Attitudes towards the male contraceptive pill in men and women in casual and stable sexual relationships

Judith Eberhardt, Anna van Wersch, Neil Meikle

Abstract

Background and methodology Men’s and women’s attitudes towards the male contraceptive pill and their trust in the effective use of the male pill were investigated, as well as the associated variables of reported health behaviours, perceived self-efficacy and type of sexual relationship, using a questionnaire survey.

Results Although both sexes had a favourable attitude towards the male pill, females had a more positive attitude than men. Conversely, women had less trust that men would use the male pill effectively. Males in stable sexual relationships were more positive about the male pill than those in casual sexual relationships. Gender, relationship type and trust in the effective use of the male pill reliably predicted attitude towards the male pill. High perceived self-efficacy was related to engaging in more health behaviours, and in men a positive association between

Introduction

Traditionally, contraception has been the responsibility of women, hence their access to a variety of options.1 For men, there is the condom; other options are vasectomy or natural methods, but these are less reliable.2 Family planning is restricted by the lack of reliable and reversible methods available to men.

Contraceptive failure has further-reaching consequences for women than for men.3 Even if effective male hormonal contraception (MHC) were to be made available, contradictory findings suggest that men would4 or would not5 take over the responsibility for fertility control and could or could not be trusted to do so. Moreover, it has been postulated that the resources currently being directed at new contraceptives for men would be better spent making existing methods more widely available.6

Men only use contraception in around one-third of heterosexual partnerships.7,8 Some findings indicated that the majority of men seem to believe that men and women share equal responsibility for the decisions about contraception.9 However, social research has repeatedly highlighted the contradictory role of men in fertility regulation: although many men believe that the responsibility for contraception should be shared, in practice many prefer not to use any.10,11 Men are not seen as able to regulate their own fertility, and are likely to reject responsibility when asked.12 It has been asserted that it is part of the image of male masculinity to exhibit fertility rather than preventing it.13–14 Similarly attributed to the traditional masculine role are men’s reluctant attitudes towards taking care of their own health because that would be a sign of weakness.15 Compared to women, men have

health behaviours and attitude towards the male pill has been found.

Discussion and conclusions A positive attitude towards the male pill does not automatically imply that the individual is confident about its effective use. Once the male pill is widely available, promotional campaigns could target not only men but also their female partners, as the latter tend to come into contact with health services more frequently. In order to increase confidence in effective implementation, a variety of presentations of the male pill should be made available in line with individual needs and lifestyles.

Keywords gender differences, health behaviours, hormonal contraception, male contraception, male pill

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Key message points
- Both men and women generally had a favourable attitude towards the male contraceptive pill.
- Women had a more positive attitude towards the male pill than men, but had less trust that it would be used effectively by men.
- Men in stable sexual relationships, in particular, had a more positive attitude towards the male pill than those in casual sexual relationships.

Men in stable sexual relationships, in particular, had a more positive attitude towards the male contraceptive pill.

School of Social Sciences and Law, University of Teesside, Middlesbrough, UK

Judith Eberhardt, BSc, MSC, Research Fellow
Anna van Wersch, MSc, PhD, Professor
Neil Meikle, BSc, MA, Psychology Technician

Correspondence to: Professor Anna van Wersch, Psychological Therapies Clinic, School of Social Sciences and Law, University of Teesside, Middlesbrough, Tees Valley TS1 3BA, UK.
E-mail: a.van-wersch@tees.ac.uk

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be important in relation to MHC. Regarding their health, men are known to take less care (as a trait of masculinity) or to overly take care (being scared of any unexpected bodily change such as possible side effects).13

Another mediating factor, studied by Reis et al.,29 is self-efficacy: the belief that one is capable of making the right decisions that will lead to expected outcomes.30 High perceived self-efficacy has been found to result in a more effective use of contraceptives in heterosexual females.31 However, its role regarding attitudes towards the male pill and possible gender differences have thus far not been examined.

Condoms tend to be used in casual sexual relationships32 but whether use of the contraceptive pill is more closely linked to stable sexual relationships has controversial findings.33,34 There is a lack of studies investigating this, particularly in relation to the male pill. Consequently, the current study aimed to investigate the associations and differences between men’s and women’s attitudes towards the male contraceptive pill and the identified relevant factors, such as trust in the effective use of the male pill, engagement in healthy behaviours, perceived self-efficacy, and type of sexual relationship.

**Methods**

**Sample**

A power analysis was carried out using the software package Power Analysis and Sample Size Software (PASS)35 and revealed that a sample size of \( n = 206 \) achieves 80% power to detect an \( R^2 \) of 0.5 attributed to six independent variables using an \( F \)-test with a significance level \((p)\) of 0.05. An opportunistic sample of \( n = 380 \) in the North East of England completed the Male Contraceptive Pill Inventory (MCPI), which was designed specifically for this study. After data collection, male and female participants were matched exactly according to their age and relationship type, resulting in 110 pairs of matched male and female participants \((n = 220)\). Their ages ranged from 18 to 50 (mean: 23.53) years. The matching procedure was carried out because the opportunity sample had yielded an overrepresentation of younger age groups; matching ensured that the sexes as well as age groups were equally represented.

**Instruments**

The inventory consisted of four parts: (1) demographics: age, gender, type of sexual relation (casual or stable); (2) attitudes towards the Male Contraception Pill scale questionnaire (AMCP); (3) Reported Health Behaviours Checklist (RHBC)36 and (4) Generalized Self-Efficacy Scale (GSES).37 The 21 items of the AMCP were constructed on the basis on the results of an analysis of male and female commentary on the male pill from two websites (http://news.bbc.co.uk/1/hi/talking_point/653601. sim; http://www.malehealth.co.uk/userpage1.cfm?item_id =1436) and the findings from relevant literature. The answer format is a four-point Likert scale, ranging from 1 (“not true at all”) to 4 (“exactly true”). The RHBC is an existing scale of 21 items validated in studies with various samples.38 This instrument assesses compliance with 21 health-promoting actions. The answer format is a six-point Likert scale, ranging from 1 (“never”) to 6 (“always”). The GSES is a 10-item scale, translated into 30 languages and validated in many studies with hundred of thousands of participants39 with the answer format of a four-point Likert scale ranging from 1 (“not true at all”) to 4 (“exactly true”). This scale is used to assess self-beliefs to cope with a range of complex demands in life, particularly the belief that one’s own actions are accountable for favourable outcomes.

**Procedure**

People were randomly approached at various locations in the North East of England and asked to collaborate in a study examining attitudes towards the male contraceptive pill. If interested, the aims and procedures were explained and anonymity guaranteed. The questionnaire and a pen were provided, and individuals were shown a quiet place to sit to answer the questions on their own. Completion took between 10 and 15 minutes. Completed questionnaires were collected and participants thanked for their collaboration.

**Analyses**

The psychometric properties of the scales of the MCPI were explored using the Statistical Package for the Social Sciences (SPSS) (SPSS Inc., Chicago, IL, USA) after the data were entered into a computer file. Items indicating a

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor I (attitude towards the male pill) loading</th>
<th>Factor II (trust in men’s effective use of the male pill) loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>As a man/woman I am trustworthy to use the male or female contraception pill</td>
<td>0.797</td>
<td></td>
</tr>
<tr>
<td>The male pill should be made available on the National Health Service (NHS)</td>
<td>0.679</td>
<td></td>
</tr>
<tr>
<td>I will make sure that I, or my male partner, will use the male pill</td>
<td>0.434</td>
<td></td>
</tr>
<tr>
<td>If the male pill will be made available by the health authorities then men will trust that the pill is safe</td>
<td>0.638</td>
<td></td>
</tr>
<tr>
<td>I am glad the male pill will be available shortly</td>
<td>0.618</td>
<td></td>
</tr>
<tr>
<td>I will not support the use of the male pill because side effects in the long term are unknown (R)</td>
<td>0.479</td>
<td></td>
</tr>
<tr>
<td>Females are more trustworthy in using the pill than males (R)</td>
<td></td>
<td>0.815</td>
</tr>
<tr>
<td>Men cannot be trusted to use the male pill (R)</td>
<td></td>
<td>0.718</td>
</tr>
<tr>
<td>Women are more trustworthy than men when they say they are using the pill (R)</td>
<td></td>
<td>0.776</td>
</tr>
</tbody>
</table>

*Extraction method: principal components. R, reversed item in scale’s total score.
negative attitude towards the male pill and low trust in men were reversed (R). A factor analysis using principal components as the method of extraction and direct oblimin rotation yielded a six-factor solution for the AMCP; oblique rotation was chosen because there were theoretical grounds to assume that the factors were correlated. This was further confirmed through oblique rotation producing a moderately correlated factor structure. While all six factors produced by the factor solution had eigenvalues higher than 1, factor 1 and 2 had eigenvalues of 3.143 (explaining 15% of the variance) and 2.459 (explaining 11.7% of the variance), respectively. Subsequent analyses identified these factors to be of high reliability (Table 1). Together they explained 26.68% of the total variability, and were labelled "attitude towards the male pill" (Cronbach’s α = 0.71) and "trust in men’s effective use of the male pill" (Cronbach’s α = 0.76), the latter indicating the individual’s level of confidence that the male pill would be used correctly. The internal consistency of both factors was further tested by conducting multiple regression analyses, using factor scores as the outcome variable and factor components as prediction variables. Both analyses indicated high internal consistency for both factor I (attitude) and factor II (trust) with an adjusted R² indicated high internal consistency for both factor I components as prediction variables. Both analyses using factor scores as the outcome variable and factor further tested by conducting multiple regression analyses, correctly. The internal consistency of both factors was excellent, with a Cronbach’s α (Cronbach's ρ = 0.76), the latter indicating the individual’s level of confidence that the male pill would be used correctly. The internal consistency of both factors was further tested by conducting multiple regression analyses, using factor scores as the outcome variable and factor components as prediction variables. Both analyses indicated high internal consistency for both factor I (attitude) and factor II (trust) with an adjusted R² = 0.96 and 0.94, respectively.

Internal consistency of both the RHBC and the GSES was excellent, with a Cronbach’s α of 0.73 for the RHBC and 0.85 for the GSES.

Missing data were dealt with by instructing SPSS to exclude cases pair-wise, according to recommendations by Field. After calculating mean scores for the RHBC and GSES, Pearson correlation coefficients were calculated for these variables in relation to the factors attitude towards the male pill and trust in men’s effective use of the male pill. For the discrete variables age and relationship type, associations were calculated using Spearman correlation coefficients. Mann-Whitney tests were performed to determine any significant differences between males and females. Following the screening of the data for normality, collinearity and homoscedasticity, a multiple regression analysis was performed in order to predict attitude towards the male pill as an outcome variable from a set of six predictor variables: self-efficacy, reported health behaviours, relationship type, trust in men’s effective use of the male pill, age and gender.

### Results
Mann-Whitney tests showed significant gender differences on attitude towards the male pill (U = 2922, p<0.0001), with females in general being more positive; and on trust in men’s effective use of the male pill (U = 3440, p<0.0001), with males in general displaying more trust in themselves than females in them.

Separate correlations for men and women (Table 2) revealed that the association between reported health behaviours and perceived self-efficacy was strong in both women (r = 0.561, p<0.01) and men (r = 0.418, p<0.01), showing that participants who engaged in health behaviours also tended to have higher self-efficacy. In men only, a positive attitude towards the male pill was associated with engaging in reported health behaviours (r = 0.213, p<0.05). Men in stable relations were more likely to have high self-efficacy (r = –0.205, p<0.05) and a more positive attitude towards the male pill (r = –0.223, p<0.05).

The multiple regression model, assessing differences in attitudes more specifically by looking at the individual contributions of the predictor variables while controlling for the others, had an adjusted R² of 0.16, indicating that the regression model explained 16% of variance (Table 3). The overall relationship between predictors and outcome was significant [F (6, 213) = 6.858, p <0.0001]. With other variables held constant, gender significantly predicted the attitude towards the male pill (α = 0.737, p<0.0001), with attitude increasing by 0.737 points for females compared to males, as did relationship type (α = –0.348, p<0.05), with attitude towards the male pill increasing by 0.348 points for individuals in stable relationships compared to individuals

### Table 2
Significant Pearson/Spearman correlation coefficients for the whole sample, as well as male and female participants

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Age</th>
<th>Gender</th>
<th>Relationship type</th>
<th>Reported health behaviours</th>
<th>Trust in men’s effective use of the male pill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude towards male pill</td>
<td>0.300**</td>
<td>–0.185** (–0.223* men only)</td>
<td>0.213* men only</td>
<td>0.439** (0.418* men, 0.5611** women)</td>
<td></td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>0.286** women only</td>
<td>–0.205* men only</td>
<td>0.439** (0.418* men, 0.5611** women)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>–0.237** (–0.238* women, –0.238* men)</td>
<td>–0.221**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>–0.221**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05, **p<0.01.

### Table 3
Predictors in multiple regression model of attitude towards the male pill

<table>
<thead>
<tr>
<th>Predictor</th>
<th>β</th>
<th>T</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>0.737</td>
<td>5.341</td>
<td>0.000****</td>
</tr>
<tr>
<td>Relationship type</td>
<td>–0.548</td>
<td>–6.669</td>
<td>0.012*</td>
</tr>
<tr>
<td>Trust in men’s effective use of the male pill</td>
<td>0.136</td>
<td>1.979</td>
<td>0.049*</td>
</tr>
<tr>
<td>Reported health behaviours</td>
<td>0.087</td>
<td>0.525</td>
<td>0.601</td>
</tr>
<tr>
<td>Age</td>
<td>–0.005</td>
<td>–0.538</td>
<td>0.591</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>0.228</td>
<td>1.226</td>
<td>0.222</td>
</tr>
</tbody>
</table>

*p<0.05, ****p<0.0001.
in casual relationships, and trust in men's effective use of the male pill ($\alpha = 0.136, p<0.05$), with attitude towards the male pill increasing by 0.136 points for every point increase in trust. Thus, being female and having trust in men's effective use of the male pill reliably predicted a positive attitude towards the male pill, while being male, being involved in casual sexual relationships or no relationship, and having low trust in its effective use by themselves reliably predicted a negative attitude.

**Discussion**

While men’s trust in the effective use of MHC has not sufficiently been explored in the existing literature, previous findings on women’s trust are mixed.4,5 The present study suggests that, in general, the effective use of the male pill is doubted more by females than males, although this lack of trust does not seem to have a significant impact on women’s favourable attitudes. This apparent contradiction is intriguing, as it implies that neither the fear of potential adverse side effects nor a lack of trust in the ability to use MHC effectively act as significant barriers towards the acceptability of the male pill in females. One possible explanation might be that women, unlike men, have first-hand experience using hormonal contraception and may therefore have more realistic expectations of its effectiveness and ease of use.

In both sexes, high perceived self-efficacy was associated with reporting to engage in more health-related behaviours, and this association was stronger in women than in men. This finding supports other studies that also have reported a strong relationship between health-related behaviour and self-efficacy in both sexes10,41 and in women specifically.2,4,32 The idea of men’s concerns about side effects in relation to the use of the male pill was not supported in this sample, since expressed interest in a healthy body (by displaying healthy behaviours) did not relate to a negative attitude towards the male pill. More support was found for men’s masculine role, in that those men not showing much interest in their health also did not show much interest in the availability of the male pill.

In particular, men who were in a stable sexual relationship had a more favourable attitude towards the male pill and showed more eagerness for its availability. This is in line with previous findings that condoms are preferred in casual sexual relationships, while the contraceptive pill and showed more eagerness for its availability. One possible explanation might be that women, unlike men, have first-hand experience using hormonal contraception and may therefore have more realistic expectations of its effectiveness and ease of use.

The best way of administering the male pill may vary with each individual. Just as female hormonal contraception exists in different presentations, some males may similarly prefer periodical injections, contraceptive patches or other presentations to a daily tablet. Ensuring that there are a variety of presentations available may boost women’s confidence in their partner using MHC effectively.

This study used a self-administered questionnaire: future research may benefit from employing qualitative methods (e.g. semi-structured interviews or focus groups). Furthermore, other variables might have an impact, such as religious orientation and education, as well as variables related to contraceptive use (e.g. level of contraceptive experience). Additionally, future studies should aim for equal numbers of male and female participants to ensure a representative sample. A measure of refusal to take part should be included, in particular to examine whether men – whom we might expect to avoid confrontation with contraceptive issues – are more likely to decline participation.

Women tend to come into contact with reproductive health services more than men do15,17 and consequently awareness and decision-making regarding MHC could partly be determined by the information that women receive from these services. Furthermore, this study highlights the important role that trust in effective use plays. Accordingly, it seems advisable to design promotional campaigns to not only encourage men to use MHC, but also to encourage women to trust the male pill with their partner. This may provide a means of increasing its uptake, once such a contraceptive method is freely available.

**Statements on funding and competing interests**

**Funding** None identified.

**Competing interests** None identified.

**Editor's note** Readers might like to refer to the Consumer Correspondent article on page 197 of this issue, which explores what women (and men) really want from their chosen contraceptive method.

**References**

Attitudes towards the male contraceptive pill/Faculty examination

The Membership Examination (MFSRH) consists of:

- **Part 1 Multiple Choice Question paper (MCQ)**

  This 1 1/2-hour paper consists of 60 clinical science and applied science questions.

  The examination date(s) for the London-based examination are still to be confirmed, but details will appear on the Faculty of Sexual and Reproductive Healthcare website in due course (www.fsrh.org).

- **Evidence Based Commentary (EBC)**

  The Evidence Based Commentary replaces the case reports/dissertation component of the Membership examination and candidates can now view the first annually released topic on the Faculty website. Candidates have an absolute deadline of 31 August 2009 to submit the Commentary on this topic. The Commentary must be a minimum of 1000 words and a maximum of 2000 words, excluding references, tables and appendices, and the format must follow the guidance notes. Candidates can find detailed information in the Candidate Guidance Notes for Evidence Based Commentary and the Membership Examination Regulations (September 2008) on the Faculty website.

- **Part 2 Examination (CRQ, SAQ, OSCE)**

  This all-day examination consists of:
  - Critical Reading Question examination paper (CRQ)
  - Short Answer Question examination paper (SAQ)
  - Objective Structured Clinical Examination (OSCE)

  The Faculty must receive applications for the MFSRH Part 2 held in June 2010 by 3 January 2010. Information on the Part 2 examination, the Examination Regulations and the application form appear on the Faculty website.

  The qualification is subject to re-certification every 5 years.

  For the current MFSRH Examination Regulations (September 2008), information on all components of the MFSRH examination and application forms, please visit the FSRH website: www.fsrh.org (see Training & Exams, Membership Exam) or e-mail Denise Pickford at denise@fsrh.org.