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# Self-medication among colombian adults: the role of credulity toward pharmaceutical advertising, health self-consciousness, and information seeking

Automedicación en adultos colombianos: papel de credulidad publicitaria farmacéutica, autoconciencia de salud y búsqueda informativa

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## ABSTRACT:

**Introduction:** Self-medication is a common practice among adults and may be encouraged by credulity toward pharmaceutical advertising. In contrast, greater health self-awareness and information-seeking may modulate this behavior.
**Objective:** This study examined the association between advertising credulity and self-medication, additionally evaluating the effects of health self-awareness and pharmaceutical information-seeking (informational consultation and risk avoidance).
**Material and Methods:** A cross-sectional study was conducted with 617 Colombian adults (385 women), and an ordinal logistic regression model was estimated.
**Results:** Self-medication was associated with greater credulity (OR = 1,47, 95% CI 1,26-1,72) and lower health self-awareness (OR = 0,72, 95% CI 0,61–0,86). Informational consultation showed no effect, whereas risk avoidance exhibited a nonlinear pattern (p < ,05), indicating that at medium–high levels the probability of high self-medication decreases. Additionally, health self-awareness buffered the effect of credulity (OR = 0,81, 95% CI 0,71–0,93).
**Conclusions:** Credulity emerges as a risk factor and health self-awareness as a protective factor against self-medication. This evidence supports the need to strengthen educational interventions that promote patient self-awareness and critical evaluation of advertising information to reduce non-prescribed medication use and, consequently, associated risks.
**Key words:** Drugs publicity; Self care; Self Medication; Risk-taking; Drug utilization.

**RESUMEN:**
**Introducción:** Automedicarse es una práctica frecuente en adultos y puede estar favorecida por la credulidad hacia publicidad farmacéutica. En cambio, una mayor autoconciencia de la salud y búsqueda de información, podrían modularla.
**Objetivo:** Este estudio examinó la asociación entre credulidad publicitaria y automedicación, evaluando además los efectos de la autoconciencia de la salud y la búsqueda de información farmacéutica (consulta informativa, evitación del riesgo).
**Material y Métodos:** Mediante un estudio transversal con 617 adultos colombianos (385 mujeres), se estimó una regresión logística ordinal.
**Resultados:** la automedicación se asoció con mayor credulidad (OR = 1,47, IC 95 % 1,26, 1,72) y menor autoconciencia (OR = 0,72, IC 95 % 0,61, 0,86). La consulta informativa no produjo efecto y la evitación del riesgo presentó patrón no lineal (p < ,05) indicando que a niveles medios–altos la probabilidad de alta automedicación disminuye. Adicionalmente, la autoconciencia amortiguó el efecto de la credulidad (OR = 0,81, IC 95 % 0,71, 0,93).
**Conclusiones:** La credulidad emerge como factor de riesgo y la autoconciencia como protector ante la automedicación. Esta evidencia respalda la necesidad de fortalecer intervenciones educativas que favorezcan la autoconciencia del paciente y el juicio crítico sobre la información publicitaria para reducir el consumo de medicamentos no prescritos y, con ello, disminuir los riesgos asociados.
**Palabras clave:** Publicidad de medicamentos; Autocuidado; Automedicación; Asunción de riesgos; Utilización de medicamentos.

# INTRODUCTION

Self-medication is characterized by the unsupervised use of medications, guided by self-assessment of symptoms or prior experience, which may lead to potentially harmful health consequences[1]. The consumption of antibiotics without a prescription promotes antimicrobial resistance and may result in dangerous drug interactions; likewise, the irrational use of analgesics has been associated with adverse reactions, dosing or treatment-duration errors, and delays in seeking medical care by masking symptoms[2].

This is a relevant public health problem, to the extent that it represents an additional burden on health systems due to increased healthcare costs[3]. In several Latin American countries, self-medication poses a significant challenge, as medications can be obtained without a medical prescription, leading individuals to administer drugs on their own initiative without supervision. Factors that favor this practice include inequalities in health systems, limited access to medical services, the quality of care, and the lack of adequate health coverage[4].

A recent meta-analysis including 520 publications demonstrated the magnitude of the phenomenon, reporting a prevalence of self-medication of 36% (95% CI: 27%, 45%)[5]. The literature has identified age as a risk factor, since older individuals experience a higher prevalence of chronic diseases and common ailments, which favors polypharmacy and, in turn, increases the likelihood of self-medication[6]. This practice has also been reported to be more frequent among women and individuals with higher levels of education[7]. In Colombia, for example, reports indicate a high prevalence (9 out of 10) among individuals training in various health sciences disciplines[8], however, frequent use of non-prescribed cold remedies, antidepressants, and antimigraine medications has also been reported among adults and older adults in the general population[9].

In Latin America, some authors argue that self-medication can be understood as a response of rejection toward health professionals, motivated by deficiencies in medical performance and superficial care[10]. However, although the phenomenon is intensifying internationally, gaps remain regarding its psychosocial determinants. This gap justifies

examining the interaction of variables such as advertising credulity, health self-awareness, and information-seeking, situating the analysis within nursing practice. Nursing's focus on health education, counseling, and the rational use of medications positions the profession as a crucial actor in mitigating risks, yet this perspective remains insufficiently explored.

In this context, pharmaceutical advertising plays a fundamental role, particularly in the promotion of over-the-counter medications, as advertising campaigns influence medication choice among the adult population by presenting them as accessible and effective solutions for a variety of common symptoms[11]. Consistently, the literature shows that pharmaceutical industry promotional activities on social media can influence consumers' self-medication decisions[12]. In addition, the pharmaceutical industry has used social movements to promote patients' rights as consumers, indirectly contributing to credulity toward medications[13].

Such credulity may depend on the personal importance that consumers assign to messages about medications, regardless of their advertising appeal[14]. Perceived importance increases when messages have emotional implications or impact personal life, thereby conferring greater credibility[15], Within this framework, various variables become relevant that may exert a protective effect against self-medication, in opposition to credulity, among them health self-awareness[16].

Individuals with higher levels of health self-awareness tend to be more attentive to their own health by adopting an active role[15] and are more likely to avoid self-medicating without guidance from a healthcare professional[17]. Likewise, trust in medical professionals, strengthened by health self-awareness, promotes adherence to prescribed treatments and reduces the likelihood of resorting to medications on one's own initiative[18].

Health self-aware individuals are more cautious and seek greater information before deciding to consume medications; they evaluate pharmaceutical information and claims about health benefits, read medicine labels, seek information on health topics, and adopt healthier behaviors[19]. In this way, information-seeking also acts as a self-regulatory strategy; consumers who inform themselves about medication risks tend to make safer and more informed decisions, reducing non-prescribed use[20].

The choice of information sources about medications is diverse: consumers seek information online, in pharmacies, from physicians, and elsewhere; those with higher incomes do so more frequently, and the selected source depends on the type of information required[21]. This is consistent with studies indicating that trust in the source drives information-seeking[22, 23].

However, evidence indicates that advertising exposure or information-seeking alone does not translate linearly into more self-regulated behaviors; their effects depend on prior dispositions such as optimistic bias (believing one will experience fewer adverse effects than others), advertising skepticism, and trust in sources. For example, when skepticism toward advertising is high, optimistic bias is associated with a lower intention to seek information about risks[23]; moreover, the relationship between optimism and information-seeking is moderated by subjective health literacy [24]. In turn, trust in online pharmaceutical information predicts behaviors following exposure to pharmaceutical

advertising, suggesting that the processing and use of information depend on the degree of credibility attributed to it[22].

These findings support the plausibility of a non-monotonic relationship between informational involvement and self-medication, in which low levels of searching (misinformation) or very high but biased levels (e.g., confirmation of beliefs or selection of low-quality sources) may be associated with greater self-medication, whereas moderate and critical levels of searching would be associated with a lower propensity to self-medicate.

Although advertising credulity and skepticism have been measured in the literature as opposite poles of the same continuum, that is, as a bipolar construct. This study chose to examine how credulous an individual is when receiving pharmaceutical information about a medication. The aim was to identify the predictive effect of credulity on the tendency to consume medications without a medical prescription, while also considering the extent to which credulity interacts with other variables such as patients' level of health self-awareness and their disposition to seek pharmaceutical information before medicating.

The objective of the study was to identify the association between advertising credulity and self-medication in a sample of Colombian adults, evaluating the effects of health self-awareness and two forms of information-seeking based on informational consultation and risk avoidance. In addition, the study sought to test whether health self-awareness moderates the relationship between credulity and self-medication, while controlling for the effects of demographic variables such as sex and age.

## MATERIAL AND METHODS

A cross-sectional study was conducted with 617 participants from a city in Colombia (Pasto, Nariño), selected through purposive sampling. Adults aged between 18 and 78 years were assessed, with a mean age of 33,11 years (SD = 12,8). In total, 232 participants (37,6%) were men with a mean age of 30,8 years (SD = 12,4), and 385 (62,4%) were women with a mean age of 34,4 years (SD = 12,8). Regarding educational level, 3,7% (n = 23) had completed primary education, 32,3% (n = 199) had completed secondary school, 26,1% (n = 161) had technical education, and 37,9% (n = 234) had university education.

The study variables were measured using several scales appropriately adapted for the population, ensuring evidence of validity; in addition, a single-item strategy was used to measure self-medication. This item was designed for the present study with the statement: "I consume medications without a medical prescription," which used a 5-point Likert-type response format (1 = *I have never done this*, 5 = *I have done this many times*) (M = 2,67, SD = 1,01). Its purpose was to identify the tendency to self-medicate without specialized consultation.

Second, advertising credulity was measured using the SKEPT questionnaire[25], composed of nine Likert-type items (1 = *Strongly disagree*, 5 = *Strongly agree*) with a bipolar unidimensional outcome: high scores indicate credulity and low scores indicate skepticism. The SKEPT provides a measure focused on general advertising; therefore, the item context was adapted for application in the pharmaceutical domain (e.g., "Drug

advertising is usually truthful"). A pilot test was conducted with a focus group, and after instrument administration, the measurement model was tested using Confirmatory Factor Analysis with polychoric matrices and diagonally weighted least squares. This analysis suggested removing items 2 and 8 due to low factor loadings (λ < .50), resulting in a seven-item model with excellent fit (RMSEA = ,042; 90% CI [,020–,063]), SRMR = ,023, CFI = ,999, TLI = ,999) and good internal consistency (α = ,889, ω = ,890; M = 20,39, SD = 4,73).

Third, information-seeking was measured using an ad hoc questionnaire designed for this study, consisting of seven Likert-type items (1 = *Strongly disagree*, 7 = *Strongly agree*). Items 1 to 3 were designed based on a previous study[23] and measure Informational consultation (e.g., "I carefully read medication information before consuming it"), whereas items 4 to 7 were constructed based on another prior study[22] and measure Risk avoidance (e.g., "I avoid using medications if I find information about risks or contraindications").

The bifactorial model of the information-seeking questionnaire demonstrated excellent fit (RMSEA = ,034; 90% CI [,000–,037]), SRMR = ,018, CFI = ,999, TLI = ,999), with good overall internal consistency (α = ,895, ω = ,896; M = 33,68, SD = 10,32), as well as for the Informational consultation subscale (α = ,881, ω = ,882; M = 14,92, SD = 5,05) and the Risk avoidance subscale (α = ,804, ω = ,810; M = 18,75, SD = 5,99).

Fourth, health self-awareness was assessed using the Health self-consciousness subscale, identified by Diehl et al. (19) on the basis of the health consciousness scale developed by Gould (16). This subscale consists of five Likert-type items (1 = *Strongly disagree*, 5 = *Strongly agree*) (e.g., "I pay close attention to my health"). The questionnaire was piloted with a focus group, and subsequent factor analysis suggested removing the fourth item, resulting in a unidimensional four-item model (RMSEA = ,027; 90% CI [,000–,070]), SRMR = ,009, CFI = 1,00, TLI = 1,00). Although the incremental indices reached their maximum values, this result is to be expected in simple models with few indicators and few degrees of freedom, and does not necessarily constitute evidence of overfitting[26].Standardized factor loadings ranged between ,79 and 93, all with small p-values (p < ,001). Composite reliability (ω = ,93) and average variance extracted (AVE = ,805) support evidence of construct validity.

All described instruments were integrated into a single online form for data collection, disseminated through social media. The form included the study objective and the ethical procedure, in accordance with the guidelines of the Declaration of Helsinki and Resolution 8430 of 1993 of the Colombian Ministry of Health. Participation was voluntary, with informed consent and strict anonymity. The form did not record identifying data, including email addresses.

A robust methodological procedure was defined for the analysis of the data collected to address the proposed hypotheses, which are described below:

- H1: Pharmaceutical advertising credulity directly predicts self-medication.
- H2: Health self-awareness negatively predicts self-medication.
- H3: The use of pharmaceutical information-seeking mechanisms based on informational consultation (H3a) and risk avoidance (H3b) negatively predicts self-medication.

- H4: Health self-awareness buffers the effect of advertising credulity on self-medication.

Initially, the data was loaded into a database that was cleaned and standardized. Although the form was configured with mandatory responses to minimize missing data, residual missing values were checked and listwise deletion was applied. Composite scores were calculated for all variables (sum for credulity; means for self-awareness, informational consultation, and risk avoidance), predictors were standardized (z), and the self-medication variable was coded as an ordered factor (1–5).

Descriptive statistics of the variables and correlations between predictors and the dependent variable (self-medication) were calculated. Given that the dependent variable is ordinal with five categories, a proportional odds ordinal logistic regression model (POM) with a logit link was estimated in R using the MASS: polr function. This model is based on the proportional odds (parallel lines) assumption common to all cut points, which was verified using the Brant test. This method has been documented as an appropriate approach for the analysis of Likert variables [27] and avoids information loss from collapsing categories, as it uses all ordinal information and provides cumulative odds ratios (OR) that are easy to interpret. The Brant test indicated a slight global deviation without violations by predictor; therefore, a more flexible alternative model (partial proportional odds, clm) was estimated.

The ordinal model specified Self-medication as the dependent variable, and predictors included Credulity, Self-awareness, Informational consultation, and Risk avoidance, incorporating the Credulity× Self-awareness interaction, as well as controlling for age and sex. Results included ORs and 95% CI, as well as predicted probabilities that allow interpretation of the Credulity×Self-awareness interaction, given that, in non-linear models, interaction effects are best interpreted in terms of predicted probabilities or marginal effects, rather than using only the coefficient of the interaction term[28].

# RESULTS

Table 1 summarizes the descriptive data of the study variables. Credulity showed a mean slightly above the theoretical midpoint (M = 21,61 on a 7–35 range; 3,09/5 per item); however, the large standard deviation suggests interindividual variability. Health self-awareness presented a mean above the midpoint, indicating moderate–high performance (M = 3,75/5), whereas self-medication was located at low–moderate values (M = 2,64/5). Informational consultation and risk avoidance showed intermediate values on their scale (1–7).

**Table 1.** Descriptive statistics of the study variables.

| | M | 95% IC | DT |
|---|---|---|---|
| Credulity (sum of 7 items) | 21,61 | [21,23 - 21,98] | 4,73 |
| Health self-awareness (mean 4 items, 1–5) | 3,75 | [3,69 - 3,82] | 0,81 |
| Informational consultation (mean 3 items, 1–7) | 4,98 | [4,84 - 5,11] | 1,69 |
| Risk avoidance (mean 4 items, 1–7) | 4,69 | [4,57 - 4,81] | 1,50 |
| Self-medication (Likert 1–5) | 2,64 | [2,56 - 2,71] | 1,00 |

Relationships among variables were tested, showing that Credulity was weakly and positively associated with Health self-awareness (rho = ,126, p = ,002 < ,01) and Self-

medication (rho = ,149, p < ,001). Health self-awareness, in turn, was directly and moderately associated with Informational consultation (rho = ,307, p < ,001) and Risk avoidance (rho = ,319, p<,001), and weakly and inversely associated with Self-medication (rho = −,096, p = ,018 <,05).

To estimate the ordinal logit model (POM), the proportional odds assumption was assessed using the Brant test. The global result indicated a slight deviation ($\chi^2_{[24]}$ = 39,63, p = ,023 < ,05), but no violations were detected for individual predictors (p-values ≥ ,086). To assess the linearity-in-the-logit assumption (continuous predictors), a linear specification was compared against alternatives including a quadratic term (I($x^2$)). Nonlinearity was observed only for Risk avoidance (LR = 4624, gl = 1, p = ,032 < ,05; AIC decreased from 1658,9 to 1656,3), suggesting the relevance of incorporating this variable with a quadratic term in the main model. Variance Inflation Factor values ruled out multicollinearity among predictors (VIF < 2,4 < 5).

Table 2 presents the estimated ordinal model results, showing that higher Credulity was associated with a greater probability of being in higher categories of Self-medication (OR = 1,47), thus confirming H1. In contrast, increases in Health self-awareness were associated with a lower probability of self-medication (OR = 0,72), confirming H2. Regarding information-seeking, the Informational consultation dimension showed no relevant effect (p = ,749), leading to rejection of H3a. Meanwhile, the quadratic term for Risk avoidance showed a significant effect (β = −0,148, p = ,032 < ,05), with an inverted "∩" shaped curvature reaching a maximum around z ≈ −0,40. This evidence suggests that medium–high levels of avoidance are associated with lower Self-medication. This finding does not confirm H3b, as a linear/monotonic effect was expected; instead, it suggests a curvilinear relationship.

The fourth hypothesis (H4) was tested and supported through estimation of the Credulity×Health self-awareness interaction, which showed a buffering effect (OR = 0,81). Thus, Health self-awareness attenuated the increase in Self-medication associated with Credulity. Among covariates, the female category showed a higher relative probability than the reference group (OR = 1,47), and age also showed a positive, albeit small, effect (OR = 1,02 per year). This model showed adequate global fit (AIC = 1656,3), outperforming the model without curvature in Risk avoidance (AIC = 1658,9). Inclusion of the interaction improved model fit compared with the model without interaction ($\Delta\chi^2$[1] = 11,879, p < ,001), confirming the clinical relevance of the moderation exerted by Health self-awareness.

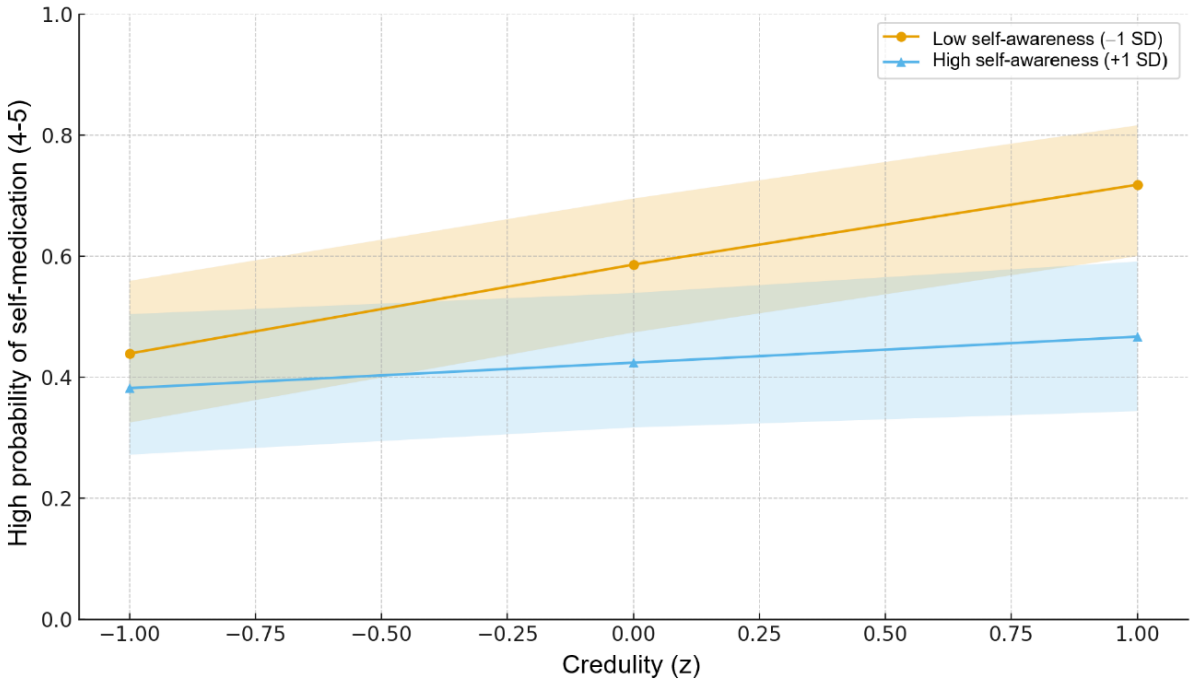
**Table 2.** Ordinal regression of self-medication.

| | | 95% IC | | |
|---|---|---|---|---|
| **Standardized predictors** | **OR** | **Lower** | **Upper** | **p** |
| Credulity | 1,47 | 1,26 | 1,72 | < ,001 |
| Health self-awareness | 0,72 | 0,61 | 0,86 | < ,001 |
| Informational consultation | 1,07 | 0,83 | 1,30 | ,749 |
| Risk avoidance(²) | — | — | — | ,032 < ,05 |
| Credulity×Health self-awareness | 0,81 | 0,71 | 0,93 | ,002 < ,01 |
| Sex (Female) | 1,47 | 1,08 | 2,00 | ,014 < ,05 |
| Age (per year) | 1,02 | 1,01 | 1,03 | ,002 < ,01 |

*Note:* All predictors are standardized (z); for Risk avoidance, a quadratic term is included. The p-value for $\beta^2$ (not OR) is reported, as it represents curvature.

Figure 1 depicts the predicted probability of high Self-medication (categories 4–5) as a function of credulity (z), comparing low (−1 SD) and high (+1 SD) Health self-awareness, with the remaining predictors fixed at 0 (z). Controlling for mean age and reference sex (male), the buffering effect is observed insofar as the slope of Credulity is steeper under low Health self-awareness and attenuated under high Health self-awareness.

**Figure 1:** Predicted probability of high self-medication as a function of credulity, comparing low (−1 SD) and high (+1 SD) health self-awareness.




*Note:* Controlling for mean age and reference sex; shaded bands represent 95 % IC.

Finally, because the initial diagnostic test suggested a slight global deviation from the parallel-lines assumption, a partial proportional odds model (*clm*, logit link) was estimated as an alternative, allowing greater flexibility for the quadratic term of Risk avoidance (I(z_evit²) and the Credulity×Health self-awareness interaction. Model fit was indistinguishable from the main model (AIC = 1656,3 for both), with preservation of the direction and magnitude of coefficients, supporting the robustness of the findings.

The results supported three of the proposed hypotheses, while partial support was found for a fourth hypothesis (Table 3).

**Table 3.** Decisions regarding hypotheses and supporting evidence.

| Hypothesis | Evidence [95% CI] | Judgment |
|---|---|---|
| H1. Greater advertising credulity, greater self-medication. | OR = 1,47 [1,26 – 1,72], p < ,001 | Supported |
| H2. Greater health self-awareness, lower self-medication. | OR = 0,72 [0,61 – 0,86], p < ,001 | Supported |
| H3a. Greater informational consultation, lower self-medication. | OR = 1,04 [0,83 – 1,30], p = ,749 | Rejected |
| H3b. Greater risk avoidance, lower self-medication. | Nonlinear relationship: association follows an inverted ∩ curve; at medium–high levels of avoidance, lower self-medication (quadratic p = ,032). | Supported as linear/monotonic effect: no. Partially compatible curvilinear evidence. |
| H4. Health self-awareness buffers the effect of credulity. | Interaction: OR = 08,1 [0,71–093], p, = ,002; improvement in fit: $\Delta\chi^2_{[1]} = 11,879$, p < ,001. | Supported |

# DISCUSSION

This study examined the relationship between advertising credulity, health self-awareness, information-seeking (informational consultation and risk avoidance), and the tendency to self-medicate in a sample of Colombian adults. The results support the central premise of the study. According to the estimated ordinal model, greater advertising credulity predicts a significant increase in the probability that consumers report self-medication in the higher categories (4–5 = several times / many times), an effect that remains after controlling for covariates such as age and sex, which are known to influence the tendency to self-medicate[6-8]. This pattern is consistent with the specialized literature [11, 12], which has warned that advertising messages tend to emphasize the benefits of medications while minimizing or omitting risks, thereby favoring unsupervised use when consumers do not activate critical appraisal mechanisms.

Health self-awareness behaved in line with the hypotheses, showing a direct protective effect and attenuating the impact of credulity. The most noteworthy finding lies in the clinical insight provided by the interaction between these two variables. Specifically, when health self-awareness is low, increases in credulity are accompanied by a higher probability of self-medication. In contrast, when health self-awareness is high, this probability decreases, suggesting that self-awareness exerts a moderating effect that functions as a self-regulatory brake. This finding supports prior empirical evidence highlighting health self-awareness as a critical mechanism for monitoring bodily well-being and engaging in metacognitive review processes that lead to responsible medication use[15, 17, 19, 20]. The present results reinforce this perspective, as health self-awareness appears to activate cognitive alerts by recognizing personal limits regarding knowledge about medication use, potentially helping individuals postpone consumption decisions until reliable information is obtained.

The evidence obtained also nuances interpretations regarding information management. On the one hand, informational consultation did not show relevant effects; on the other, the risk avoidance dimension did not exhibit a linear relationship but rather

a curvilinear pattern. This finding is not entirely new, as previous studies have shown that information-seeking does not necessarily have a linear relationship with self-medication and that other variables may mediate this association[22-24]. The striking result of this study is that moderate levels of information-seeking based on risk avoidance are associated with a lower probability of high self-medication, whereas at very high levels of avoidance, this benefit diminishes.

This does not imply discouraging information-seeking but rather recognizing that "optimal performance" appears to be based on focused and measured inquiry, avoiding both inattention and hypervigilance. The time and effort invested in this practice are beneficial when appropriate sources are consulted without exacerbating risk avoidance, which may lead to excessive vigilance that paradoxically reintroduces misinformation.

The results are subject to limitations that warrant consideration. The measure of self-medication was based on a single-item method, which, despite methodological support [29, 30], may be criticized for potentially reducing sensitivity and behavioral variability among respondents. In addition, the type of medications consumed without prescription was not assessed, and purposive sampling was used in a single city, which may restrict generalizability. Despite these limitations, a robust analytical model was implemented to address these weaknesses and ensure reliable results. Future studies could employ multidimensional measures of self-medication that include aspects such as frequency, combinations of active ingredients, and types of medications, as well as evaluate the impact of brief health media literacy interventions using longitudinal designs.

In the field of nursing, studies of this type have been relatively underexplored, particularly from an interdisciplinary perspective that incorporates cognitive and dispositional variables extending beyond the purely clinical domain. Nevertheless, findings such as those obtained here offer practical implications of high value.

First, it is justified to consider health self-awareness as a valuable target in nursing health education, through which patients are encouraged to identify risk signals that allow them to decide not to self-medicate, or to learn simple rules for the responsible use of medications (e.g., avoiding duplication of NSAIDs, recognizing potential interactions, reading labels). Nursing professionals are called upon to develop brief, well-being–focused interventions that promote the early identification of warning signs, directly contributing to improved patient self-regulation regarding medication use. This, in turn, helps ensure that decisions are not based solely on advertising messages, but rather on a reflective process grounded in relevant information.

Second, in the context of primary care, triage, or community health programs, the role of nursing in preventing advertising credulity stands out as a necessary task. The evidence gathered may be useful for recognizing that a patient's disposition and willingness to adhere to a medication plan are influenced by their beliefs about medication use. Accordingly, nursing staff can conduct brief and efficient screenings of trust in advertising and habits of purchasing medications without a healthcare prescription, enabling them to guide patients toward critical appraisal of pharmaceutical messages and to warn them about potential health risks.

Third, to promote the search for useful and safe information, nursing health education should guide patients on what to verify (active ingredients, dosage, contraindications, etc.), where to do so (official sources, healthcare professionals), and when to stop

further searching to consult an authorized professional. This approach helps prevent excessive or poor-quality information from downplaying risks and encouraging self-medication.

## CONCLUSIONS

The study findings reveal a pattern in which credulity toward medication-related information leads to use without professional mediation; however, this impulse is restrained by personal resources such as health self-awareness and by sufficiently thorough and high-quality information-seeking behaviors. Owing to their close contact with users in clinical consultations, pharmacies, and community settings, nursing professionals are well positioned to translate these findings into health education interventions that enhance patient safety, promote the rational use of medications through reliable information, and strengthen self-regulation.

From a clinical perspective, the findings underscore the importance of nursing staff incorporating the assessment of advertising credulity into patients' educational evaluations, given that many individuals are susceptible to persuasive messages from the pharmaceutical industry. This susceptibility calls for guidance aimed at appropriately interpreting commercial information and recognizing the limits of self-medication.

## REFERENCES


1. Sachdev C, Anjankar A, Agrawal J. Self-medication with antibiotics: An element increasing resistance. Cureus. 2022;14(10):e30844. Doi: https://doi.org/10.7759/cureus.30844.
2. Nabi N, Baluja Z, Mukherjee S, Kohli S. Trends in practices of self-medication with antibiotics among medical undergraduates in India. J Pharm Bioallied Sci. 2022;14(1):19–24. Doi: https://doi.org/10.4103/jpbs.jpbs_17_21
3. Aljinović-Vučić V. Self-medication as a global health concern: Overview of practices and associated factors—A narrative review. Healthcare (Basel). 2025;13(15):1872. Doi: https://doi.org/10.3390/healthcare13151872
4. Ramos P, Tullo E, Canese J, Soria Rey N. Características de la automedicación durante la pandemia del COVID-19, Paraguay (2020–2021). Rev Salud Publica Parag. 2023;13(1):46–51. Doi: https://doi.org/10.18004/rspp.2023.abril.07
5. Rafati S, Baniasadi T, Dastyar N, Zoghi G, Ahmadidarrehsima S, Salari N, et al. Prevalence of self-medication among the elderly: A systematic review and meta-analysis. J Educ Health Promot. 2023;12:67. Doi: https://doi.org/10.4103/jehp.jehp_630_22
6. Da Silva LR, Franco JVV, Nestor ICN, dos Santos JJ, Fonseca JB, Barbosa JM, et al. A prática de automedicação em adultos e idosos: Uma revisão de literatura. Res Soc Dev. 2022;11(13): e411111335692. Doi: https://doi.org/10.33448/rsd-v11i13.35692
7. Tran AT-Q, Soullier N, Ankri J, Herr M, Carcaillon-Bentata L. Uses and perceptions of medications among French older adults: Results from the 2020 French Health Barometer survey. BMC Geriatr. 2022;22(1):602. Doi: https://doi.org/10.1186/s12877-022-03289-9
8. González-Muñoz F, Jiménez-Reina L, Cantarero-Carmona I. Self-medication among final year students of Nursing, Physiotherapy and Medicine at the University of

Cordoba. Educ Med. 2021;22(3):124–9. Doi: https://doi.org/10.1016/j.edumed.2020.01.005
9. Tobón Marulanda FÁ, Montoya Pavas S, Orrego Rodríguez MÁ. Automedicación familiar, un problema de salud pública. Educ Med. 2017;18(3):123–6. Doi: https://doi.org/10.1016/j.edumed.2017.03.004
10. Campos A. Identificación de estrategias discursivas para la representación de la automedicación en Latinoamérica: análisis de un corpus de redes sociales. Argonautas Rev Educ Cienc Soc [Internet]. 2024 [citado 2025 Nov 11];14(22):71-88. Disponible en: https://n2t.net/ark:/32496/ARECS.v14i22.624
11. Ryvak T, Denysiuk O. Public opinion study on the role of advertising in choice of non-prescription drugs for self-treatment. Pharmacia. 2019;66(3):135–40. Doi: https://doi.org/10.3897/pharmacia.66.e35075
12. Mor J, Kaur T, Menkes DB, Peter E, Grundy Q. Pharmaceutical industry promotional activities on social media: A scoping review. J Pharm Health Serv Res. 2024;15(4):rmae022. Doi: https://doi.org/10.1093/jphsr/rmae022
13. Donohue J. A history of drug advertising: The evolving roles of consumers and consumer protection. Milbank Q. 2006;84(4):659–99. Doi: https://doi.org/10.1111/j.1468-0009.2006.00464.x
14. Huh J, DeLorme DE, Reid LN. A model of consumer response to over-the-counter drug advertising: Antecedents and influencing factors. J Health Commun. 2016;21(1):109-117. Doi: https://doi.org/10.1080/10810730.2015.1033116
15. Jin B. Over-the-Counter medicine advertising and behavioral responses in the South Korean context: Roles of health consciousness, attention, attitude, and subjective health knowledge. Asian Commun Res. 2024;21(2):217–233. Doi: https://doi.org/10.20879/acr.2024.21.020
16. Gould SJ. Health consciousness and health behavior: The application of a new health consciousness scale. Am J Prev Med. 1990;6(4):228–37. Doi: https://doi.org/10.1016/S0749-3797(18)31009-2
17. Chen M-F. The joint moderating effect of health consciousness and healthy lifestyle on consumers' willingness to use functional foods in Taiwan. Appetite. 2011;57(1):253–62. Doi: https://doi.org/10.1016/j.appet.2011.05.305
18. Espinosa A, Kadić-Maglajlić S. The role of health consciousness, patient–physician trust, and perceived physician's emotional appraisal on medical adherence. Health Educ Behav. 2019;46(6):991–1000. Doi: https://doi.org/10.1177/1090198119859407
19. Diehl S, Mueller B, Terlutter R. Skepticism toward pharmaceutical advertising in the U.S. and Germany. In: Taylor CR, editor. Advances in International Marketing. Vol. 18. Bingley (UK): Emerald; 2007. p. 3–60.
20. Baracaldo-Santamaría D, Trujillo-Moreno MJ, Pérez-Acosta AM, Feliciano-Alfonso JE, Calderón-Ospina C-A, Soler F. Definition of self-medication: A scoping review. Ther Adv Drug Saf. 2022;13:20420986221127501. Doi: https://doi.org/10.1177/20420986221127501
21. Carpenter DM, DeVellis RF, Hogan SL, Fisher EB, DeVellis BM, Jordan JM. Use and perceived credibility of medication information sources for patients with a rare illness: Differences by gender. J Health Commun. 2011;16(6):629–42. Doi: https://doi.org/10.1080/10810730.2011.551995
22. Huh J, DeLorme DE, Reid LN. Factors affecting trust in on-line prescription drug information and impact of trust on behavior following exposure to DTC advertising. J Health Commun. 2005;10(8):711–31. Doi: https://doi.org/10.1080/10810730500326716

23. Park J-S, Ahn H-Y, Haley EJ. Optimistic bias, advertising skepticism, and consumer intentions for seeking information about the health risks of prescription medicine. Health Mark Q. 2017;34(2):81–96. Doi: https://doi.org/10.1080/07359683.2016.1275227
24. Ahn HYA, Park JS, Haley E. Consumers' optimism bias and responses to risk disclosures in DTC prescription drug advertising: The moderating role of subjective health literacy. J Consum Aff. 2014;48(1):175–94. Doi: https://doi.org/10.1111/joca.12064
25. Obermiller C, Spangenberg ER. Development of a scale to measure consumer skepticism toward advertising. J Consum Psychol. 1998;7(2):159–86. Doi: https://doi.org/10.1207/s15327663jcp0702_03
26. Shi D, Lee T, Maydeu-Olivares A. Understanding the model size effect on SEM fit indices. Educ Psychol Meas. 2019;79(2):310-334. Doi: https://doi.org/10.1177/0013164418783530
27. Agresti A. Analysis of ordinal categorical data. 2nd ed. Hoboken (NJ): John Wiley & Sons; 2010. Doi: https://doi.org/10.1002/9780470594001
28. Karaca-Mandic P, Norton EC, Dowd B. Interaction terms in nonlinear models. Health Serv Res. 2012;47(1 Pt 1):255-274. Doi: https://doi.org/10.1111/j.1475-6773.2011.01314.x
29. Bergkvist L. Appropriate use of single-item measures is here to stay. Mark Lett. 2015;26(3):245–55. Doi: https://doi.org/10.1007/s11002-014-9325-y
30. Onwezen MC, Reinders MJ, Verain MCD, Snoek HM. The development of a single-item Food Choice Questionnaire. Food Qual Prefer. 2019;71:34–45. Doi: https://doi.org/10.1016/j.foodqual.2018.05.005