (S2 and S9) after ↑ temp° testicular by hot baths of 43°C for 30 min per day, every day for 6 consecutive days.	Different protein expressions before and 2 weeks after treatment. 2 wk after heat treatment: ↓ expression of some proteins involved in cell proliferation and survival. ↑ expression of some proteins involved in germ cell apoptosis and antiproliferative mechanisms. HNRNPH1 seems to play a key role. Expression correlated with spermatogenesis (decreased 2 weeks after treatment and increases again 9 weeks later).
Ahmad et al. 2012 (216)	5 H	Effects on spermatogenesis	↑ temp° of 1.5 to 2°C testicular and epididymal by wearing underwear specific worn for 15 hours during the day, for 120 consecutive days	↑ significant DFI (DNA fragmentation index) and HDS (high DNA stainability) from D20. ↑ DFI of approx 200%. HDS 13.0 ± 1.1 D45 vs 5.9 ± 0.3 at baseline.
Rao and al. 2015 (217)	20 H	Effects on spermatogenesis and accessory sex glands	↑ testicular temp°: grp 1 = hot baths at 43°C pdt 30 min 1/d for 10 consecutive days or grp 2 = hot baths at 43°C pdt 30 min 1/d every 3 days (10 baths in total).	↓ spz concentration and total spz nbr in 2 grp. ↓ + significant grp 2 (15.5% of initial values at S8 vs 28.8%grp 1). Severe oligo (< 5M/ml) n= 4H/grp. ↓ progressive mobility in 2 grp. ↓ HOS test (hypo-osmotic swelling test) in 2 grp. ↓ significant total acrosin activity assay in 2 grp. No change in biochemical parameters of semen. Oxidative stress assessment: ↑ significant in 2 grp of malondialdehyde
Zhang et al. 2018 (218)	30 H	Effects on spermatogenesis and accessory sex glands and hormones sexual	↑ temp° of the scrotum with an electric heating device at 43°C for approx 30-40 min 1/d, 2 successive days per week, for 3 months.	↓ nbr of spz, motility and nbr spz of normal shape. ↓ significant HOS, ↓ of DNA integrity, up to 1 month after ttt. ↑ MIF and DFI. ↓ significant T and ↑ FSH and LH. ↑ rate of chromosomal abnormalities for chromosomes 13, 18, 21, X, and Y (13.7 times higher).
Abdelhamid et al. 2019 (219)	5 H	Effects on spermatogenesis	↑ temp° of 1.5 to 2°C by wearing a specific undergarment for 15 hours during the day for 120 consecutive days. n=5 Control: semen from 27 healthy subjects.	Nbr spz of normal form divided by 5 during exposure period. ↑ MAI (multiple anomaly index) at D20, return to normal values at D193.
Abdelhamid et al. 2019 (220)	5 H	Effects on spermatogenesis	↑ temp° of 1.5 to 2°C by wearing specific undergarment for 15 hours during the day resulting in a rise in temperature for 120 consecutive days n=5. FISH analysis on 234038 spz	↑ x2 number of aneuploidies at D45 post-exposure. Reversible effect at D180 post exposure.

Articles on the acceptability of CM				
Gough 1979 (230)	151 H	Theoretical acceptability of a male contraceptive pill	Questionnaires	In the question "Would you be prepared to use a male contraceptive pill if it were available", 55.6% yes, 18.5% probably yes, 18.5% probably no, 7.3% no.
Ringheim 1995 (231)	154 H	Acceptability ET practice as CHM	Injections AND IM 1/week Focus group + questionnaires	Motivations for participate in the study : need change contraception=36%, encouraged by partner=23%. For majority H, partner had had problems in the past with contraception. H express a desire to share responsibility for contraception so as not to no longer see their partner suffer from the effects of the 2ndaries. H Australians also call into question traditional gender roles while than Asian + "conservative" H. H report secondary effects such as: acne, weight gain or ↑ muscle mass, but also a feeling of well-being, a sense of being + virile and ↑ libido. Secondary effects most felt as negative = irritability.
Glasier et al. 2000 (232)	1894 F : Scotland 450, China 900, Africa of the South 544	Acceptability of a theoretical CHM	Questionnaires	84% agree to greater sharing of contraceptive responsibility. Cultural differences: 29% in Hong Kong think that the pill for H useless or not a good idea vs 13% in Shanghai, 7% in Cape Town, 6% to Edinburgh. >30% (except Hong Kong) ready to use CHM if available and 43 78% (except Shanghai) would use it in the future. >50% (except Hong Kong) think that their partners would use CHM. Modalities of administration: for pill in ½ cases in Edinburgh, ½ for monthly injections instead. Reasons why F thinks CHM is not a good idea no trust in their partner and/or fear of second-hand effects (F Chinese).
Martin et al. 2000 (233)	1829 H : 436 in Scotland, 493 in Africa	Acceptability theory of the CHM	Questionnaires	Pill seen as most convenient form by H in Edinburgh and 16% of black H in Cape Town and 34% of Chinese H thought that they were that CHM would alter their sexuality or masculinity. 44% Chinese H at 83% White Cape Towners ready to use the contraceptive pill male. Injectable form less acceptable with 32% willing to

	South and 450 in China		use it in Edinburgh and Hong Kong and 62% of white Hs in Cape Town. On the need to do spermograms, the Chinese and Scottish H tended to find this less acceptable than H from Cape Town, The same applies to the timeframe for effectiveness.

Weston et al. 2012 (234)	148 H	Theoretical acceptability of CHM	Questionnaires distributed to Hs whose partner had recently given birth	118 usable questionnaires. 75.4% were maybe, probably or definitely willing to try CHM. They preferred (in order): daily pill, quarterly injection or 2/year. Weekly injection was the last choice (although = the only form proven to be effective).
Weston et al. 2012 (235)	76 H	Theoretical acceptability of CHM	Questionnaires distributed to Australian immigrants whose partners had recently given birth, compared with data from a previous study of Australian-born men (234)	13.6% 'probably' or 'definitely' willing to try CHM vs. 47.5% of Australian-born males, but 52.7% of immigrant males answered 'maybe'. Among the preferred administration modalities (in order): injection 2/year, daily pill, injection 4/year.
Heinemann et al. 2005 (236)	9342 H in 9 countries, 4 continents	Theoretical acceptability of CM	Questionnaires	Contraceptive decision usually made by both partners. 55.1% would like to use new MC vs 20.7% not. Factors correlated with better acceptability: high level of education, desire for vasectomy, current use of contraception. Preferred methods of administration: oral, daily gel application, monthly injection, annual implant.
Heinemann et al. 2005 (237)	9342 H	Determinants of the theoretical acceptability of MC	Questionnaires	Positive factors influencing decision to use CM: effectiveness, rapidity of action and reversibility, few side effects, improvement in virility and sexuality, improvement in muscle strength, ease of use, non-dependence on CF. Negative factors influencing decision to use CM: negative attitude towards CM, fear of sex hormones, fear of drugs, rejection of regular medical follow-up, idea that contraception is a female responsibility, fear of impact on sexuality, religious opposition.
Marcell et al. 2005 (238)	30 H and women	Theoretical acceptability CHM	Semi-structured interviews	67% M and 67% F had a positive impression of CHM. Reversal of roles in contraceptive responsibility received positively by most Fs and seen as "surprising" or unnatural by Hs. Many Fs interviewed mentioned that most Hs were not used to regular medical follow-up unlike them and pointed to the lack of services or prevention programmes for Hs. 85% of Fs would trust their partner to take CHM.

Meriggiola et al. 2006 (239)	20 H	Practical acceptability of the UT+NETE combination	UT + NETE -Every 6 weeks - Every 8 weeks - Every 12 weeks For 48 weeks	92% M think that M and F should share responsibility for contraception. 38% ready to take full responsibility. 75% ready to try new CM method and 74% say partner too. 66% ready to use UT+NETE if available. 32% think that the main disadvantage of injections is the lack of protection against STIs. 12 weeks to be effective considered unacceptable by 39% of men. 64% find 18 weeks to return to normal acceptable. 62% willing to pay 10 to 20€/month, 32% 10€, 6% <10€.
Zhang et al. 2006 (240)	308 H	Practical acceptability of UT	Injections UT 500 mg IM 1/month Questionnaires, interviews and focus group.	Reasons for participating in the study: sharing responsibility for contraception 41.2%, doing something good for my country 36.7%, helping to solve the problem of overpopulation 41.6%. H and F mention the way other Hs look at them, CM would be badly perceived by other Hs in the face of culturally accepted gender norms. > ½ of respondents did not notice chgmt during ttt. 40.3% perceived inconveniences during treatment, 72.3% of which were related to the monthly injections, which were considered too frequent, and 21.7% to the fact that they had to come regularly to the clinic.
Amory et al. 2007 (241)	38 H	Practical acceptability of the DMPA +Gel T	T-gel 100 mg/d + DMPA 300 mg injection every 3 months +/- acycline 300 µg/kg every 2 weeks for the first 12 weeks 24 weeks	50% satisfied with method, 45% would like to use it if available vs. 42% not. 40% prefer this method to the one they currently use vs. 42% not. Older subjects have a more favourable opinion than younger ones. Subjects whose partner uses IUD tend to prefer the method less (satisfied with IUD). 74% find gel easy to administer, 55% dry quickly, 81% find their skin "sticky
vSolomon et al. 2007 (242)	24 couples	Practical acceptability of UT+MPA	Injection UT+MPA Semi-structured interviews	Motivations for participating in the study: 8/24 H out of curiosity, 6/24 out of necessity. For F, reasons were risk sharing and responsibility. Majority H noticed ↑ appetite, weight gain during ttt and ↑ libido. Some Fs reported + high level of stress and anger from their partner during ttt.

Eberhardt et al. 2009 (243)	100 H and 110 women	Theoretical acceptability of a male contraceptive pill	Questionnaires	F had a more positive attitude than H about the male contraceptive pill. F had less confidence in H to use a contraceptive pill than H themselves. H in a stable couple had a more favourable attitude than those with occasional partners.

Walker 2011 (244)	54 H and 134 women	Theoretical acceptability of a male contraceptive pill	Questionnaires + semi-structured interviews	49.5% are willing to use the male contraceptive pill, 19.2% not, 31.3% maybe. Same for M and F. No effect of age, duration of relationship or education level on acceptability. The most frequent comments (53%) concerned second-hand effects and long-term risks. 52% F and 17% M mentioned the risk of forgetting to take a daily pill. Some (M and F) mentioned the possibility of having more control over family planning and sharing responsibility for contraception. 37% of M respondents would prefer the male contraceptive pill to withdrawal or condoms. Some M expressed remarks about manhood.
Roth et al. 2014 (245)	79 H	Practical acceptability of T-gel + Nestorone gel as CHM	T gel 10g + - Placebo gel - Nes 8 - Nes 12 20 to 24 weeks	58% satisfied with method and 53% would recommend it if available. 1/3 volunteers would use as 1^{e} contraceptive method if available. African men less likely to use method than Caucasians and Asians. 34% find the method better than the one they currently use vs. 35% who do not.

Amouroux et al. 2018 (246)	"New fathers" M whose F was in maternity ward to give birth (potential users) Potential "new providers" prescribers, interns or young GPs or gynaecologists (M + F)	Theoretical acceptability of WCL	Questionnaires in 6 hospitals in Marseille + email list from the University of Aix-Marseille (New providers).	Knowledge about MC: Same in 2 populations on withdrawal and condoms (99 and 98%). On the subject of vasectomy and "new" methods of contraception, NP were more informed than NF (88 vs 48 and 26 vs 10%). "Would you be willing to use a CM method as your primary form of contraception?" Yes 58.4% NF vs 70.1% MNP and 73.9% FNP. Main motivations: sharing contraceptive responsibility and avoiding the side effects of FC. Among 53 NPF who answered "no", lack of trust in partner was the main reason in 28.3% for H, feeling too restrictive in 21.6 and 31% and fear of secondary effects in 14.4 and 31%. High socio-professional or scientific category or high level of education statically associated with higher acceptability as well as atcd of side effects with FC Religion statistically + associated with 'no' response. 43.2 %NF and 92% NP want more info on CM and 54.2 and 84.6 want more choice of CM. Concerning CMT: 29,2% NF willing to try, main advantages: natural=52%, non-hormonal=36,2% without side effects=38,2% // main disadvantages: duration of use too long=55,9%, daily wear=43,1%, fear of discomfort =38,8% Attitudes of prescribers: 33.7% NP never offer CM

				during consultations, >½ do not offer other methods than condoms. 82.2% interested in participating in CM course. NP + More concern about manhood for their patients than the patients themselves (32.3 vs 13.5)
Vera Cruz and al. 2019 (247)	412 H	Acceptability pill theory contraceptive male	Questionnaires with vignettes presenting different usage scenarios a male contraceptive pill	11% would never try never try the male contraceptive contraceptive pill, generally older subjects with lower levels of education or practising religion. For 11% it would depend on prices and secondary effects. For 25% would depend secondary effects. For 46% would depend on context and secondary effects.
Cartwright and al. 2020 (248)	80 H 398 F	Acceptability theoretical CM	Qualitative analysis of data from focus group	About 2/3 M and ¾ F have a favourable opinion on CM dvlpt. Reasons for favourable opinion: risk sharing and responsibility contraception, avoid pregnancies outside marriage, improve supply CM, get more involved and empower H in family planning. Reasons for unfavourable opinion: H would not accept and condom already sufficient, fear negative impact on sexuality and fertility, standard social CF, lack of confidence of Fs in their partner. Desired CM forms: injectable or local gel
Lacasse and al. 2020 (249)	151 H	Acceptability theoretical RISUG® in depending on the stereotypes of genre	Online questionnaire	Immediate feelings after reading RISUG® description = These are: "effectiveness", "pain", "innovation". Factors associated with want to try RISUG® = active sexuality. Gender norms adhered to H negatively associated to try RISUG® : -to give an image of a heterosexual person, + svt associated with perceived "negative impact on sexuality" and "disadvantages". -think that H must have + power than F, + svt associated with felt "impact neg on sexuality
Nguyen et al. 2020 (250)	57 H	Practical acceptability of UFAD	DMAU 4 capsules/d for 28 days 30 min before a high-fat meal n=39 Placebo n=18	28% had difficulty meeting a high-fat meal. 54% willing to use method. 77% would recommend method. H willing to use CHM + svt in couple or with higher education level.
Sax and al.	162 H	Acceptability	Questionnaire	45% ready to use CHM, 23.5% not and 30.9% maybe. Modality

2021 (251)	theoretical CHM	administration preferred = form injectable form. Main concerns about CHM use = effectiveness and risk of effects 2ndaries.

Appendix 3: Potential social, economic and cultural barriers identified in sociological studies

References	Themes and sub-themes identified
Articles that deal with the theme of MC	
Oudshoorn et al. 1999 *Male contraception and gender quarrels* (252)	Cultural representation: contraception = woman - gender stereotypes - exclusion of men History of contraception - Feminist movements and the contraceptive revolution Absence of the pharmaceutical industry
Oudshoorn 1999 *On Masculinities, Technologies, and Pain: The Testing of Male Contraceptives in the Clinic and the Media.* (253)	Gender stereotypes in the press
Oudshoorn 2004 *"Astronauts in the Sperm World: The Renegotiation of Masculine Identities in Discourses on Male Contraceptives*. (254)	Cultural representation: contraception = woman History of contraception - feminisation - exclusion of men
Castro-Vázquez et al. 2007 *Heterosexual Japanese Males Negotiating Contraception. Men and Masculinities*. Oct (255)	Gender stereotypes - manhood
Kalampalikis et al. 2007 *Medicalised male contraception: psychosocial issues and imaginary fears*. (256)	Cultural representation: contraception = woman Gender stereotypes - Virility/sexuality/fertility
Desjeux 2009 *History and current status of male contraceptive representations and practices* (257)	Cultural representation: contraception = woman Gender stereotypes - manhood/fertility History of contraception - history of research Lack of resources - absence of the pharmaceutical industry - public funds

Desjeux 2010 *History of male contraception [The experience of the Association for Research and Development of Male Contraception (1979-1986)]* (258)	History of contraception - Feminist movements - exclusion of men Lack of means - public funds
Desjeux 2013 *Male contraception" today. A plural reality*. (259)	Cultural representation: contraception = woman Gender stereotypes - virility/fertility Male Occultation in Family Planning
Desjeux 2013 *Contraception from the men's side. The emergence of a "male conscience".* (260)	Cultural representation: contraception = woman Gender stereotypes - sexuality/fertility
Shih et al. 2013 *He's a Real Man: A Qualitative Study of the Social Context of Couples' Vasectomy Decisions Among a Racially Diverse Population*. (261)	Gender stereotypes - virility/fertility
Welzer-Lang 2013 *Male contraception, ARDECOM and men's groups, premises of the evolution of gender relations* (262)	History of contraception - women's movements Traditional gendered representations (by doctors)
Dismore L et al. 2016 *Social constructions of the male contraception pill*: *When are we going to break the vicious circle?*	Lack of resources - absence of the pharmaceutical industry Gender stereotypes - manhood
Wilson 2018 *"Put It in Your Shoe It Will Make You Limp: British Men's Online Responses to a Male Pill* (264)	Cultural representation: contraception = woman Men excluded from family planning Lack of resources absence of the pharmaceutical industry
Campo-Engelstein et al. 2019 *Where Is the Pill for the "Reproductive Man? A Content Analysis of Contemporary US Newspaper Articles* (265)	Cultural representation: contraception = woman
Schmidhauser et al. 2021 *"Male contraception*: does *it feel male?"* (266)	History of contraception - feminisation Cultural representation: contraception = woman Exclusion of men from family planning Gender stereotyping - manhood

Articles that deal with men in reproductive health or family planning	
Chabot M. 1985 *Men are just passing through* (267)	History of contraception - exclusion of men Gender stereotypes - manhood
Gardey 2006 *Science and the construction of gendered identities.* (268)	Gender stereotypes
Ventola 2016 *The gender of contraception: representations and practices of prescribers in France and England* (269)	Feminisation of contraception Medicalisation of contraception Cultural representation: contraception =woman (by doctors) Gender stereotypes: sexuality.
Andro et al. 2009 *Birth control and sexual health: where are the men*?	Men excluded from family planning Gender stereotypes : - manhood
Stratonovitch 2009 *Gender and medicine* (271)	Gender stereotypes - traditional roles M/F
Ventola 2014 *Prescribing contraceptives: the role of the medical institution in the construction of gendered categories*. (272)	History of contraception - medicalization - feminisation - exclusion of men Cultural representation: contraception = woman Gender stereotypes - Traditional M/F roles - virility/sexuality
Le Guen et al. 2015 *Men's contraceptive practices in France: evidence of male involvement in family planning* (273)	History of contraception - feminisation - medicalization Cultural representation: contraception = woman Gender stereotype - sexuality
Casey et al. 2016 *Family Planning and Preconception Health Among Men in Their Mid-30s: Developing Indicators and Describing Need* (274)	Men excluded from family planning
Roux et al. 2017 *From experts to layman's logic: contraceptive prescribers in France*. (275)	Medicalisation of contraception Cultural representation: contraception = women (by doctors) History of contraception

Wilson et al. 2018. *Marginalisation of men in family planning texts: An analysis of training manuals* (276)	Gender stereotypes (by doctors). - manhood Cultural representation: contraception = woman
Chernick et al. 2019 *A Qualitative Assessment to Understand the Barriers and Enablers Affecting Contraceptive Use Among Adolescent Male Emergency Department Patients*. (277)	Men excluded from family planning Cultural representation: contraception = women
Articles on the history of contraception	
De Guibert-Lantoine 1998. *Contraception in France: an assessment after 30 years of liberalisation*. (278)	Feminisation of contraception Medicalisation of contraception
Bajos et al. 2001 *Abortion at the age of reason* (279)	Feminisation of contraception Medicalisation of contraception Gender stereotypes (by doctors)
Bajos et al. 2004. *Contraception, real or symbolic lever of male domination* (280)	Gender stereotypes - traditional role M/F History of contraception - feminisation
Bajos et al. 2005 *Contraception and abortion.* (281)	History of contraception - Medicalisation of contraception
Jacquemart A. 2006 *When activism confuses gender identity* (282)	History of contraception - Feminist movements - exclusion of men
Jaspard et al. 2017 *Sexual revolution or gender revolution? From the 1960s to the 2010s*. (283)	History of contraception - exclusion of men
Guen et al. 2017 *Fifty years of legal contraception in France: diffusion, medicalisation, feminisation*. (2)	History of contraception - medicalization - feminisation - exclusion of men

Asselin et al. 2019 *Contraception, abortion: current overview* (284)	History of contraception - feminisation Cultural representation: contraception =woman
Articles that deal with men and fatherhood	
Castelain-Meunier 2001 *Fatherhood, manhood and identity* (285)	Gender stereotypes - manhood - Traditional M/F roles
Devreux 2004 *Human resistance to social change: the emergence of a problematic* (286)	Gender stereotypes - traditional roles M/F
Devreux 2005 *Men in the family* (287)	Gender stereotypes -traditional roles M/F
Blais 2018. *Reinventing fatherhood (*288)	Exclusion of men in family planning