How sociodemographic features impact subjects' opinion on packages leaflets of medicines?

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ABSTRACT

Background
Packages leaflets (PLs) are essential for the safe use and efficacy of medicines.

Aims
To quantify the opinion of users of medicines on PLs through the application of a self-administered Likert scale, taking into consideration subjects' sociodemographic data.

Methods
Participants were enrolled from two Portuguese regions: urban/littoral (Lisbon) and rural/interior (Centre). 503 participants were included: 53 per cent males, 45 per cent <30 years, and 55.1 per cent from Lisbon. Participants' level of education varied: 31.9 per cent (0-6 years of schooling); 36.3 per cent (7–12 years of schooling); and 31.9 per cent (>12 years of schooling). A questionnaire was used to collect the sociodemographic data. A Likert scale was self-administered to rate the characteristics of 12 randomized PLs (6 from prescription medicines and 6 from over-the-counter medicines) (August-December 2014). An invitation was send to several institutions (e.g., municipal councils). The inclusion criteria were: agreeing, be capable of reading/writing, and be more than 17 years old.

Results
In the Likert scores obtained, no significant differences were found related to region, sex, marital status, age group (≥65 years and other), and employment status of participants. By contrast, significant differences were found related to education (χ^2=42.747; p<0.001), income (χ^2=8.789; p=0.012), reading habits (χ^2=8.581; p=0.014), and frequency of medicines use (χ^2=6.965; p=0.031). The participants with >12 years of schooling, more regular reading habits (2 or more books/year), higher income and less frequent medicines use, showed a more negative global opinion on PLs.

Conclusion
Sociodemographic data are important to understand users' opinion on PLs. It seems that more educated subjects are more demanding. A lower socio-economic status positively influenced the participants' opinion, with subjects' poorer education being a relevant factor in this population. A higher frequency of taking medicines also positively contributed to a better opinion, probably due to a greater familiarity with PLs.

Key Words
Package leaflets, medicine information, opinion study, likert scale, health communication

What this study adds:

1. What is known about this subject?
Packages leaflets (PLs) are very specific documents considered essential for the rational use of medicines. Studies on the relation between sociodemographic features

and subjects' opinion on PLs are limited.

2. What new information is offered in this study?

Sociodemographic data revealed important implications for understanding users' opinion on PLs, which may contribute to better design these health materials.

3. What are the implications for research, policy, or practice?

Participants from different economic and educational backgrounds should be involved in the evaluation and development of PLs, since their perceptions on PLs may be discrepant.

Background

In the European Union, packages leaflets of medicines (PLs) are obligatory dispensed with all medicines and are organized in six sections:

- What X (X=medicine name) is and what is used for;
- What you need to know before you <take> <use> X;
- How to <take> <use> X;
- Possible side effects of X;
- How to store X;
- Contents of the pack and other information.[1,2]

In addition, Norway, Iceland and Lichtenstein use the same QRD (Quality Review Document) template as they are part of the European Economic Area (EEA). However, other European countries use different templates. This applies for example to Switzerland, Russia, and Ukraine. PLs present a similar structure in the European Union, United States, and Australia, comprising few sections in the first case.[3] These documents are frequently consulted by patients and are important sources of health information for patients, together with the consultation of health professionals, internet search or traditional news media and advertisings on health issues.[4-6]

This type of information targeting medication consumers is relevant for the safe and effective use of medicines, since it contributes to increase patients' knowledge.[7] These documents may positively modify users' behaviors (e.g., to correctly take the medicines or to assure the therapeutic adhesion), and consequently improve health outcomes. In general, patients consider the written information on medicines useful.[7-9] By contrast, health professionals (general practitioners, community and hospital pharmacists) tend to believe that these documents may promote patients' anxiety, are not useful information-sharing tools, and are in general low-quality material, which need to be improved or tailored in accordance to the patients' needs.[6,10]

Besides increasing patients' knowledge, providing information about medicines, such as PLs may also promote users' satisfaction.[7,11] There are also studies supporting the development of consumer-tailored information delivery, regarding the differences in the individuals' preferences concerning these documents.[6,12,13] The involvement of patients and potential users of medicines in the development of PLs is also recommended in order to avoid design and comprehension issues, and to reduce the occurrence of possible health inequalities between more and less educated subjects.[14-17]

Sociodemographic features, such as education and literacy are determinant factors on subjects' comprehension of PLs, with less literate subjects usually performing worse than more literate participants in tasks requiring the understanding of the information in PLs.[16,18,19] Also, sociodemographic features seem to be related to users' perceptions on the usefulness of PLs, as well as preferences in terms of readability characteristics.[20,21] For instance, users' perceived usefulness of medicine information may be influenced by age and number of medications taken; and subjects' preferences on PLs' design may also vary according to age, gender, and level of education.[21] Importantly, studies on the readability of PLs are still limited.[7,21-25]

Among the characteristics that may have an impact in PLs' readability are text formatting and design features choices, including font size and type, the layout of sections' titles, color of the text, line spacing, as well as linguistic properties, namely the length of sentences, the comprehensibility of the medical terms and clarity of the text.[18,22-27] Sociodemographic features may also influence subjects' opinion on PLs, including health literacy.[21,28-30] Bearing this in mind, a self-administered Likert scale was applied to study the role played by a number of major sociodemographic features in subjects' opinions on aspects of the presentation of the information in PLs.

Method

Sample frame

This study is part of a larger research,[18] which was carried out in two Portuguese regions: one urban/littoral (Lisbon and Tagus Valley) and the other rural/interior (Centro), between August and December 2014. Besides the application of the self-administered Likert scale here applied (Appendix 1), diverse literacy measures were quantified/collected in this larger investigation (e.g., performance of calculus tasks or the quantification of the reading or writing habits).

The detailed characterization of the participants and the description on how they were recruited may be consulted in the additional study,[18] since the participants are the same in both studies.

Inclusion criteria

Included subjects had to agree to participate, be capable of reading and writing, and be at least 18 years old; the legal adult age in Portugal.

Rational for distributing the participants per three education groups

Overall, the participants were balanced distributed by the three education groups (low, medium, and high education), as follows: 31.9 per cent (0-6 years of schooling); 36.3 per cent (7-12 years of schooling); and 31.9 per cent (>12 years of schooling). The expression "0-6 years of schooling," was used because one participant mentioned not having completed the first year of schooling, but was able to read and write.

These three educational categories were motivated by Portuguese education reforms in the last decades. Obligatory education corresponded to six years after 1984, nine years after 1986, and 12 years after 2009[1]. Using this stratification allows to include representatives from all education strata of the Portuguese population.

Another reason for using these three education groups was that in the larger study,[18] participants' years of education per strata and the reading habits were found, respectively, to be strongly and moderately related to subjects' knowledge about the content of the tested PLs, unlike the other evaluated Literacy tasks. Importantly, the positive relation between subjects' education and literacy is widely reported in various studies.[18,31]

Recruitment

First, an email invitation was sent to several public and private institutions (e.g., municipal councils, parish centers, firefighters headquarters). Then, these institutions were contacted to confirm their willingness in collaborating in this research and to book one day to accomplish the data collection. Finally, the subjects who accepted to participate were instructed to complete a set of questionnaires.

Sample size: Krejcie & Morgan formula

Overall, 503 participants were conveniently selected: 53 per cent males, 45 per cent with less than 30 years old, and 55.1

per cent from Lisbon. This number of participants was calculated based on the *Krejcie & Morgan* formula.[32] The application of this formula estimates 384 participants for a Z value of 1.96 (95 per cent confidence level) and 5 per cent margin of error. An extra number of participants were included to compensate for possible drop outs and minimizing the margin of error.[18]

Administration methods

The materials were self-administered to groups of participants, after receiving clear instructions. One researcher supervised these tasks. Specifically, this researcher was instructed to (i) give a brief explanation about the Likert scale before the participants begun to respond and (ii) clarify any participants' doubts about the meaning of the sentences of the Likert scale during the test, which only occurred in less than 1 per cent of the cases. All data were anonymous and confidential.

Self-completed questionnaire

The self-completed questionnaire to collect sociodemographic data is given in Appendix 2. There was no time limit to filling out the questionnaire. Specifically, the correlation of reading habits with subjects' satisfaction was not evaluated in the present study, since this variable was not explanatory of subjects' knowledge on the tested PLs in a univariate logistic model.[18]

Socio-demographic variables: categorization

All socio-demographic variables were classified or categorized as qualitative variables (e.g., male=0, female=1; urban=0, rural=1 or 0-6 years of schooling=0, 7-12 years of schooling=1 and >12 years of schooling=2).

Self-administered Likert scale

We have decided to only carry out a general evaluation of the PLs, since (i) long scales may be not suitable, especially for lay participants[33,34] and (ii) there is great variability between the content of different PLs.[5,7,17,22] Also, we have specifically decided to evaluate the description of adverse drug reactions in the PLs, because the information on adverse drug reactions is one of the main reasons why subjects decide not to take a medicine.[35,36]

The topics proposed in the specialized literature to ensure the quality of health information for patients, have been taken into consideration in the development of this Likert tool. Moreover, simple plain language was used to ensure the comprehensibility of the tool by participants with varying instruction backgrounds, including lay people. This

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[1] Decree of Law n. º 301/1984; Law n. º 46/1986 and 85/2009.

scale was pre-tested in a previous study, and the present version shows some optimizations (Appendix 1).[33,34]

Administration of the self-administered Likert scale
The self-administered Likert scale was distributed together with one tested PL. Participants were required to rate the design, readability, intelligibility, and typographic characteristics of the PLs using the 5-points Likert scale (1-Strongly disagree; 2-Disagree, 3-Neutral, 4-Agree, and 5-Strongly agree) (Appendix 1).

In order not to put pressure on the participants, the task was not time-limited, although subjects were instructed to complete the self-administered scale as soon as possible.

Likert scale: global score
The calculation of the global scores were based on the sum of the values (1-Strongly disagree to 5-Strongly agree) attributed by each participant to the 15 items of the Likert scale. Thus, the maximum total score of the scale is 75 points (100 per cent) (15*5=75 points).

Likert scale: categorization of the global score
The scores of the scale were stratified in three groups: low (0 per cent to <50 per cent), medium (50 per cent to <75 per cent), and high (≥75 per cent). Thus, the inputs to the statistical tests were respectively, classified as 0, 1 and 2 in the non-parametric tests of the SPSS.

Scores were distinguished between positive and negative (higher/lower than 50 per cent) to increase the study precision. The scores higher than 75 per cent were based on the traditional cut-off of the usability tests.[15,37] Usability testing usually applies a cut-off of 70-80 per cent to distinguish between improper or proper usability, respectively.[37] For instance, the European Readability guideline of PLs establishes a cut-off of 80 per cent to decide if the PLs are/are not readble.[15] We have specifically decided to apply a slightly lower cut off value (75 per cent) because in most of the cases the global score of the Likert scale was lower than 80 per cent (Table 1).

It is important to point out that accurate results are expected, since many participants were enrolled (n=503). Unfortunately, usability studies enrolling a limited number of participants only detected a part of the problems.[37,38]

Evaluated package leaflets
Twelve PLs were conveniently randomized from 651 PLs mentioned in the National Prescribing guide v10.[39] The same documents were also used in a comprehension study on Portuguese PLs.[18] The inclusion criteria for the selected PLs were as follows:

- 6 from over-the-counter medicines;
- 6 from prescription medicines;
- 6 with more than 1500 words;
- 6 with less than 1500 words;
- All from different therapeutic groups;

All from different pharmaceutical formulation/presentation.

It was expected that PLs from over-the-counter medicines were simpler than PLs from prescription medicines, since they are supposed to be consulted by the general population without the intervention of physicians and comprise few details, such as information on contra-indications and adverse drug reactions.[2,27] Because of their length, short PLs were also expected to be easier to process than long PLs.[18]

Table 1 shows the characteristics of the selected PLs in terms of therapeutic groups/active substance(s), pharmaceutical presentations, number of words, type of letter, font size, color, line spacing, number of lists, no. of words/ no. of paragraphs (Quotient), and presentation of drug adverse reactions using lists or numeric descriptors (e.g., a per cent or an interval), by the three education groups.

Randomization criteria of the evaluated PLs
The 651 were classified in an MS Excel file in terms of the previous features (e.g., PLs form an over-the counter or a prescribing drug or therapeutic group).

First, these features were introduced into a MS Excel file. Second, the randomization of the 12 PLs was carried using the Excel filter function to identify, successively, the PLs by the above-mentioned features. Finally, the Excel randomization function was applied to select the 12 evaluated PLs.

Statistical analysis
The statistical analysis was done with the *Statistical Package for the Social Sciences* (SPSS) version 22 (IBM SPSS Inc., Chicago, IL, USA). General descriptive statistics were calculated (e.g., average and standard deviation), while a non-parametric test was applied to the existing qualitative and categorical data, since the study data were not normally distributed. Chi-square tests (χ^2) were used to evaluate if there were statistically significant associations between the scale scores (low, medium, and high) and the sociodemographic variables under investigation.[40] As already explained, all variables were previously categorized (see section of methods).

The tests were applied with a significant level of $p<0.05$ and a confidence interval (CI) of 95 per cent (Table 1 and 2). No data were excluded from the analysis.

Results

The results of the three education groups per the characteristics of the PLs and the average scores of the Likert Scale are presented in Table 1. The distributions of the evaluated variables (per cent) by the three strata of the scale (low, medium, and high) and the results from the inferential statistics (χ^2 and p-values) are presented in Table 2.

The global scores in the higher education group were clearly lower (69.2 per cent) than the global scores of the medium (and lower education groups (78.6 per cent and 78.5 per cent, respectively) (Table 1).

Among the variables studied, there were significant differences between the three classificatory strata of the scale (i.e., the global score: low, medium, and high) and education group, income level, frequency of taking medicines, and books reading habits. Overall, participants with more education, with better remuneration, taking less medicines, and reporting more reading habits show a more negative global opinion on the PLs evaluated (Table 2).

Likert scale: fifteen evaluated items

Of the 15 items evaluated, 14 showed a median score of 4 (agree), and one (related to the color used in PLs) presented a median score of 5 (strongly agree). By contrast, the global average scores (± standard deviation) were lower than 4 in the following cases:

- Font size (3.4±1.7);
- Line spacing (3.8±1.3);
- Clarity of text (3.8±1.2);
- Number of sentences in each paragraph (3.9±1.2);
- Information on adverse drug reactions (3.9±1.5);
- Understanding of the medical terms (3.6±1.2);
- Clarity of the instructions to the patients (3.9±1.1);
- Use of abbreviations throughout the text (3.2±1.4);
- Repetition of the brand names of the medicine (3.9±1.1).

Consultation of PLs

Only 8.1 per cent the participants have declared to never consult the PLs (22 with 1-6 years of schooling; 11 with 7-12 years of schooling; and 7 with more than 12 years of schooling), thus it is not likely that this variable (consultation of PLs) influenced subjects' opinion on PL.

Discussion

Sociodemographic features were associated with subjects' opinion on PLs, which follows the results obtained in other previous studies.[21,18] This confirms that patients and potential users of medicines with different profiles should be involved in the design of PLs contributing to assure the development of intelligible PLs.[15,16,33,41] The development of tailored and more accessible information may result in better health decisions by medicine users, the reduction of literacy-related barriers, and the enhancement of patients' engagement with their treatments.[6,13,14,30]

Education and reading habits

Higher education was negatively associated with participants' positive opinions on the PLs, while less educated population by contrast seemed not so critical regarding PLs presentation. This may result from the fact that more educated subjects are more likely to be efficient in analyzing PLs. Participants with higher education and social background may be more demanding in relation to the quality of PLs regarding their intelligibility. As expected, participants reporting more reading habits also had a negative opinion on PLs.[18,42] By contrast, the less educated patients may be poorly equipped to evaluate PLs and this may further indicate that they need to be motivated to and trained in reading PLs. Overall, it seemed to exist an inverse correlation between level of education and level of satisfaction with design and format of PLs. Subjects' social and cultural differences may explain these differences.

Besides comprehension differences of health written materials between more and less educated/literate people,[18,19] it is known that a high literacy is also associated to lower mortality and morbidity and better treatment adherence.[14,43,44] These facts reinforce the importance of considering patients' education/literacy during the development of health written materials. Also, health professional should assure that less literate patients, understand and use health written materials correctly.

Income

Subjects that were less remunerated showed better opinion on PLs. This may be explained by the fact that poor population is also most frequently less educated.[42]

Frequency on taking medicines

Higher frequency on taking medicines also contributed to a better opinion on PLs. This may be due the fact that these documents are more familiar to frequent users of medicines. Similar findings were also obtained in other studies.[21] However, patients should be able to make good use of PLs

independently of how frequently they take medicines. These results may thus indicate that potential users of medicines would benefit from being trained on the consultation of PLs (e.g., at school). Health professionals may also be called to play a more active role in training patients and potential users of medicines.

Characteristics of the evaluated PLs: general aspects

A product or service should be useful, efficient/effective, satisfying, learnable and accessible to its users, consequently satisfaction should be taken into consideration when evaluating PLs and performing usability and readability tests.[22,37,45] Thus, it seems that the tested PLs need to be optimized, since the participants were not fully satisfied with PLs and the recommendations of the European Readability Guideline[15] were not followed in many cases (e.g., font size and line spacing). In addition, it may be advisable to send the results of satisfaction tests to national medicine authorities when carrying out readability tests of PLs.

Tested PLs

The tested PLs presented a small font size: only one showed a font size above 9, at odds with the European Readability Guideline.[15] The line spacing was also too straight and was not in line with the recommendations of the above cited guideline, which recommend 1.5 as a rule.[15] The use of color in PLs was rare, probably because of the higher production costs. Numeric descriptors to designate adverse drug reactions were usually not employed, which is also not in line with the recommendation of the QRD template of European Medicine Agency.[1] Usually, the characteristics of the tested PLs are divergent from the international recommendations, a global result also found in other studies analyzing larges samples of Portuguese PLs.[20,39-41]

Characteristics of the evaluated PLs: number of words

Given shorter PLs (≤1500 words) are better understood[18, 23] and more satisfactory in accordance to the findings of the present study, it may be advisable to develop PLs with a limited number of words instead of long PLs.

Characteristics of the evaluated PLs: OTC

Within the group of subjects with more than 12 years of schooling, the average satisfaction score was higher in the group of PLs from OTC medicines. Within the groups subjects with 0-6 and 7-12 years of schooling the PLs of OTC medicines also were better scored, except for the PL of the prescribing medicine Cefatrizine in the first group and the PL of the prescribing medicine Ofloxacin in the second group. This preference by PLs of OTC medicines may be due to the fact that they are potentially simpler and contain less

information.[27] Other previous studies also support these findings.[17,18,26,33]

Limitations

The sampled participants were not statistically representative of the general Portuguese population, since they were conveniently selected. Nevertheless, the sample size was much larger than the recommended size for PLs usability studies. The 15 evaluated items of the self-administered Likert scale may have had a varying ponderation/influence on responses and therefore, future studies are recommended. The sampled PLs are also not necessarily representative of all Portuguese PLs population. Additionally, using different PLs also limits the comparison between education groups. Although not aimed in this study, using an identical package leaflet in all three groups would allow a more accurate comparison. Not assessing the reading habits on other sources of information (e.g., newspaper, internet, etc.) may also be a limitation. Finally, the socially desirable behavior may have influenced responses and explain some of the differences between the three education groups.

Suggestions for future studies and interventions

- Opinion tests may also be administered to health professional when developing PLs[10] since, physicians, pharmacists or nurses also consult PLs and there are studies demonstrating that different health professionals have dissimilar opinions on PLs.[17,33]

- Ideally, opinion studies about each PL should be carried out. For instance, involving patients from different populations (e.g., diabetics or anti-hypertensive patients), since they may have discrepant opinions.

- Health professionals should implement procedures that ensure patients' understanding of health written documents,[42-44] given that subjects' positive opinion on PLs does not necessarily mean that the information in PLs is understood.[18]

- Medicines users may need to be coached to adequately read PLs, and clarify their doubts with health professionals.

- Health literacy concerning reading and extracting information from PL may be included in compulsory school curricula, empowering the general population to look after their own health problems in daily practice.[45-47]

- Social media may be developed towards patients' education on health written materials, such as PLs.[48]

- The self-administered Likert Scale may be used with other additional tools/tests to investigate subjects' opinion on PLs (e.g., eye-tracking studies).

Conclusion

Sociodemographic features were relevant to better understand the opinion of potential users of medicines on PLs. Lower education, lower income, reduced reading habits, and a higher frequency of taking medicines positively influenced the opinion of participants concerning PLs. These results may be related to the fact that lower social status population have generally less education, while a higher frequency of medicines usage favors subjects' exposure to PLs, which become more familiar to them. Sociodemographic characteristics seem therefore to be relevant when developing PLs, as well as when educating patients in healthcare daily practice. Results suggest the introduction in compulsory school curricula of selfcare and health-related education, including skills to explore PLs information, thus progressively reaching the general population.

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PEER REVIEW

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CONFLICTS OF INTEREST

The authors declare that they have no competing interests.

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ETHICS APPROVAL

The study was performed in accordance with the good research practices of the School of Arts and Humanities, University of Lisbon. The participants did not receive any incentive or any other form of compensation, and they were free not to participate in or to abandon the study at any time. All data were anonymous and confidential. In the tested PLs, the original names of the medicines were replaced by invented brand names, and the laboratory and manufacturing names were erased with a blank filler to assure the concealment of the medicine brands.

Table 1: Characteristics of the PLs and average scores of the Likert Scale per the three education groups

Education Groups (years of schooling)	Therapeutic groups/ Active substance(s)	Pharmaceutical presentations	OTC/PM	N.º of wordsb	Type of letter	Font size	Colour	Line spacing	N.º of Lists	Quotient*	Using Lists	Using numeric descriptors	Average	SD
0-6	Drugs altering gut motility (Gelatin + Glycerol)	Rectal gel	OTC	966 (≤1500)	Arial	7	No	≤ 1 pt	1	64	No	No	59.5 (79.3%)	11.1
	Topical products for hair loss (Minoxidil)	Solution	OTC	2220 (>1500)	Arial	8	No	≤ 1 pt	6	41	Yes	No	60.2 (80.3%)	9.7
	Antibacterial drugs (Cefatrizine)	Oral suspension powder	PM	1465 (≤1500)	Arial	8	No	≤ 1 pt	5	38	No	No	56.3 (75.1%)	11.5
	Antiasthmatics (Ipratropium bromide)	Aerosol	PM	1683 (>1500)	Arial	8	No	> 1 pt	8	44	Yes	No	59.6 (79.5%)	12.3
Total													58.9 (78.5%)	11.2
07-Dec	Vaginal disinfectant (Povidone-iodine[a])	Solution	OTC	1075 (≤1500)	Arial	6	No	≤ 1 pt	1	37	No	No	57.5 (76.7%)	7.8
	Nasal decongestants (Oxymetazoline)	Nasal spray	OTC	1714 (>1500)	Arial	8	Yes	≤ 1 pt	6	30	No	Yes	60.7 (80.9%)	13.2
	Topical antibacterial (Ofloxacin)	Ophthalmic drops	PM	1345 (≤1500)	Other**	8	No	≤ 1 pt	5	45	Yes	No	62.5 (83.3%)	10.7
	Antidepressive (Clomipramine)	Tablets	PM	2346 (>1500)	Arial	10	No	≤ 1 pt	4	96	No	No	54.5 (72.6%)	16
Total													59 (78.6%)	12.6
> 12	Anti-ulcerous (Choline salicylate)	Oral gel	OTC	924 (≤1500)	Arial	6	No	≤ 1 pt	1	154	No	No	57.0 (76%)	7.8
	Analgesic and antipyretics (Acetylsalicylic acid + Ascorbic acid)	Effervescent tablets	OTC	2346 (>1500)	Arial	7	Yes	≤ 1 pt	8	76	Yes	No	54.0 (72%)	10.2
	Topical corticosteroids (Dexamethasone + Neomycin)	Optical drops	PM	3487 (≤1500)	Arial	8	No	≤ 1 pt	3	42	No	No	50.3 (67.1%)	10.4
	Corticosteroids (Methylprednisolone + Lidocaine)	Parenteral injection	PM	>1500	Arial	7	No	≤ 1 pt	4	77	Yes	No	46.1 (61.4%)	11.8
Total													51.9 (69.2%)	10.9

Table 2: Distributions of the evaluated variables (%) by the strata of the Likert Scale (low, medium, and high) and the results from the inferential statistic (χ^2 and p values)

Evaluated variables/ Number of participants (Total=503)	% of participants by each stratum of the Likert Scale Global Score			Chi square test	
	Low	**Medium**	**High**	χ^2	p
	0% to <50%	50% to <75%	≥ 75%		
Regions					
Urban/Lisbon (n=277)	4.3	37.5	58.1	2.375	0.305
Rural/Centre (n=226)	7.5	37.2	55.3		
Sex					
Male (n=270)	7	34.8	58.1	2.828	0.243
Female (n=233)	4.3	40.3	55.4		
Marital Status					
Married or marital living (n=186)	6.6	38.2	55.2	1.655	0.437
Other (n=317)	4.3	36	59.7		
Unemployed					
Yes (n=79)	7.6	39.2	53.2	0.856	0.652
No (n=424)	5.4	37	57.5		
Age					
< 65 years (n=452)	6.4	37.6	56	3.953	0.139
≥ 65 years (n=51)	0	35.3	64.7		
Education (years of schooling)					
0-6 (n=160)	5.6	28.7	65.6	42.747	<0.001*
7-12 (n=184)	3.3	29.3	67.4		
>12 (n=159)	8.8	55.3	38.8		
Income					
>970 euros (n=436)	9	50.7	40.3	8.789	0.012**
Other (n=67)	5.3	35.3	59.4		
Frequency of taking medicines					
At least once a week (n=238)	3.4	33.6	63	6.965	0.031**
At least once in the last 0-6 months (n=218)	8.7	39.4	51.8		
Other (n=47)	4.3	46.8	48.9		
Reading habits of books					
At least 1-2 per year (n=433)	6.2	39.5	54.3	8.581	0.014**
Never (n=70)	2.9	24.3	72.9		

* Very strong evidence of a difference or relation

** Evidence of a difference or relation