

Running Head: Spaniard men contraception**Assessing Spaniard men's willingness and determinants to use a male contraceptive pill**

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Assessing Spaniard men's willingness and determinants to use a male contraceptive pill**ABSTRACT**

Objective: As the clinical trials to develop male contraceptive pills are underway, understanding men's attitudes towards this contraceptive method is transcendental. This research was conducted to identify the degree of willingness and the determinants to use male contraceptive pill among Spaniard men.

Methods: A sample of 402 Spaniards men was presented with 36 scenarios comprising four within-subject factors (cost of pills, pill efficacy, side effects and context). In each scenario, a man is asked by his partner to use the contraceptive pill. Participants indicated their own willingness to use the pill in each circumstance.

Results: Cluster analysis revealed that participants took one of seven different positions regarding their willingness to use a contraceptive pill: *never agree* (10%); *mainly depends on pill efficacy* (6%); *mainly depends on side effects* (10%); *depends on side effects and efficacy* (12%); *depends on context and side effects* (12%); *quite always* (25%); *always agree* (25%). Participants' willingness to use contraceptive pills was more pronounced in the case of mild side effects and higher pill efficacy.

Conclusion: Fifty percent of participants would use the male pill regardless of the circumstances. Access to this contraceptive method, when available, can contribute to greater equity in reproductive rights of the population.

KEYWORDS

Male contraceptive pill, Spain

Introduction

Scientific efforts for the development of a male contraceptive pill (MCP) have been underway since the 1970s [1, 2]. Now, male hormonal contraceptive agents are at different stages of clinical trials and recent clinical trials have reported promising results [3, 4], which might make the MCP available on the market in near future. Just as the female contraceptive pill had an unprecedented great social and reproductive impact [5], the commercialisation of a MCP has the potential to usher in a new revolution in reproductive men's health. In turn, the drive for male family planning would actively affect all sexual partners, not just the part that can get pregnant, strengthening equal opportunities for men and women to exercise reproductive rights equitably.

As with other contraceptive methods, the MCP effectiveness to revolutionise the reproductive health sector will depend on the will of men as users, which may depend on several different factors. Unfortunately, relatively little is known about the factors and conditions under which men would be willing to take the MCP for birth control.

Since the 1970s, several studies on men's willingness to take a MCP have been carried out in several countries [6–12]. In these studies, between 40% and 70% of men participants stated that they would be willing to use MCP. However, the methodology used in these studies is observational and although the information provided is very valuable, knowing the participants percentage supporting the use of a MCP does not show us under what conditions the MCP would be used.

To fill the gap and enrich the literature on MCP, Vera Cruz et al. [13] conducted in 2018-2019 a study designed to identify the conditions that determine, either individually or in combination, men's willingness to use the MCP. The authors started from the premise that, beyond availability, men's willingness to use oral contraception may be influenced by a number of factors, including cost, efficacy, side effects, sociodemographic factors, and the reasons for which its use is proposed (e.g. health, equality, method diversity). They decided to start this type of study in Mozambique (412 male participants) [13] as an underdeveloped sub-Saharan country on the southeast coast of Africa with relatively poor and uneducated populations and one of the highest rates of unintended pregnancy. Traditional values/roles regarding male–

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female relationships within the marriage are much more prevalent in Mozambique than it is the case in Western countries [14], fact that may affect men's willingness to use a MCP. In addition, in Mozambique, abortion was prohibited by law until recently, except in case of foetal malformation and serious health risks for the mother. Since 2015, however, the law allows abortion up to 12 weeks of pregnancy and 16-24 weeks in case of rape, incest, foetal malformation and or if it endangers the mother live [15]. Cluster analysis conducted on raw data in Mozambique revealed that participants took one of four different positions regarding their willingness to use a MCP: *never* (11%); *depends on side effects alone* (25%); *depends on side effects and costs* (11%); *depends on side effects and context* (46). Men's willingness to use a MCP was more pronounced in the case of serious medical risk to their partner. Overall, only about a fifth of the participants were reluctant or unwilling to consider using a MCP.

After carrying out this type of study in Mozambique [13], it was later decided to reproduce it in a country with sociodemographic characteristics typical of developed countries such as Spain.

Regarding contraception, of the more than 12 million Spanish men surveyed in 2018 [16], only 52.2% said they were using contraceptives at that time. The male condom was the most widely used method with 54.8% of use. Overall, 5.7% of the men surveyed indicated that they had had their first biological child earlier than they considered ideal, in connection with the lack of use of contraception. As for abortion, in Spain, until 11 years ago, it was prohibited, except in life-threatening cases, for those who had been raped and in cases of foetal malformation. Since 2010, however, the law allows abortion up to 14 weeks of pregnancy and 22 weeks of pregnancy in case of foetal malformation [17]. In 2019, within the assumptions contemplated by Spanish new legislation, 99 149 voluntary interruptions of pregnancy were declared, placing the rate at 11.53 abortions per 1,000 women aged 15 to 44 (an increase compared to the year 2018 which was 11.12 abortions per 1,000 women) [18]. Finally, in 2020, The Federal State Planning Federation for the Universal Periodic Review of the Human Rights Council of the United Nations reported that "in Spain there is still a need to ensure access to contraceptive methods for the entire population" [19, p.134].

For better understanding the factors that may influence men's attitudes towards the use of male oral contraceptives in Spain, the aim of this study was to conduct a multivariate study, with a fully factorial design and based on cluster analysis, to identify the degree of willingness

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and the determinants to use MCP among Spaniard men. More precisely, using the scenarios based on pilot research, this study examined the willingness to use a MCP under different following situations: (1) the cost of the MCP, (2) its efficacy, (3) its side effects and (4) the reason for its use (i.e., for health, equality, or method diversity). Participants were also asked about their attitudes towards religion and contraception. Participant responses were used to test the following hypotheses: (1) that, as it was the case in the study conducted in Mozambique, Spaniard participant willingness would cluster into more than three empirically distinct groups – ranging from those who would never agree to use the MCP to those whose willingness would depend on its cost and side effects; and (2) that participants with less education, lower income and who were more religious would be more likely to never agree to use a MCP.

Material and Methods

The study was carried out in Aragon region (Spain) between September 2019 and February 2020 (before the first covid-19 confinement).

Participants

Participants were 402 men aged 15 to 49 years ($M = 30.58$, $SD = 7.89$), residents in the Aragon region (Spain), who gave their informed consent for their inclusion. Participants were unpaid volunteers recruited by a PhD student in Health Sciences. The sociodemographic characteristics of the participants are shown in Table 1.

Sampling, Recruitment, Sample Size

Participants were sampled by randomized sampling in three phases. Participants were recruited in the city of Zaragoza for logistical and financial reasons. First, a randomisation of the districts of the city of Zaragoza was carried out following the demographic data of the municipal registry of Zaragoza as of January 1, 2018. In the second phase, a stratified random sampling of recruitment points was carried out in which, according to the size of the population of men living between 15 and 49 years-old in each municipal district of the city of Zaragoza, a sample size proportional to each municipal district was obtained. Finally, an on-site randomisation was carried out at each recruitment point. The third out of every three men who passed through the area both in the morning and in the afternoon on alternate days were invited to participate. A total of 527 men were invited to participate; 472 men accepted the invitation; however, only

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402 participants did come to the interview location and completed the survey. Even if the participants were recruited randomly on streets, since neither sample size calculations were made no strict sample representativeness technics were applied prior to the data collection, this can be considered to some extent as convenient sample.

Data Collection and Measures

In this study, the same data collection and measurement instrument used in the Mozambican study were applied [13]. The instrument comprises 36 vignettes (scenario) and, at the end of each vignette, a question and an 11-point response scale. Each vignette reported an intimate relationship situation in which a female demands her male partner to use a MCP. The question was: *If you were X (the name of the male partner), to what extent would you agree to use these pills to prevent Y (the name of the female) from getting pregnant?* The response scale ranged from certainly not (0) to certainly (10).

The vignettes were created by orthogonally crossing the following four factors of the willingness to take a MCP: (1) the type of reason for its use, differentiating between a medical reason, a reason for equality in the couple or a reason for changing the contraceptive method; (2) efficacy (95% vs 99%); (3) type of side effects produced by the pill (none, mild or severe); (4) cost of the pill (free or € 30 for 3 months). The cost was chosen to reflect the reality of the Spanish context. The 36 proposed scenarios formed a $2 \times 2 \times 3 \times 3$ experimental design (efficacy \times cost \times side effects \times context).

Regarding the present study, first, the scenarios were translated (from Portuguese to Spanish) and a pilot study was conducted (ten participants, none of whom participated in the main study) to test the instrument applicability to the Spaniard target population. The applicability was evaluated based on the participants understanding of the scenarios and the assessment they had made about their pertinence in the Spanish context. Since the applicability was evaluated as very good, the decision to start the main study was taken. Three examples of the vignettes are shown in Table 2.

Regarding the socio-demographic variables, the educational level was divided between the stages of Spanish education (primary studies or secondary education, vocational training, university degree or postgraduate university degree), the economic status was trichotomised (low level corresponding to income less than € 1000, average level between € 1000 and € 1500,

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high level with income higher than € 1500 per month). In addition, marital status and the number of children were recorded. Religious affiliations were Christian Catholics, Jehovah's Witnesses, Muslims, Protestants, Orthodox, and Atheists. The degree of religiosity was also measured (measured with the Hoge [20] intrinsic religious motivation scale).

Procedures

Before each data collection session, the participants signed the informed consent and received a brief synopsis of the research on the MCP from the lead investigator. They were told how the MCP can work, the purpose and design of the study, instructions on how to use the tablet on which the data were collected, and instructions on how to use the response scales. Throughout the session, the researchers also responded to any questions or requests for clarification from the participants. Participants took between 45 and 60 minutes to respond to all of the study scenarios. Each participant responded to all 36 scenarios. After answering the scenarios, the participants answered additional questions about their age, sex, educational level, geographic origin, level of religiosity, etc. All instructions and study material were presented in Spanish.

Ethics

Approval for the study was obtained from the Aragón Clinical Research Ethics Committee (Spain) (C.P. - C.I. PI19/192).

Statistical analyses

The ratings of agreement to take the pills were converted to numerical values of 1 to 11, and all subsequent analyses were based on these measures. Strong individual differences in ratings were, as expected, detected during preliminary data analysis. In order to test our first hypothesis, a cluster analysis was performed using the K-means method advocated by Hofmans and Mullet [21]. A seven-cluster solution was retained because it was the one that produced the most interpretable findings. An overall ANOVA was performed on the raw data with a Cluster x Cost x Efficacy x Side Effects x Context, 7 x 2 x 2 x 3 x 3 design. Owing to the great number of comparisons, the significance threshold was set at .001. As the Cluster effect and all two-ways interactions involving the Cluster factor were significant, seven separate ANOVAs were conducted on the data of these clusters, using a Cost x Efficacy x Side Effects x Context, 2 x 2 x 3 x 3 design. In order to test our second hypothesis, chi-square tests of independence were

performed, involving the demographic characteristics variables, self-reported religiosity, and the willingness to use the MCP participants' ratings.

Results

The distribution of participants in each cluster is shown in Table 1. The main patterns of data that correspond to these clusters are shown in Figure 1. In each panel, agreement to take the pills is on the vertical axis, and the three levels of the side effects factor are on the horizontal axis. In the top panels of this figure (five clusters), the three curves correspond to the three contexts. In the bottom panels of this figure (two remaining clusters), the two curves correspond to the two levels of the efficacy factor. Each panel corresponds to one position (cluster). The main results of the corresponding ANOVAs are shown in Table 3.

The first cluster (39 participants; 10% of the sample) was the expected *Never Agree* cluster. As can be observed in Figure 1 (top, left hand panel), all ratings were close to the left anchor of the response scale ($M = 1.05$). Ratings were, however, slightly higher when side effects were inexistent ($M = 1.99$) than when they were severe ($M = 0.37$). As shown in Table 1, participants aged 31-36, participants with an income level higher than 1000€, participants who are married or have been married, participants who have more than two children, Muslims, and participants who reported a high level of religiosity were more often members of this cluster than participants aged 18-24, or participants with the lowest income level, or participants who are currently married/divorced, or participants who have less than three children, or Atheists/Christians or participants who reported a lower level of religiosity.

The second cluster (23 participants; 6% of the sample) was called *Mainly Depends on Pill Efficacy* because this factor had by far the strongest impact of participants' judgments. As can be observed in Figure 1 (bottom, left hand panel), agreement ratings were much higher when pills were 99% efficient ($M = 6.28$) than when they were 95% efficient ($M = 1.29$). In addition, (a) the impact of the side effect factor on agreement was stronger when pills were 99% efficient ($8.02 - 4.10 = 3.92$) than when they were 95% efficient ($2.25 - 0.51 = 1.74$), and (b) the impact of context on agreement was somewhat stronger when pills were 99% efficient ($8.02 - 4.10 = 3.92$) than when they were 95% efficient ($2.25 - 0.51 = 1.74$). As shown in Table 1, participants with professional education were less often members of this cluster than participants with primary, secondary or tertiary education.

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The third cluster (41 participants; 10% of the sample) was called *Mainly Depends on Side Effects* because this factor explained by itself most of the variance. As can be observed in Figure 1 (top, second panel on the left), ratings were considerably higher when side effects were inexistent ($M = 9.17$) than when they were severe ($M = 0.84$) or of intermediate severity ($M = 7.14$). In addition, ratings were slightly higher (a) when the context was medical ($M = 6.12$) than when it was not medical ($M = 5.51$), and (b) when efficacy was high ($M = 5.99$) than when it was low ($M = 5.44$).

The fourth cluster (48 participants; 12% of the sample) was called *Depends on Side Effects and Efficacy*. As can be observed in Figure 1 (bottom, right hand panel), ratings were considerably higher when side effects were inexistent ($M = 7.30$) than when they were severe ($M = 1.48$) or of intermediate severity ($M = 3.71$). In addition, (a) the impact of the side effect factor on agreement was slightly stronger when pills were 99% efficient ($8.38 - 1.90 = 6.48$) than when they were 95% efficient ($6.23 - 1.06 = 5.17$), and (b) ratings were slightly higher when the context was medical ($M = 4.78$) than non-medical ($M = 3.86$).

The fifth cluster (48 participants; 12% of the sample) was the expected *Depends on Context and Side Effects*. As can be observed in Figure 1 (top, central panel), ratings were higher when the context was medical ($M = 8.32$) than when it was not medical ($M = 6.90$ and 3.47), and when side effects were inexistent ($M = 7.30$) than when they were severe ($M = 4.05$). The effect of side effects was stronger when the context was medical ($7.04 - 3.64 = 3.40$) than when it was not medical ($2.41 - 0.84 = 1.57$). In addition, ratings were slightly higher when efficacy was high ($M = 6.69$) than when it was low ($M = 5.77$). As shown in Table 1, participants who reported a high level of religiosity were less often members of this cluster than participants who reported a low level of religiosity.

The sixth cluster (108 participants; 25% of the sample) was the expected *Quite Always Agree* cluster. As can be observed in Figure 1 (top, fourth panel), ratings were systematically high ($M = 6.18$). They were higher when side effects were inexistent ($M = 7.75$) than when they were severe ($M = 4.60$), the context was medical ($M = 6.86$) rather than not medical ($M = 5.83$), and pills were 99% efficient ($M = 6.84$) rather than 95% efficient ($M = 5.51$). As shown in Table 1, younger participants, and participants without children were more often members of this cluster than older participants or participants with children.

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Finally, the seventh cluster (101 participants; 25% of the sample) was the expected *Always Agree* cluster. As can be observed in Figure 1 (top, right-hand panel), ratings were always close to the Totally Agree end of the response scale ($M = 8.35$). Ratings were, however, slightly higher when side effects were inexistent ($M = 8.89$) than when they were severe ($M = 7.80$), and when pills were 99% efficient ($M = 8.75$) rather than 95% efficient ($M = 7.95$).

Discussion

Findings and interpretation

In accordance with our hypothesis, several qualitatively different positions were found with respect to the willingness to use a MCP among Spaniard participants. These positions were related to participants' sociodemographic characteristics. Overall, from the results, three participant categories can be distinguished. First, a relatively small number of participants (10%) indicated that they would be unwilling to use a MCP irrespective of circumstances, i.e. the 'never agree' position. The participants were more often less educated, older, Muslim and with a high level of religiosity. The finding suggests that the unwillingness of these participants may be based on traditional / cultural views (especially religious views) regarding sex roles or on more general ideological views that outlaw unnatural birth control [22].

Second, one-half of participants reported strong willingness to use MCP (25% always agree + 25% quite always agree) irrespective of circumstances. These participants were more often younger and without children. This finding is in accordance with the sexual attitude's studies showing that, in general, young people (more than older counterparts) adhere to the idea that the responsibility of contraception should be shared between men and women [22, 21]. In addition, this finding is also in accordance with the result of the fertility survey carried out in Spain in 2018, in that young men without children would use the MCP to continue without having children, since 32% of young people Spaniards under 31 without children wish not to have children [16].

Third, more than third of participants (40%) indicated that they would be willing to use a MCP if one or several conditions were met. For 6% the main condition was that the pill had a greater efficacy; for 10% of these men, the only condition was that side effects were mild; for 12% the condition was mild side effects and greater pill efficacy; and for other 12% the condition was a mix of context (e.g., when the female partner could not use contraceptive pill

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because of medical contraindication) and side effects. No consistent socio-demographic profile was come out of this last category of participants.

Strengths and weaknesses

The strengths of the current study include the fact that this study conducted in Spain serves to validate the methodology tested in the 2018 study in Mozambique [13]. Realistic multifactorial situations of MCP intake were described in the study vignettes. This, combined with the full-factorial, within-subject design enabled identification of the individual and combined circumstances under which participants would be willing, and unwilling, to use a MCP. More specifically, the use of factorial vignettes enables the assessment of immediate reactions to different situations, standardises the situations across participants, permits statistical analyses to examine how people weight and combine separate factors, and allows the characterisation of qualitatively different patterns of responses. For all this adds to the strength of the study and the solidity of the tool.

The methodology also has a number of limitations. First, while significant logistical efforts were made to maximise participant diversity and generalisability, ours was still a simple random sampling of volunteer participants coming from only one region of the country (Aragon). Thus, the generalisability to Spaniards as a whole remains unknown. In addition, the full-factorial vignette technique is costly in time, reducing response rates and sample sizes.

Similarities and differences in relation to other studies

The current results are consistent with findings from the previous similar study conducted in Mozambique [13], in that a majority of participants indicated that they would be willing to use the MCP if it were made available. However, the main factor affecting the willingness to use MCP are side effects for Spaniards, while for Mozambicans the main factor the context (e.g., when the female partner could not use contraceptive pill because of medical contraindication). This difference might have something to do with the traditional gender roles perspective, which is more prevalent in Mozambique than in Spain [14]. Also, judging from the number of clusters, the combination of factors affecting the willingness to use MCP is more diverse and complex in Spain (7 clusters) than in Mozambique (4 clusters).

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In addition, both the Spanish and the Mozambican studies are consistent with findings from previous studies [6–12], in that a majority of participants indicated that they would be willing to use the contraceptive pill if it were made available. However, the two current studies extend prior research findings in previous ones by revealing under which circumstances (individually and combined) participants would be willing to use the MCP and when they would not. In this sense, the Spanish and the Mozambican studies bring new and relevant information to the literature on the subject.

Open questions and future research

In the wake of a clinical trial testing the efficacy of a MCP [3], this study was designed to examine Spaniard men's willingness to use MCP and under what circumstances. It remains an open question to what extent men would be willing to use other male hormonal contraceptive methods (e.g. skin gels, intramuscular injections) and under which circumstances.

As a global trial examining the efficacy of a male contraceptive transdermal gel started last year [24], future studies should explore participants' willingness to use a skin gel, so that comparisons can be made between men's willingness to use a contraceptive gel and a contraceptive pill.

Conclusion and implications

In conclusion, the willingness of Spanish men to use MCP was very high in general. Fifty percent of the participants would use the MCP regardless of the circumstances. In Spain as well as in Mozambique, participants seem concerned by side effects. This is an important information for researchers, pharmaceutical companies, regulation authorities, and policymakers to pay particular attention to the side effects of the MCP they may put in the market. In addition, the use of male contraceptive pill promotion must be accompanied by counselling programs stressing the efficacy of the MCP and how to mitigate possible negative side effects. Finally, the development of educational programmes to promote more progressive sex roles (e.g. responsibility for contraception) may be helpful.

Declarations

Funding

No applicable

Conflicts of interest / Competing interests

The authors declare that they have no competing interests.

Availability of data and materials

The data supporting this finding are available at:

https://osf.io/mct2z?show=view&view_only=

The material used in this study are available from the corresponding author upon reasonable request.

Code availability

Not applicable

Authors' contributions

PG-T, MG-B, GZM-P and GVC and conceived the study. PG-T and GVC prepared the data collection material. PG-T collected the data. EM and GVC carried out data/statistical analysis. EM, GVC and PG-T drafted the manuscript. PG-T and GZM-P revised the manuscript. All co-authors read and approved the manuscript.

Ethics approval and consent to participate

Ethical clearance was obtained from the the Aragón Clinical Research Ethics Committee (Spain) (C.P. - C.I. PI19/192). All participants participated in the study on voluntary bases and consent for data collection and publication prior to data collection. Data collectors informed participants of their right to end the data collection at any time or skip any questions they did not want to answer.

Consent for publication

Not applicable.

Consent to participate

Not applicable.

Abbreviations

MCP = male contraceptive pill

ANOVA = analysis of variance

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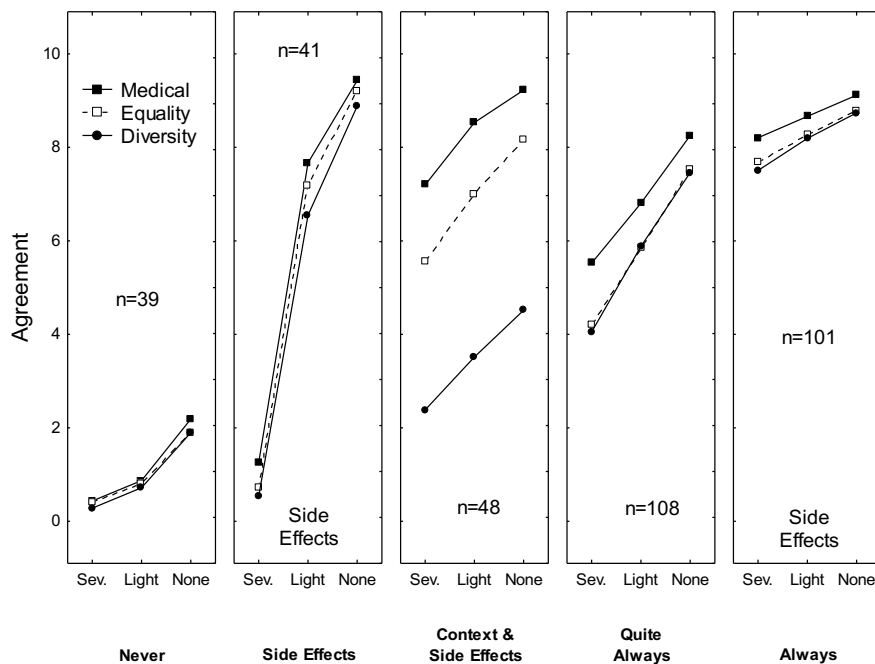
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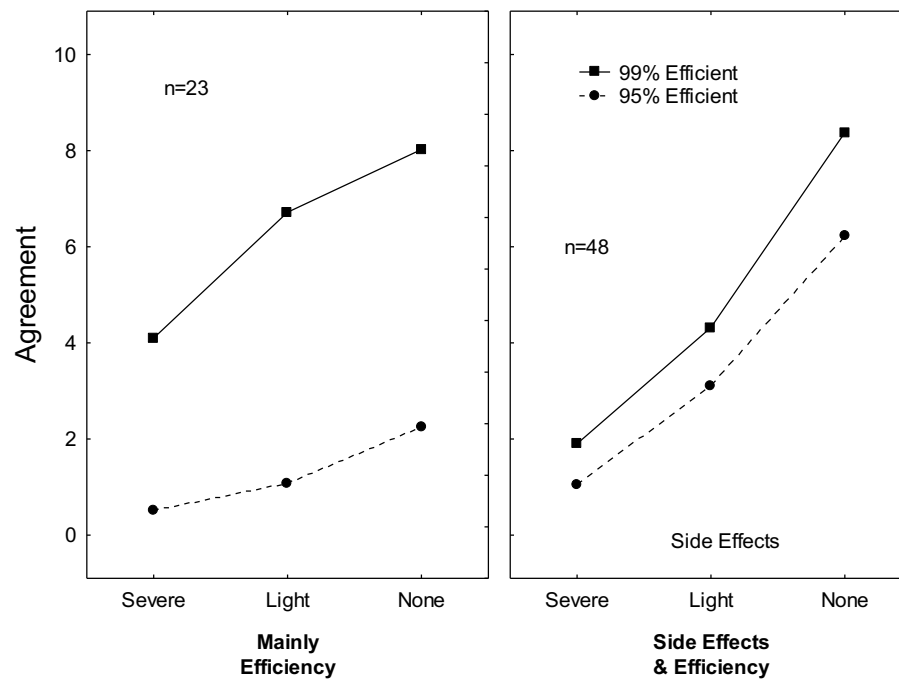
FIGURES

Figure 1. The main patterns of data that correspond to the five first clusters. In each panel, agreement to use the pills is on the vertical axis, and the three levels of the side effects factor are on the horizontal axis. The three curves correspond to the three contexts. The three curves correspond to the three contexts. Each panel corresponds to one position.



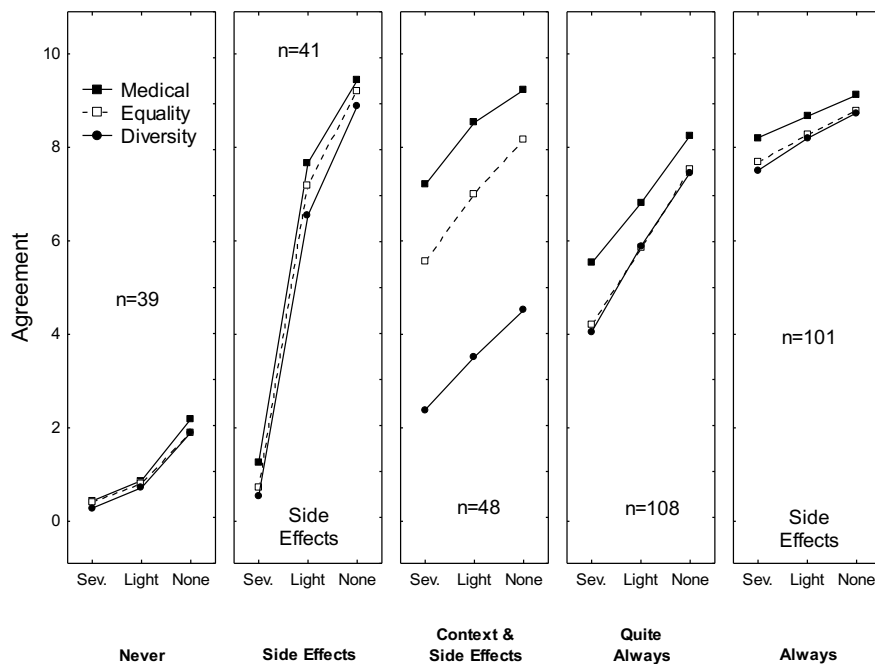
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Figure 2. The main patterns of data that correspond to the two last clusters. In each panel, agreement to use the pills is on the vertical axis, and the three levels of the side effects factor are on the horizontal axis. The two curves correspond to the two levels of the efficiency factor. Each panel corresponds to one position.



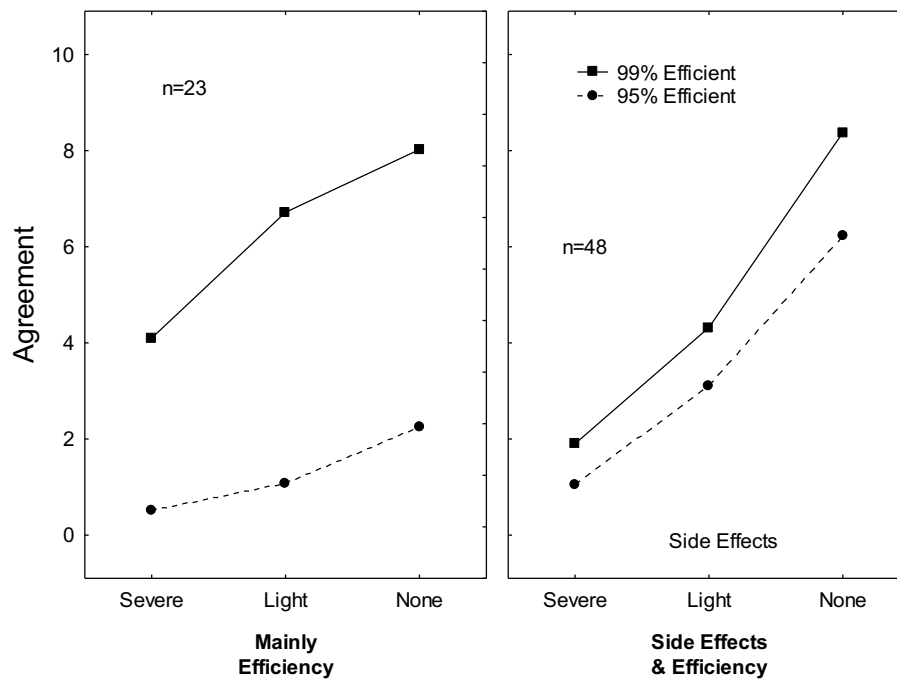
FIGURES

Figure 1. The main patterns of data that correspond to the five first clusters. In each panel, agreement to use the pills is on the vertical axis, and the three levels of the side effects factor are on the horizontal axis. The three curves correspond to the three contexts. The three curves correspond to the three contexts. Each panel corresponds to one position.



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Figure 2. The main patterns of data that correspond to the two last clusters. In each panel, agreement to use the pills is on the vertical axis, and the three levels of the side effects factor are on the horizontal axis. The two curves correspond to the two levels of the efficiency factor. Each panel corresponds to one position.



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Table 2. Demographic Characteristics of the Sample. Composition of the Clusters

Characteristic	Cluster							Total
	NV	EF	SE	SE&EF	CO&SE	QA	ALW	
Age								
18-24 Years	4(4) ^a	10(10)	8(8)	11(11)	11(11)	33(33) ^{ab}	23(23)	100
25-30 Years	7(7)	6(7)	7(7)	12(13)	14(15)	28(30) ^{cd}	21(21)	95
31-36 Years	17(15) ^a	4(4)	12(11)	13(12)	12(11)	22(20) ^{ac}	29(27)	109
37+ Years	11(11)	3(3)	14(14)	12(12)	11(11)	19(20) ^{bd}	28(29)	98
Education								
Primary or Secondary	10(8)	9(8) ^a	13(11)	14(12)	13(11)	30(26)	28(24)	117
Professional	16(12)	1(1) ^{ab}	10(8)	17(13)	18(14)	33(26)	34(26)	129
University	13(8)	13(8) ^b	18(12)	17(11)	17(11)	39(25)	39(25)	156
Income								
< €1000	2(2) ^{abc}	9(9)	8(8)	8(8)	14(14)	30(31)	28(28)	99
€1000-1500	12(11) ^a	3(3)	9(8)	14(13)	12(11)	26(24)	33(30)	109
> €1500	12(10) ^b	5(4)	18(16)	12(10)	14(12)	27(24)	28(24)	116
Unknown	13(17) ^c	6(8)	6(8)	14(18)	8(10)	19(24)	12(15)	78
Sexual Orientation								
Heterosexual	30(9)	19(5)	39(11)	43(12)	42(12)	85(25)	89(26)	347
Homosexual	2(12)	1(6)	0(0)	1(6)	2(12)	7(41)	4(23)	17
Bisexual	0	1(7)	2(12)	2(12)	2(13)	5(31)	4(25)	16
Asexual	1(50)	0(0)	0(0)	0(0)	0(0)	1(50)	0(0)	2
Unknown	6(30)	2(10)	0(0)	2(10)	2(10)	4(20)	4(20)	20
Marital Status								
Single	6(5) ^a	9(7)	12(9)	10(7)	20(15)	42(31)	35(26)	134
Non-Cohabiting	4(6) ^b	7(11)	5(8)	12(19)	6(9)	19(30)	11(17)	64
Cohabiting	3(3) ^c	3(3)	14(16)	10(11)	14(16)	16(18)	29(33)	89
Married	23(22) ^{abc}	4(4)	9(8)	16(15)	8(8)	22(21)	23(22)	105
Divorced	3(30) ^{abc}	0(0)	1(10)	0(0)	0(0)	3(30)	3(30)	10
Number of Children								
None	12(4) ^{abc}	18(7)	25(9)	26(10)	39(14)	83(31) ^{ab}	68(25)	271
One	9(14) ^a	2(3)	11(17)	7(11)	4(6)	10(16) ^a	21(33)	64
Two	6(13) ^b	3(7)	3(7)	13(28)	4(9)	9(19) ^b	8(17)	46
More	12(57) ^c	0(0)	2(10)	2(10)	1(4)	0(0)	4(19)	21
Religious Tradition								
Atheist	11(6) ^a	11(7)	18(11)	15(9)	22(13)	43(26)	47(28)	167
Catholic	14(8) ^b	9(5)	18(10)	23(13)	22(12)	51(29)	40(23)	177

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Jehova	0(0)	1(9)	2(15)	2(15)	3(23)	2(15)	3(23)	13
Muslim	9(90) ^{ab}	0(0)	0(0)	1(10)	0(0)	0(0)	0(0)	10
Protestant	3(43)	0(0)	0(0)	0(0)	0(0)	3(43)	1(14)	7
Orthodox	1(14)	1(14)	1(14)	2(30)	0(0)	1(14)	1(14)	7
Unknown	1(5)	1(5)	2(9)	5(24)	1(5)	2(9)	9(43)	21
Religious Involvement								
None	13(7) ^a	13(7)	22(12)	21(12)	28(15) ^a	40(22)	46(25)	183
Some	8(6) ^b	8(5)	13(9)	17(11)	17(11)	50(34)	36(24)	149
Strong	18(26) ^{ab}	2(3)	6(9)	10(14)	3(4) ^a	12(17)	19(27)	70
Total	39	23	41	48	48	102	101	402

Data are shown as n (%).

Figures with the same exponent in each column are significantly different ($p < 0.05$). For example: regarding religious involvement, 7% is significantly different from 26%, 6% is significantly different from 26%, and 6% and 7% are not significantly different; they have different exponents.

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Table 3. Main Results of the ANOVAs Conducted at the Cluster Level

	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2_p
Cluster Never					
Cost	1	2.48	0.38	.54	.01
Efficacy	1	151.37	11.73	.001	.24
Context	2	4.81	1.76	.18	.04
Side Effects	2	328.38	22.43	.001	.37
Efficacy x Side Effects	2	75.40	10.03	.001	.21
Cluster Efficacy					
Cost	1	1.09	0.28	.60	.01
Efficacy	1	5 165.00	286.07	.001	.93
Context	2	65.06	15.03	.001	.41
Side Effects	2	555.46	48.35	.001	.69
Efficacy x Context	2	12.77	10.97	.001	.33
Efficacy x Side Effects	2	102.95	6.01	.001	.21
Efficacy x Context x Side Effects	4	3.21	4.11	.001	.16
Cluster Side Effects					
Cost	1	9.18	4.79	.03	.11
Efficacy	1	107.26	23.72	.001	.38
Context	2	76.42	25.08	.001	.39
Side Effects	2	9 064.97	845.65	.001	.96
Cost x Side Effects	2	17.65	8.40	.001	.18
Cluster Side Effect and Efficacy					
Cost	1	1.07	0.15	.70	.00
Efficacy	1	848.68	120.28	.001	.72
Context	2	201.05	31.56	.001	.40
Side Effects	2	4 968.30	244.81	.001	.84
Efficacy x Side Effects	2	64.79	9.87	.001	.17
Cluster Context and Side Effects					
Cost	1	7.92	2.39	.13	.05
Efficacy	1	367.60	26.04	.001	.36
Context	2	3 575.95	215.63	.001	.82
Side Effects	2	735.63	58.04	.001	.55
Cluster Quite Always					
Cost	1	87.80	12.72	.001	.11
Efficacy	1	1 612.00	116.24	.001	.54
Context	2	426.22	55.01	.001	.35
Side Effects	2	3 013.15	303.74	.001	.75
Cost x Context	2	8.86	9.14	.001	.08
Cost x Side Effects	2	70.11	22.10	.001	.18
Context x Side Effects	4	15.30	11.87	.001	.11

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Cost x Efficacy x Side Effects	2	21.71	15.36	.001	.13
Cluster Always					
Cost	1	18.49	5.72	.02	.05
Efficacy	1	584.03	65.44	.001	.40
Context	2	89.69	21.67	.001	.18
Side Effects	2	350.56	92.21	.001	.48
Context x Side Effects	4	2.75	5.17	.001	.05

df, degree of freedom; η^2_p , effect size.