

# Reference Values For Facilitating the Interpretation of the ESPRINT-15 Questionnaire (Spanish Version)

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## ■ Abstract

*Objective:* ESPRINT-15 is a specific, short-form instrument to measure health-related quality of life in adults suffering from allergic rhinitis. The aim of this study was to obtain reference values in order to improve its interpretability.

*Methods:* ESPRINT-15 was administered to a representative sample of Spanish adults with allergic rhinitis. Means and percentiles were obtained, taking into account the kind of rhinitis (persistent/intermittent) and symptom severity (very mild/mild/moderate/severe).

*Results:* A total of 2756 patients participated in the study. Mean (SD) scores were significantly lower (better) for men than for women (2.2 [1.4] vs 2.4 [1.4],  $P < .001$ , effect size [ES] = 0.15). Patients with intermittent rhinitis showed better scores than patients with persistent rhinitis (2.1 [1.4] vs 2.5 [1.4],  $P < .001$ , ES = 0.21). Mean (SD) scores were higher (worse) when severity of symptoms increased, ranging from 0.9 (0.9) (very mild) to 3.7 (1.0) (severe) (ES = 1.0 between each consecutive group of symptom severity).

*Conclusions:* The magnitude of the differences found among groups of patients reinforces the usefulness of providing reference values stratified by gender, type of allergic rhinitis, and symptom severity. The percentiles obtained can be used in clinical practice to evaluate individual scores, and assign the patient to the corresponding reference group.

**Key words:** Allergic rhinitis. Adults. Specific questionnaire. Health perception. Reference values. Spanish version.

## ■ Resumen

*Objetivo:* El cuestionario ESPRINT-15 es una herramienta de calidad de vida breve y específica y validada para evaluar la calidad de vida relacionada con la salud, en pacientes con rinitis alérgica. El objetivo del estudio fue obtener valores de referencia para mejorar la interpretabilidad de la medida.

*Métodos:* El cuestionario ESPRINT-15 fue administrado a una muestra representativa de pacientes adultos con rinitis alérgica de España. Se calcularon las medias y los percentiles según el tipo de rinitis (persistente/intermitente) y la severidad de los síntomas (muy leve, leve, moderado y grave).

*Results:* 2.756 pacientes participaron en el estudio. Las puntuaciones medias fueron significativamente más bajas (mejores) en hombres que en mujeres ( $2.2 \pm 1.4$  vs.  $2.4 \pm 1.4$ ,  $P < 0.001$ , tamaño del efecto  $-ES = -0.15$ ). Los pacientes con rinitis intermitente mostraron mejores puntuaciones que los pacientes con rinitis persistente ( $2.1 \pm 1.4$  vs.  $2.5 \pm 1.4$ ,  $P < 0.001$ ,  $ES = 0.21$ ). Las puntuaciones medias fueron peores cuando los síntomas empeoraban, oscilando desde  $0.9 \pm 0.9$  (muy leve) hasta  $3.7 \pm 1$  (grave) ( $ES = 1.0$  entre grupos consecutivos de severidad de los síntomas).

*Conclusions:* La magnitud de las diferencias halladas entre grupos de pacientes refuerza la utilidad de disponer de valores de referencia estratificadas por sexo, tipo de rinitis e intensidad de los síntomas. Los percentiles obtenidos pueden ser utilizados en práctica clínica para evaluar las puntuaciones individuales, situando a un paciente individual dentro de su correspondiente grupo normativo.

**Palabras clave:** Rinitis alérgica. Adultos. Cuestionario específico. Percepción del estado de salud. Valores de referencia. Versión española.

## Introduction

Allergic rhinitis (AR) is an inflammation of the nasal mucous membrane brought about by an allergic reaction. It affects between 10% and 25% of the world's population. Its prevalence is increasing and it generates significant social and health care costs [1,2,3]. With a prevalence of 22.7% in Europe (21.5% in Spain), it has been calculated that allergic rhinitis affects about 100 million people in the European Union [4]. Recently, AR has been classified as intermittent and persistent [1], and both types have an important impact on quality of life [5]. Therefore, it is important to evaluate the impact of illness and treatment on health-related quality of life (HRQOL) using standardized validated questionnaires. The use of these tools in clinical practice can provide information that would otherwise remain unknown and facilitate patient management [6-8].

Generic questionnaires (36-item short form general health questionnaire [SF-36]) and specific questionnaires (Rhinitis Quality of Life Questionnaire, the Rhinosinusitis Disability Index, or the ESPRINT questionnaire) have been used to measure HRQOL in patients with allergic rhinitis [9-14]. However, none of these questionnaires have been developed in Spain and this can cause specific measurement handicaps, as some authors observe [15]. The ESPRINT Questionnaire comes in 2 validated versions, a 28-item long version for research purposes and a shorter 15-item version (ESPRINT-15) to be used in clinical practice [15, 16].

Once the questionnaire was developed and validated, the next step in the ESPRINT project was to gather additional information to facilitate interpretability of ESPRINT-15 [18]. Of the different approaches available [18], one of the most widely used was gathering of normative values from target reference populations with different sociocultural characteristics and from heterogeneous clinics [19-21]. The so-called patient-based norms enable an individual's score to be put into context by comparing it with that of the corresponding reference group [18]. The percentile technique, understood as a departure from these values, is easy to use and interpret.

Therefore, in order to obtain reference values for ESPRINT-15, the questionnaire was administered to a heterogeneous patient population with AR.

## Material and Methods

### Design

We performed a cross-sectional, descriptive study using quota sampling to ensure that a wide range of patients with

AR would respond to ESPRINT-15. General practitioners, otorhinolaryngologists, primary health-based allergists and hospital-based allergists in Spain were invited to recruit patients for the study, as described below.

To ensure a sufficiently representative sample, 16 quotas were defined on the basis of the following variables: gender (men vs women), AR type (intermittent vs persistent) [1], and 4 symptom intensity groups according to the total symptom score (TSS4) [15,22]. TSS4 totals the scores assigned to nasal obstruction symptoms, rhinorrhea, itching, and sneezing, and classifies patients as follows: very mild (<3 points), mild (3-6 points), moderate (7-9 points), and severe (10-12 points). Each quota enables us to provide a clearly different clinical profile in terms of gender, rhinitis type, and symptom intensity. For example, one quota included women with intermittent and very mild AR, another included men with mild intermittent AR, and so on. In order to report mean score values for each decile with sufficient accuracy, 170 patients were considered necessary for each quota (ie, 17 patients per decile). The final overall theoretical sample size was estimated at 2720 patients. The quotas were randomly assigned and communicated to the investigators using a specially designed form.

### Study Participants

Patients were included consecutively as they visited their doctor because of their AR and after meeting all inclusion criteria. Adult outpatients were also consecutively included if they had a diagnosis of AR based on sensitization to any clinically relevant allergen, had visited their doctor because of AR, and belonged to a quota profile type that had not been covered. Signed informed consent was obtained from all participants.

### ESPRINT-15 Questionnaire and Other Study Variables

The sociodemographic data (age, sex, education) and clinical characteristics (nasal symptom intensity, patient receiving treatment for AR, AR type) of the study patients were recorded and the ESPRINT-15 questionnaire was provided, preferably for a self-administered response. The questionnaire contains 15 items distributed within the following dimensions: symptoms (5 items), daily activities (3 items), sleep (3 items), psychological impact (3 items), and general health (1 item) (Appendix 1). An overall score and a score for each dimension are obtained. The overall score and the dimensional scores range from 0 (no impact on HRQOL) to 6 (maximum impact on HRQOL).

A multivariate analysis was performed to confirm the association between the overall score of the questionnaire

(dependent variable) and the variables by which the overall score was stratified, including gender, age, allergic rhinitis type, and rhinitis symptom intensity (independent variables). The mean, standard deviation, interquartile range, and deciles of the overall scores were obtained for the 16 defined quotas. All the analyses were performed using SPSS 11.0.

## Results

Table 1 presents data on the participating investigators by geographical location of the health center where the data was gathered and its attendance profile. In total, each of the 539 participating investigators included an average of

Table 1. Investigators and Geographical Distribution of the Participating Centers (N=539)

	N	%
Care level of the investigators of the study		
Family doctor/Primary care physician	368	68.3
Allergist	47	8.7
Otorhinolaryngologist	98	18.2
Other	8	1.5
No answer	18	3.3
Geographical distribution of settings <sup>a</sup>		
Peninsular Northwest: Galicia and Asturias	43	7.9
Peninsular Center: Madrid and Castile	62	11.5
Peninsular South: Andalusia	141	26.2
Canary Islands	26	4.8
Peninsular East: Community of Valencia and Murcia	99	18.4
Peninsular North-East: Aragon, Navarre, and La Rioja	50	9.3
Peninsular North: Basque Country and Cantabria	32	5.9
Peninsular North-East: Catalonia and Balearic Islands	86	16.0

<sup>a</sup> The Autonomous Communities of Extremadura and Ceuta and Melilla did not participate in the study.

Table 2. General Characteristics of the Sample (N=2756)<sup>a</sup>

		Men	Women
N (%)	2752 (100)	1308 (47.5)	1444 (52.5)
Age, mean (SD)	47.46 (16.9)	47.10 (16.9)	47.78 (16.8)
Education received, N (%)			
Little education	421 (15.4)	155 (11.9)	266 (18.5)
Primary education completed	855 (31.2)	387 (29.7)	468 (32.6)
Secondary education completed	886 (32.3)	451 (34.6)	435 (30.3)
University education completed	578 (21.1)	311 (23.8)	267 (18.6)
Subtotal	2740 (100)	1304 (47.6)	1436 (52.4)
Allergic rhinitis type, N (%)			
Persistent	1347 (49)	630 (48.2)	717 (49.7)
Intermittent	1403 (51)	678 (51.8)	725 (50.3)
Subtotal	2750 (100)	1308 (47.6)	1442 (52.4)
TSS4 nasal symptom intensity, N (%)			
Very mild symptoms (0-2 points)	518 (18.9)	261 (20.1)	257 (17.9)
Mild symptoms (3-6 points)	785 (28.7)	380 (29.2)	405 (28.2)
Moderate symptoms (7-9 points)	828 (30.3)	382 (29.3)	446 (31.1)
Severe symptoms (10-12 points)	605 (22.1)	278 (21.4)	327 (22.8)
Subtotal	2736 (100)	1301 (47.6)	1435 (52.4)

Abbreviation: TSS4, Total Symptom Score.

<sup>a</sup> The difference in the number of cases between subtotals and the 2756 patients recruited to the study is due to missing cases in some of the variables analyzed in this table.

Table 3. Variables Associated With the Overall Scores of the ESPRINT-15 Questionnaire (Linear Regression Model) (N=2666)

Variable	Coefficient	P <sup>a</sup>
TSS4 nasal symptom intensity	0.689	.000
Allergic rhinitis type	-.0063	.000
Sex	0.054	.000
Age	0.006	.644

Abbreviation: TSS4, Total Symptom Score.

<sup>a</sup> Statistical significance was set at a P value of <.001; R<sup>2</sup>=0.49

5.1 patients, depending on their corresponding quotas. The participating doctors were mostly primary care physicians (68.3%), as opposed to otorhinolaryngologists (18.2%) or allergists (8.7%). The investigators were evenly distributed throughout the Spanish mainland, although the areas of Andalusia (26.2%), Peninsular East (18.4%), and Peninsular North-East (16%) displayed a greater investigator density (accumulated=56.1%), partly because these areas are more densely populated.

As could be expected from a study of these characteristics using quotas, the distribution of the variables concerning gender, AR type, and symptom intensity was very balanced (Table 2). If we look at the distribution by gender, we see that of the total number of patients (N=2752), 47.5% (1308) were men and 52.4% (1444) were women, with a mean (SD) age of 47.5 (16.9) years. Type of AR (persistent or intermittent) was evenly distributed. As for symptoms, 18.9% of the patients had very mild symptoms at inclusion, 28.7% had mild symptoms, 30.3% had moderate symptoms, and 22.1% had severe symptoms. In terms of educational level, 31.2% of patients of both genders had finished primary school, 32.3% had finished secondary school, and 21.1% had attended university.

To prepare the table of reference values for the overall ESPRINT-15 score, the variables found to be independently associated with the score had to be confirmed beforehand, that is, variables with statistically different scores (depending on their values) within the overall score of the questionnaire. Table 3 shows the linear regression model, which used the overall score in the ESPRINT-15 questionnaire as a dependent variable and gender, age, allergic rhinitis type, and symptom intensity as independent variables. The results clearly show that all the variables included in the model, except age, are independently associated with the overall score. The results confirmed that age was irrelevant for the preparation of the reference values, although it validated other variables (gender, allergic rhinitis type, and symptom intensity). Moreover, men showed a better HRQOL (2.2 [1.4]) than women (2.4 [1.4], P<.001; effect size  $\cong$  0.15). Quality of life was poorer in patients with persistent AR (2.5 [1.4]) than in patients with intermittent AR (2.1 [1.4], P<.001; effect size  $\cong$  0.21). Interestingly, quality of life deteriorated as the severity of symptoms increased (very mild, 0.9 [0.9]; mild, 1.8 [1]; moderate, 2.7 [1]; and severe, 3.7 [1] points; effect size  $\cong$  1.0. The linear tendency of the overall score according to gender, AR type, and symptom severity was confirmed by the corresponding test (P<.001) (data not shown in Table).

Table 4 shows the definitive reference values for the overall ESPRINT-15 score.

Table 4. Reference Values for the Overall<sup>a</sup> ESPRINT-15 Questionnaire Score According to Gender, Rhinitis Type, and Intensity of Nasal Symptom Intensity (N=2666)

	Men n=1264						Women n=1402						
	Persistent n=610			Intermittent n=654			Persistent n=695			Intermittent n=707			
	VM n=116	Mi n=156	Mo n=191	VM n=135	Mi n=217	Mo n=177	VM n=115	Mi n=169	Mo n=227	VM n=132	Mi n=230	Mo n=210	S n=135
Cronbach	0.96	0.94	0.91	0.96	0.94	0.94	0.92	0.93	0.93	0.94	0.94	0.93	0.91
Mean	0.9	1.8	2.7	0.9	1.5	2.5	0.9	1.9	2.9	0.9	1.8	2.6	3.7
SD	1	1	0.9	1	1	1.1	0.7	0.9	1	0.9	0.8	1	1
Interquartile range	0.2-1.1	1.1-2.6	2.1-3.4	0.3-1.2	0.8-2.2	1.9-3.2	0.3-1.2	1.1-2.5	2.3-3.6	0.3-1.3	1.1-2.5	1.9-3.3	3.2-4.2
Deciles													
10	0.1	0.6	1.7	0.1	0.4	1	0.1	0.6	1.4	0.1	0.6	1.3	2.5
20	0.2	0.9	1.9	0.2	0.7	1.5	0.3	0.9	2.1	0.2	0.9	1.6	2.9
30	0.3	1.2	2.3	0.3	0.9	2.1	0.4	1.4	2.4	0.3	1.2	2	3.3
40	0.4	1.4	2.5	0.4	1.1	2.3	0.5	1.7	2.7	0.4	1.5	2.2	3.6
50	0.5	1.7	2.8	0.5	1.3	2.6	0.7	1.9	2.9	0.6	1.6	2.6	3.8
60	0.7	1.9	3	0.8	1.6	2.7	0.9	2.2	3.1	0.9	1.9	2.8	4.0
70	1	2.2	3.1	1.1	2	3.0	1.1	2.4	3.4	1.1	2.3	3.1	4.1
80	1.2	2.8	3.4	1.5	2.4	3.4	1.4	2.7	3.7	1.4	2.7	3.4	4.5
90	2.6	3.2	3.8	2.4	2.7	3.9	2.0	3.1	4.1	1.9	3.1	4.1	5
100	4.7	4.8	5.6	5.8	5.6	5	4.1	4.9	5.9	5.9	5.3	5.2	6

Abbreviations: Mi, mild; Mo, moderate; S, severe; VM, very mild.

<sup>a</sup> Averaged on the basis of 14 specific items. The summary score ranges from 0 (no repercussion on HRQOL) to 6 (maximum repercussion on HRQOL).

## Discussion

After validating the ESRINT-15 questionnaire [14,15], we administered it for the first time to a sample of adult patients with acute intermittent or persistent rhinitis throughout Spain, in order to obtain reference values for patient perception of HRQOL.

Our findings showed statistically significant differences between genders (women's mean scores were significantly higher [worse] than men's), between types of rhinitis (higher mean scores among patients with persistent rhinitis), and between different degrees of symptom intensity (mean scores increased progressively from very mild to severe). Furthermore, the results of the multiple linear regressions showed that gender, type of AR, and symptom severity were all independently associated with HRQOL. Moreover, the magnitude or clinical importance of the differences found between groups was interpreted using the standard categorization of effect size [23], whereby SDs of 0.2, 0.5, and 0.8 represent small, moderate, and large differences, respectively. First, the difference of 0.21 points observed between the overall mean scores of men and women (2.18 vs 2.39) indicates a very small effect (effect size of 0.15 when taking into account an SD of 1.35). These results prove that allergic rhinitis has a slightly greater impact on women's HRQOL, thus corroborating findings from previous studies with generic and specific HRQOL questionnaires that report worse health in women [19,21,24]. Second, the mean difference of 0.34 between groups of patients with persistent and intermittent AR (2.5 vs 2.1), given an SD of 1.35, corresponded to a small effect size (0.21). Finally, the difference of around 0.9 points (range, 0.87-0.97 points) between each consecutive group for symptom severity reflected a large effect size ( $\cong$  1.0), taking into account the fact that the SD was 1. The magnitude of this difference reinforced the usefulness of providing the reference values stratified by severity. Furthermore, it provides ESRINT users with a clear clinical interpretation of a 0.9-point change, since it corresponds to a shift to another symptom severity group.

Although there is no doubt that reference values facilitate the interpretation of complex and multidimensional concepts such as health and intelligence, few studies analyze specific HRQOL instruments [21]. The reference value strategy has been applied more to generic HRQOL instruments [24-28], even though they are important for facilitating their applicability [19]. The scores found should not be interpreted alone, but compared with the most suitable reference group, since this approach based on reference values has shown its usefulness in adult HRQOL instruments [20]. It is possible to compare the score obtained for an individual or group of individuals with the mean of the reference group [29-31]. On the other hand, percentiles provide an approximation of the differences between groups [19] or the change between administrations, since they make it possible to divide up the distribution into 100 parts. They can also be used in clinical practice to evaluate individual scores, by situating an individual patient according to his/her score within the corresponding reference value group as a percentage [24]. Therefore, the conversion of an individual score in percentiles would indicate, for example, if a participant was midway in the scoring (ie, 50% with lower scores and 50% with higher scores). When we establish reference values, we are trying to situate an individual score in a group and to estimate the distance from

the expected value (the group median). Moreover, the use of percentile 30 as the cutoff to define the therapeutic objective makes it possible to create population subgroups with greater care requirements and to establish clinical interventions.

Table 4 shows the reference values for the overall scores of the ESRINT-15 questionnaire according to gender and rhinitis type and intensity, taking the score range from 0 (no impact on HRQOL) to 6 (maximum impact on HRQOL). As an example, let us take 2 male patients with the same overall score (3.2). Does this mean that the impact of AR symptoms on HRQOL was equal in both patients? Patient 1 presents persistent AR and severe symptoms, and patient 2 also presents persistent rhinitis but mild symptoms. Therefore, patient 1's score (3.2) is to be found at percentile 30, which means that only 30% of his reference group (ie, men with persistent AR and severe symptoms) have obtained lower scores, that is, a lower impact on HRQOL. On the other hand, patient 2's score (3.2) is to be found at percentile 90, which means that 90% of the patients with the same kind of allergic rhinitis have obtained better scores than him. Clearly, percentiles show that the impact of AR symptoms on patient 2 is higher than on patient 1. If symptoms remained stable, the therapeutic objective for patient 2 would move from 3.2 to scores equal to or lower than 1.2, which is percentile 30 for male patients with persistent AR and mild symptoms. If this patient's symptom severity decreases to mild, the therapeutic objective would be to ensure that the overall score was equal to or lower than 0.3 (percentile 30 for male patients with persistent AR and very mild symptoms).

Despite the advantages of population reference norms for conditions such as allergic rhinitis, which affects 15% of the Spanish population and whose symptoms have repercussions on quality of life, the approach does have some limitations. For example, one must mention the fact that, in the construction of the population values, aspects such as socioeconomic status have not been taken into account. Furthermore, reference values are useless if the patient does not answer at least 1 of the points in the questionnaire, thus making it impossible to calculate the overall score. Therefore, the norms should be applied and interpreted with caution. Our results should serve to improve the use of the ESRINT-15 questionnaire in Spain [24].

In summary, we confirm the suitability of the ESRINT-15 questionnaire as an instrument for measuring HRQOL in Spanish adults with allergic rhinitis. Likewise, our results should help in the interpretation of the scores of such a questionnaire, making it a useful tool for further studies or clinical practice, both for specialists and general practitioners.

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Appendix 1. English version of the ESRINT-15 questionnaire<sup>a</sup>

During the last two weeks, how much have you been bothered by the following symptoms?

	Symptoms	Not at all	Almost not at all	A little	Moderately	A bit	A lot	Very much
1	Feeling of blocked or stuffed up nose.	0	1	2	3	4	5	6
2	Liquid nasal mucous or water like	0	1	2	3	4	5	6
3	Itchy nose or repeated sneezing	0	1	2	3	4	5	6
4	Itchy eyes or having to rub eyes	0	1	2	3	4	5	6
5	Difficulty in breathing or feeling of suffocation or shortness of breath	0	1	2	3	4	5	6

During the last two weeks, how much have you been bothered by each one of the following symptoms?

	Daily activities	Not at all	Almost not at all	A little	Moderately	A bit	A lot	Very much
6	Discomfort or difficulty while working caused by your rhinitis	0	1	2	3	4	5	6
7	Rhinitis symptoms having dinner or while eating out	0	1	2	3	4	5	6
8	Constant interruption of what you are doing caused by your rhinitis	0	1	2	3	4	5	6

During the last two weeks, how much have you been bothered by each one of the following symptoms?

	Sleeping	Not at all	Almost not at all	A little	Moderately	A bit	A lot	Very much
9	Problems getting to sleep or sleeping caused by your rhinitis.	0	1	2	3	4	5	6
10	Getting up dry mouthed or waking up because of it, caused by your rhinitis	0	1	2	3	4	5	6
11	Sleep badly, caused by rhinitis	0	1	2	3	4	5	6

During the last two weeks, how much have you been bothered by each one of the following symptoms?

	Psychological affectation	Not at all	Almost not at all	A little	Moderately	A bit	A lot	Very much
12	Having to be on top of your rhinitis	0	1	2	3	4	5	6
13	Being more irritable or in a bad mood because of your rhinitis	0	1	2	3	4	5	6
14	Feel bad or have a bad time of it because of your rhinitis	0	1	2	3	4	5	6
15	In general and only taking into account your rhinitis, how would you say your health is? Excellent <input type="checkbox"/> Very good <input type="checkbox"/> Good <input type="checkbox"/> Normal <input type="checkbox"/> Bad <input type="checkbox"/>							

<sup>a</sup> This is not the official English version of the Esprint-15 questionnaire.

## Appendix 1. Spanish Version of the ESPRINT-15 Questionnaire (Validated Version)

Durante las últimas 2 semanas, ¿cuánto le ha molestado cada uno de los siguientes síntomas?

	Síntomas	Nada	Casi nada	Poco	Moderado	Poco	Mucho	Muchísimo
1	Sensación de nariz tapada o de obstrucción	0	1	2	3	4	5	6
2	Mucosidad nasal líquida o como agua	0	1	2	3	4	5	6
3	Picor en la nariz o estornudos repetidos	0	1	2	3	4	5	6
4	Picor de ojos o tener que rascarse los ojos	0	1	2	3	4	5	6
5	Dificultad para respirar, sensación de asfixia o ahogo	0	1	2	3	4	5	6

Durante las últimas 2 semanas, ¿cuánto le ha molestado cada uno de los siguientes síntomas?

	Actividades de la vida diaria	Nada	Casi nada	Poco	Moderado	Poco	Mucho	Muchísimo
6	Incomodidad o dificultad para trabajar, a causa de la rinitis	0	1	2	3	4	5	6
7	Síntomas de rinitis cenando o tomando algo fuera de casa	0	1	2	3	4	5	6
8	Interrumpir constantemente lo que está haciendo, a causa de la rinitis	0	1	2	3	4	5	6

Durante las últimas 2 semanas, ¿cuánto le ha molestado cada uno de los siguientes síntomas?

	Sueño	Nada	Casi nada	Poco	Moderado	Poco	Mucho	Muchísimo
9	Problemas para dormir o dificultad para conciliar el sueño, a causa de la rinitis	0	1	2	3	4	5	6
10	Levantarse con sequedad de boca o despertarse por esto, a causa de la rinitis	0	1	2	3	4	5	6
11	Dormir mal, a causa de la rinitis	0	1	2	3	4	5	6

Durante las últimas 2 semanas, ¿cuánto le ha molestado cada uno de los siguientes síntomas?

	Afectación psicológica	Nada	Casi nada	Poco	Moderado	Poco	Mucho	Muchísimo
12	Tener que estar pendiente de la rinitis	0	1	2	3	4	5	6
13	Estar más irritable o de mal humor, a causa de la rinitis	0	1	2	3	4	5	6
14	Pasarlo o sentirse mal, a causa de la rinitis	0	1	2	3	4	5	6
15	En general, teniendo en cuenta su rinitis y ningún otro trastorno, ¿cómo diría que es su salud? Excelente <input type="checkbox"/> Muy buena <input type="checkbox"/> Buena <input type="checkbox"/> Regular <input type="checkbox"/> Mala <input type="checkbox"/>							