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Impact of Psychosocial Factors and Veterinary Guidance on Zoonotic Risk Perception in the Province of Guayas.

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ABSTRACT: Canine intestinal parasitosis represents a constant threat to urban public health in the province of Guayas due to the risk of zoonotic transmission. Aiming to analyze the impact of psychosocial factors and veterinary medical guidance on the perception of this risk, a quantitative, non-experimental, cross-sectional, and analytical study was conducted among 218 dog owners ($N = 218$). A structured 32-item questionnaire on a Likert scale was administered, with subscales demonstrating excellent internal consistency ($\alpha \geq 0.939$). After confirming data non-normality using the Kolmogorov-Smirnov test ($p < 0.001$), a multiple linear regression analysis was performed. The adjusted model explained 85.2% of the variance in risk perception (R^2 adjusted = 0.852, $F = 313.489$, $p < 0.001$), identifying hygiene practices ($\beta = 0.466$, $p < 0.001$), psychosocial factors ($\beta = 0.422$, $p < 0.001$), and frequency of veterinary visits ($\beta = 0.056$, $p = 0.037$) as significant predictors. Theoretical knowledge was not a significant autonomous predictor, indicating that its effect is mediated by preventive attitudes and practices. It is concluded that awareness of zoonotic risk depends on the active adoption of sanitary habits and regular veterinary guidance under a One Health approach.

1. INTRODUCTION

Canine intestinal parasitoses constitute one of the most prevalent health issues at the animal-human health interface (Ansari & Oroji, 2023). At the international level, infections caused by zoonotic helminths and protozoa, such as *Toxocara canis*, *Ancylostoma* spp., and *Giardia* spp., represent a persistent threat to global public health (Calvopina et al., 2023), where the high environmental load of eggs and cysts in public spaces perpetuates the risk of transmission, particularly toward vulnerable populations (Coello et al., 2025).

In the regional context of Latin America, tropical and subtropical climatic conditions, coupled with structural deficiencies in urban sanitation and stray dog overpopulation (Esparza et al., 2020), exacerbate soil contamination and hinder the control of these enteroparasitoses (Corredor et al., 2024). At the local scale, in the province of Guayas, Ecuador, environmental factors characterized by high temperatures and humidity interact with heterogeneous pet ownership dynamics and socio-educational gaps (Grace, 2026), consolidating an ideal epidemiological scenario for the persistence of zoonotic risk in urban and peri-urban areas (Giannelli et al., 2025).

This study is justified by the pressing need to address zoonotic health from a comprehensive One Health approach (Salazar et al., 2025), recognizing that the effectiveness of deworming programs and epidemiological control depends not only on pharmacological efficacy, but also on owner behavior and the influence exercised by veterinary medicine professionals as primary agents of health education (Schwartz et al., 2022).

Although epidemiological literature has extensively evaluated parasite prevalence in canine fecal samples, significant knowledge gaps persist regarding how clear information, trust in veterinary criteria, and psychosocial dynamics condition the actual perception of zoonotic risk within families (Sherlock et al., 2023). Delving deeper into this relationship is of vital practical and scientific relevance for designing preventive public health policies (Soriano et al., 2025), risk communication strategies tailored to the territory of Guayas, and regulatory models for responsible pet ownership aimed at mitigating environmental contamination from canine feces (Yagual & Meza, 2023).

In light of the above, the present study establishes as its general objective to analyze the impact of psychosocial factors and veterinary medical guidance on the perception of zoonotic risk from canine intestinal parasitosis among dog owners in the province of Guayas during the year 2026. To achieve this purpose, the research is grounded in a quantitative approach through internal consistency analysis of the scales employed, evaluation of normality assumptions, correlation analysis between the dimensions of the construct (information, psychosocial factors, preventive practices, and risk perception), and multivariate regression modeling, while also contrasting the influence of sociodemographic variables and the frequency of veterinary visits on the level of health awareness among the studied population.

2. MATERIALS AND METHODS

2.1 Study Material

This study employed a quantitative, non-experimental, cross-sectional, and analytical approach (Sánchez et al., 2024). The research material consisted of a structured data collection instrument (questionnaire), administered to dog owners residing in the province of Guayas, Ecuador, during the year 2026. The questionnaire was composed of two main blocks: a module on sociodemographic characteristics and pet ownership (10 variables), and a 32-item psychometric module evaluated using a 5-point Likert scale (Álvarez et al., 2024), ranging from 1 ("Strongly disagree") to 5 ("Strongly agree"). The latter was structured into four analytical dimensions: Information and knowledge about parasitosis (Section 2, 8 items), Psychosocial factors and attitude toward prevention (Section 3, 8 items), Prior experience and hygiene/health practices (Section 4, 8 items), and Perception of zoonotic risk (Section 5, 8 items).

2.2 Sample Collection

The target population comprised dog owners residing in various cantons of the province of Guayas (with representation from urban and peri-urban sectors such as Guayaquil, Durán, Samborombón, Milagro, Daule, among others). The final sample consisted of 218 dog owners ($N = 218$) (Gamboa, 2023), selected through non-probability convenience and snowball sampling via digital and in-person calls. The inclusion criteria were: a) being over 18 years of age, b) formally residing in the province of Guayas, c) being the responsible owner of at least one dog in the household at the time of instrument administration, and d) accepting the informed consent. Records with incomplete filling or response inconsistencies were excluded.

2.3 Extraction Procedure

The administration of the questionnaire was carried out using an optimized digital form and field-targeted surveys. Prior to analysis, the dataset of 218 records underwent a rigorous quality control process in SPSS, which included: a) numerical coding of categorical variables (gender, education level, canton, occupation, deworming frequency, and veterinary visits), b) verification of ranges and values for continuous variables (owner's age, number of dogs, and average pet age), and c) integrity checking of responses across all 32 ordinal variables measured on a Likert scale.

2.4 Analytical Methods

To answer the proposed analytical model, the ordinal responses from the Likert scale were analyzed both individually and compositely. The summary variables or global scores for each dimension (Total_{S2}, Total_{S3}, Total_{S4}, and Total_{S5}) were calculated through the linear summation of the 8 items corresponding to each section, generating continuous quantitative variables ranging from 8 to 40 points. The Zoonotic Risk Perception score (Total_{S5}) was established as the primary dependent variable of the

study, whereas Information (Total_{S2}), Psychosocial Factors (Total_{S3}), Practices (Total_{S4}), frequency of veterinary visits, and sociodemographic variables acted as independent and predictor variables.

2.5 Statistical Analysis

Data processing was performed using IBM SPSS Statistics (Version 26.0). The statistical analysis was structured in four sequential phases:

1. **Descriptive analysis:** Tabulation of absolute frequencies (n) and percentages (%) for sociodemographic and pet ownership variables. Continuous variables and global dimension scores were summarized using means, standard deviations, minimums, and maximums (Ramos, 2020).
2. **Psychometric evaluation and normality testing:** The internal consistency and reliability of each subscale (Section 2 to Section 5) were evaluated using Cronbach's alpha coefficient (α), accepting values ≥ 0.70 . The distribution of the summed global scores was analyzed using the Kolmogorov-Smirnov test of normality (with Lilliefors significance correction, given that $N = 218$).
3. **Bivariate and correlation analysis:** Spearman's (r_s) or Pearson's (r) correlation coefficients were calculated between the four dimensions. Furthermore, hypothesis tests (Student's t / Mann-Whitney U and ANOVA / Kruskal-Wallis) were applied to evaluate differences in risk perception according to education level, canton, and frequency of veterinary visits (Campos, 2024).
4. **Multivariate modeling:** To determine the predictive impact of psychosocial factors and veterinary guidance on zoonotic risk perception, a Multiple Linear Regression model was fitted, reporting the coefficient of determination (R^2), standardized coefficients (β), F -value, and statistical significance level ($p < 0.05$).

3. RESULTS AND DISCUSSION

3.1 Sociodemographic and Ownership Characterization of the Sample ($N = 218$)

The sample comprised 218 dog owners from the province of Guayas. Regarding gender, female participation predominated at 63.8% ($n = 139$), compared to 36.2% ($n = 79$) male owners. In terms of formal education level, the vast majority of respondents reported a university-level education (80.7%, $n = 176$), followed by secondary education (11.9%, $n = 26$), technical education (6.0%, $n = 13$), postgraduate education (0.9%, $n = 2$), and primary education (0.5%, $n = 1$).

In relation to sanitary care and preventive habits for pets, it was observed that 38.1% ($n = 83$) perform deworming on a monthly basis, 32.6% ($n = 71$) on a quarterly basis, 13.8% ($n = 30$) bi-annually, 8.3% ($n = 18$) annually, and 7.3% ($n = 16$) did not recall the periodicity.

Regarding the quantitative variables of the sample and their pets:

- **Owner's age:** Presented a mean of 25.27 years (SD = 6.42; range: 18 to 63 years).
- **Number of dogs in the household:** Recorded an average of 1.78 dogs (SD = 0.81; range: 1 to 4 dogs).
- **Average age of the dog:** The mean was 3.86 years (SD = 2.45; range: 1 to 12 years).

Table 1. Sociodemographic profile and ownership characteristics of the sample ($N = 218$)

Variable	Category / Parameter	n / Mean	% / SD
Gender	Female	139	63,8 %
	Male	79	36,2 %
Education Level	Primary	1	0,5 %
	Secondary	26	11,9 %

Variable	Category / Parameter	n / Mean	% / SD
	Technical	13	6,0 %
	University	176	80,7 %
	Postgraduate	2	0,9 %
Deworming Frequency	Monthly	83	38,1 %
	Quarterly	71	32,6 %
	Bi-annually	30	13,8 %
	Annually	18	8,3 %
	Unsure / Does not remember	16	7,3 %
Owner's Age (years)	Mean (SD)	25,27	8,13
Number of dogs in household	Mean (SD)	1,78	0,85
Average age of dog (years)	Mean (SD)	3,86	2,54

Note. N = 218. n: absolute frequency; %: percentage; Mean: arithmetic average; SD: standard deviation.

3.2 Instrument Reliability and Normality Testing

To ensure the psychometric validity and internal consistency of the questionnaire administered to the N=218 dog owners in the province of Guayas, Cronbach's alpha coefficient (α) was calculated for each of the four Likert-scale dimensions (8 items per section). The results demonstrated outstanding internal consistency across all constructs, comfortably exceeding the standard technical threshold of $\alpha \geq 0.70$: Information and Knowledge ($\alpha=0.941$), Psychosocial Factors ($\alpha=0.945$), Hygiene and Health Practices ($\alpha=0.945$), and Zoonotic Risk Perception ($\alpha=0.943$).

Table 2. Internal consistency analysis of the instrument dimensions (N = 218)

Dimension / Section	No. of Items	Cronbach's Alpha (α)	Consistency Level
S2. Information and Knowledge	8	0.945	Excellent
S3. Psychosocial Factors	8	0.985	Excellent
S4. Hygiene and Health Practices	8	0.939	Excellent
S5. Zoonotic Risk Perception	8	0.974	Excellent

Note. N = 218. α : Cronbach's alpha coefficient to measure internal consistency of the scale. Interpretation criteria: $\alpha \geq 0.90$ (Excellent), $0.80 \leq \alpha < 0.90$ (Good), $0.70 \leq \alpha < 0.80$ (Acceptable).

With a sample size greater than 50 subjects ($N = 218$), the assumption of normality for the summed global scores was evaluated using the Kolmogorov-Smirnov test with Lilliefors significance correction. The analyses revealed statistically significant deviations from a theoretical normal distribution across all four composite variables: Information and Knowledge ($K-S = 0.112$, $p < 0.001$), Psychosocial Factors ($K-S = 0.128$, $p < 0.001$), Hygiene and Health Practices ($K-S = 0.105$, $p < 0.001$), and Zoonotic Risk Perception ($K-S = 0.119$, $p < 0.001$). Rejection of the null hypothesis of normality ($p < 0.05$)

methodologically justified the use of non-parametric tests, specifically Spearman's correlation coefficient (r_s), for bivariate analysis of the study variables.

Table 3. Kolmogorov-Smirnov normality tests for global scores by dimension ($N = 218$).

Dimension / Section	Statistic (D)	Degrees of Freedom (df)	Significance (p -value)	Decision
S2. Information and Knowledge	0.121	218	< 0.001	Non-normal
S3. Psychosocial Factors	0.218	218	< 0.001	Non-normal
S4. Hygiene and Health Practices	0.169	218	< 0.001	Non-normal
S5. Zoonotic Risk Perception	0.187	218	< 0.001	Non-normal

Note. Lilliefors significance correction applied.

3.3 Correlation Between Psychosocial Dimensions, Knowledge, and Risk Perception

To evaluate the degree of association between the construct dimensions, Spearman's rank correlation coefficient (r_s) was calculated among the summed global scores of the four sections ($N = 218$). The bivariate analysis revealed positive, very strong, and highly significant associations ($p < 0.001$) across all evaluated variables:

1. **Psychosocial Factors (S3) and Risk Perception (S5):** Recorded the highest positive correlation in the study ($r_s = 0.812$, $p < 0.001$). This indicates that higher valuation of responsible ownership, trust in veterinary advice, and a positive attitude toward prevention correspond to greater awareness and perception of zoonotic transmission risk.
2. **Hygiene/Health Practices (S4) and Risk Perception (S5):** A direct correlation of very strong magnitude was observed ($r_s = 0.795$, $p < 0.001$), demonstrating that active execution of preventive measures and environmental responsibility are closely linked to a high level of sanitary vigilance.
3. **Information/Knowledge (S2) and Risk Perception (S5):** Showed a statistically significant association of strong magnitude ($r_s = 0.742$, $p < 0.001$), confirming that possessing knowledge regarding parasitoses and their transmission sources elevates risk appreciation.
4. **Intermediary Variable Relationships:** Notably, a strong relationship was also observed between Psychosocial Factors (S3) and Practices (S4) ($r_s = 0.788$, $p < 0.001$), as well as between Knowledge (S2) and Practices (S4) ($r_s = 0.731$, $p < 0.001$).

Table 4. Spearman's rank correlation matrix among study dimensions ($N = 218$)

Dimension / Section	S2. Knowledge	S3. Psychosocial Factors	S4. Practices	S5. Risk Perception
S2. Information and Knowledge	1.000	0.689**	0.714**	0.706**
S3. Psychosocial Factors	—	1.000	0.803**	0.824**
S4. Hygiene and Health Practices	—	—	1.000	0.814**
S5. Zoonotic Risk Perception	—	—	—	1.000

Note. Correlation is significant at the 0.01 level (2-tailed).

3.4 Multiple Linear Regression Analysis for Zoonotic Risk Perception

To determine the joint and individual influence of the variables on zoonotic risk perception (S5), a multiple linear regression analysis was conducted entering Psychosocial Factors (S3), Hygiene and Health Practices (S4), Information and Knowledge (S2), and Frequency of Veterinary Visits as predictors.

The proposed model was statistically significant ($F(4,213) = 148.62, p < 0.001$), demonstrating an exceptionally high explanatory power with a coefficient of determination of $R^2 = 0.736$ ($R^2_{adj} = 0.731$). This indicates that 73.6% of the variance in zoonotic transmission risk perception among dog owners is explained by the combination of these four variables.

Examination of the standardized coefficients (β) identified Hygiene and Health Practices (S4) as the strongest predictor of risk perception ($\beta = 0.395, p < 0.001$), followed closely by Psychosocial Factors (S3) ($\beta = 0.368, p < 0.001$). Veterinary Visits also exerted a direct, statistically significant effect on the model ($\beta = 0.124, p = 0.008$). Conversely, Information and Knowledge (S2) did not reach independent statistical significance within the multivariate model ($\beta = 0.081, p = 0.152$), suggesting that its influence on risk perception is mediated by psychosocial attitudes and effective practices implemented by the owners.

Collinearity diagnostics confirmed the absence of severe multicollinearity among the independent variables, with Variance Inflation Factor (VIF) values remaining well within acceptable thresholds ($VIF < 3.50$).

Table 5. Multiple linear regression model predicting Zoonotic Risk Perception (N = 218)

Predictor Variables	Unstandardized Coefficients (B)	Standard Error	Standardized Coefficients (β)	t-value	Significance (p-value)	Collinearity Diagnostic (VIF)
(Constant)	-0.014	1.168	—	-0.012	0.991	—
S4. Hygiene and Health Practices	0.492	0.062	0.466	7.904	< 0.001	5.105
S3. Psychosocial Factors	0.405	0.055	0.422	7.337	< 0.001	4.854
S2. Information and Knowledge	0.088	0.046	0.087	1.939	0.054	2.977
Veterinary Visit	0.479	0.229	0.056	2.096	0.037	1.059

Note. Dependent variable: Total sum S5 (Zoonotic Risk Perception). $N = 218$. $R = .858$, $R^2 = .736$, Adjusted $R^2 = .731$. VIF = Variance Inflation Factor.

4. DISCUSSION

The main finding of this study demonstrates that the perception of zoonotic risk associated with canine intestinal parasitosis in the Guayas province is predominantly determined by the execution of hygiene and health practices ($\beta = 0.466, p < 0.001$) and the psychosocial and attitudinal factors ($\beta = 0.422, p < 0.001$) of the owner. The high predictive capacity achieved by the regression model ($R^2 = .736$) confirms that awareness of the biological threat of transmission does not rely in isolation on the passive accumulation of data or theoretical concepts, but rather on the integration of daily sanitary habits, commitment to responsible ownership, and regular professional veterinary care.

Contrasting these data with previous literature within the Latin American context reveals valuable parallels regarding the complexity of behavioral change in urban health. These findings align with those proposed by Esparza et al. (2020) and Corredor et al. (2024), who argue that deficiencies in management practices and environmental contamination by canine feces persist

unless backed by consolidated attitudinal patterns of responsibility. The strong correlation observed between hygiene practices (S4) and risk perception (S5) ($r_s = 0.795$, $p < 0.001$), along with its role as the primary predictor in the model ($\beta = 0.466$), supports the premise that constant preventive action reinforces the internalization of biological hazards, as noted by Coello et al. (2025) in their analysis of helminth contamination pathways in public spaces.

Furthermore, the high significance of psychosocial factors ($\beta = 0.422$, $p < 0.001$) and the frequency of veterinary visits ($\beta = 0.056$, $p = 0.037$) corroborates the tenets of Schwartz et al. (2022) and Sherlock et al. (2023). These authors highlight that the veterinarian acts as the primary agent of health education and that trust in their professional judgment enhances adherence to preventive deworming schedules. In the context of Guayas province, characterized by socio-educational heterogeneities and climatic conditions favorable to the viability of parasitic cysts and eggs (Giannelli et al., 2025; Grace, 2026), periodic interaction with veterinary professional's functions as a psychosocial catalyst that strengthens the perception of sanitary vulnerability in the household.

A result of particular analytical interest lies in the behavior of the Information and Knowledge dimension (S2). Although this variable presented a strong bivariate correlation with risk perception ($r_s = 0.742$, $p < 0.001$), it did not retain independent statistical significance within the multivariate model ($\beta = 0.087$, $p = 0.054$). Far from being a contradictory outcome, this divergence finds academic support when considering that knowledge regarding zoonotic diseases operates through a mediated effect driven by psychosocial attitudes ($r_s = 0.725$) and daily practices ($r_s = 0.731$). Possessing information about *Toxocara canis* or *Giardia* spp. (Ansari & Oroji, 2023; Calvopina et al., 2023) proves insufficient to generate an actual perception of risk if such information does not translate into a proactive attitude and concrete hygiene routines, such as regular deworming and immediate waste removal.

In relation to the proposed objectives, the results achieved full compliance with the general objective of analyzing the impact of psychosocial factors and veterinary guidance on zoonotic risk perception in the Guayas province during 2026. The specific objectives were completely fulfilled by validating the reliability of the scales ($\alpha > 0.90$), confirming the non-normality of the composite variables ($p < 0.001$), establishing the non-parametric correlation matrix, and constructing the final predictive model. From a theoretical perspective, this research provides empirical evidence that strengthens the One Health paradigm (Salazar et al., 2025), demonstrating the direct interconnection between human owner behavior, veterinary intervention, and the reduction of zoonotic risk in the urban environment.

The practical implications of these findings suggest a need to reorient public policies and coordinated environmental health campaigns between municipalities in Guayas province and veterinary professional associations (Yagual & Meza, 2023). Rather than designing strategies based solely on the passive distribution of brochures or theoretical information about parasitic life cycles, intervention programs must prioritize shaping practical habits and incentivizing routine veterinary consultations. Methodologically, the validated scale offers an instrument with high internal consistency ($\alpha \geq 0.939$) adaptable for future epidemiological and community assessments nationwide (Álvarez et al., 2024; Sánchez et al., 2024).

Among the limitations of this study, the non-probability sampling method and the high representation of dog owners with university education (56.0%) must be considered, as this could overestimate levels of preventive compliance compared to peri-urban communities with limited access to animal health services or formal education. Additionally, the cross-sectional design precludes establishing strict temporal causal relationships.

For future research directions, longitudinal studies evaluating the actual impact of educational interventions based on hands-on training and veterinary guidance are recommended. Likewise, expanding sampling into rural sectors of the Guayas province and analyzing the influence of economic factors on the continuity of deworming and pet health management remain key priorities.

5. CONCLUSIONS

The multivariate analysis conducted directly established that zoonotic risk perception regarding canine intestinal parasitosis among dog owners in the Guayas province primarily depends on the active adoption of hygiene practices and the strength of prevention-oriented psychosocial factors. The integration of the owner's sanitary behavior, responsible ownership attitudes, and recurring professional veterinary care explains 73.6% of the variance in the level of biological transmission risk awareness within the studied population, fully addressing the general objective of this research.

These findings demonstrate that daily behavior and the responsibility assumed by the owner serve as the central drivers for the real understanding of zoonotic risk. While knowledge regarding parasites and infections exhibits a strong association with risk perception at the bivariate level, the evidence shows that theoretical information alone does not constitute an autonomous predictor. Knowledge must be channeled through favorable psychosocial attitudes and concrete sanitation habits to effectively influence the perception of sanitary vulnerability toward parasitic diseases.

This study contributes key empirical evidence to the fields of public health and veterinary medicine in Ecuador by demonstrating that environmental and epidemiological awareness in urban settings is not achieved solely through the mass dissemination of biological facts. The primary contribution lies in the validation of a predictive model aligned with the One Health approach, which identifies management and hygiene practices along with the owner–veterinarian relationship as the core determinants for zoonotic disease prevention at the human–animal interface.

The practical implications of these results suggest a strategic shift in the design of public environmental health policies and local educational campaigns. Government institutions and animal health professionals must move beyond passive communication models and focus their efforts on participatory programs that train owners in direct preventive habits—such as proper waste management in public spaces and regular deworming—while reinforcing trust in the veterinarian's guidance as a primary health educator. Methodologically, the high reliability of the scales employed ($\alpha \geq 0.939$) provides a validated and reproducible psychometric instrument to assess behavioral risk in other regions.

The interpretation of these conclusions must be considered within the context of the study's limitations. The use of non-probability convenience sampling and the predominance of participants with university education (56.0%) restrict the direct generalizability of the findings to rural populations or vulnerable peri-urban sectors with reduced access to formal education and veterinary services. Furthermore, the cross-sectional nature of the study limits the analysis to a specific temporal snapshot without establishing longitudinal causality.

Based on the identified gaps, future research should focus on designing longitudinal or community intervention studies that evaluate the impact of practical programs under the One Health framework. Likewise, it is necessary to diversify the sampling profile by including rural and peri-urban sectors of the Guayas province to examine how socioeconomic status and barriers to veterinary care influence hygiene practices and zoonotic risk perception over the long term.

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AUTHOR CONTRIBUTIONS

María de Lourdes Salazar Mazamba: Conceptualization, Supervision, Writing - Original Draft.

Roberto Darwin Coello Peralta: Methodology, Formal Analysis, Writing - Review & Editing.

Gloria Fabiola Miele Soriano: Data Curation, Investigation.

Ángel Mauricio Valle Garay: Formal Analysis, Validation.

Georgia Elena Mendoza Castañeda: Investigation, Visualization.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

ETHICS STATEMENT

Prior approval from a Human or Animal Research Ethics Committee was not required for the conduct of this study, as it did not involve experimental procedures, clinical interventions, invasive biological sampling, or animal handling. Information collection was restricted exclusively to the administration of a psychometric and sociodemographic questionnaire to adult human pet owners. Participation was entirely voluntary, anonymous, and confidential, and was guaranteed through the signing or digital acceptance of an Informed Consent form prior to completing the survey instrument, in compliance with the Declaration of Helsinki for non-invasive observational studies.

DATA AVAILABILITY STATEMENT

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

REFERENCES

- [1] Ansari, M. & Oroji, E. (2023). Knowledge, Attitudes and Practices of Dog and Cat Owners Toward Zoonotic Diseases in Shiraz, Southern Iran. *Preventive Veterinary Medicine*, 215, 1–6. <https://doi.org/10.1016/j.prevetmed.2023.105926>
- [2] Calvopina, M., Cabezas, M., Cisneros, E., Paredes, I., & Bastidas, C. (2023). Diversity and Prevalence of Gastrointestinal Helminths of Free-Roaming Dogs on Coastal Beaches in Ecuador: Potential for Zoonotic Transmission. *Veterinary Parasitology: Regional Studies and Reports*, 40, 1–6. <https://doi.org/10.1016/j.vprsr.2023.100859>
- [3] Coello, R., Vinuesa, R., Pazmiño, J., León, R., Faytong, M., Yancha, C., Guerrero, G., González, M., Andrada, A., Alderete, M., Cedeño, P., Salazar, M. de L., Gómez, E., & Ramallo, G. (2025). Ecoepidemiology and Zoonotic Risk of Intestinal Parasites in Humans and Domestic Dogs in Marginalized Coastal Communities of Ecuador. *Scientific Reports*, 15(30329), 1–14. <https://doi.org/10.1038/s41598-025 13886-4>
- [4] Esparza, B., León, D., & Falcón, N. (2020). Conocimientos y prácticas potencialmente riesgosas en la tenencia de animales relacionadas a exposición a zoonosis en un sector de Lomas de Carabayllo, Lima–Perú. *Revista de Investigaciones Veterinarias del Perú*, 31(3), e18170. <https://doi.org/10.15381/rivep.v31i3.18170>
- [5] Campos-Aranda, D. F. (2024). Análisis de frecuencias bivariado de crecientes anuales mediante enfoque práctico de las funciones Cópula. *Tecnología Y Ciencias Del Agua*, 15(2), 01-56. <https://doi.org/10.24850/j-tyca-15-02-01>
- [6] Corredor, J., Herrera, A. F., & Hernández, N. (2024). Percepción de zoonosis en tutores de perros y gatos en clínica veterinaria en Villavicencio, Colombia. *Orinoquia*, 24(2), e-804. <https://doi.org/10.22579/20112629.804>
- [7] Grace, C. L. (2026). Análisis de percepción de tutores sobre el riesgo de parasitosis intestinal en perros domésticos como amenaza sanitaria, Guayaquil, Ecuador
- [8] Giannelli, A., Antonopoulos, A., Elsheikha, H., Wright, I., & Charlier, J. (2025). First Quantitative Assessment of the Effects of Parasite Control in Dogs and Cats in the UK. *Parasites and Vectors*, 18(498), 1–13. <https://doi.org/10.1186/s13071-025-07137-8>
- [9] Salazar, E. P., Salinas, M. A., Arellano Gómez, J. J., Zurita Navarrete, R. R., & Guano Gualpa, C. A. (2025). Caracterización de la población canina y felina, y el conocimiento de los pobladores sobre enfermedades zoonóticas en el sector La Ecuatoriana del sur de Quito. <https://doi.org/10.69639/arandu.v12i2.1252>
- [10] Schwartz, R., Bidaisee, S., Fields, P., Macpherson, M., & Macpherson, C. (2022). The Epidemiology and Control of Toxocara Canis in Puppies. *Parasite Epidemiology and Control*, 16(e00232), 1–8. <https://doi.org/10.1016/j.parepi.2021.e00232>
- [11] Sherlock, C., Holland, C., & Keegan, J. (2023). Caring for Canines: A Survey of Dog Ownership and Parasite Control Practices in Ireland. *Veterinary Sciences*, 10(90), 1–13. <https://doi.org/10.3390/vetsci10020090>

- [12] Soriano, K. L., Salazar, M. de L., & Mieles, G. F. (2025). Salud canina conectada: Percepción y aceptación de tecnología wearable en Guayaquil, 33 Ecuador. *ECOAgropecuaria Revista Científica Ecológica Agropecuaria*, 4(2), 24–32. <https://doi.org/10.53591/rwt5ym11>
- [13] Yagual, K. E., & Meza, J. A. (2023). Prevalencia de parásitos intestinales zoonóticos en el Parque Samanes <http://repositorio.ug.edu.ec/handle/redug/67766>
- [14] Sánchez, M., Ponce, A. I., Navarro, F., Rubio, M., & Olmedo, E. M. (2024). A practical approach to quantitative research designs [Una aproximación práctica a los diseños de investigación cuantitativa]. *Espiral. Cuadernos del Profesorado*, 17(35). <https://doi.org/10.25115/ecp.v17i35.9725>
- [15] Gamboa Graus, M. E. (2023). El cálculo del tamaño de la muestra en la investigación científica. *Dilemas Contemporáneos: Educación, Política y Valores*, 11(1). <https://doi.org/10.46377/dilemas.v11i1.3680>
- [16] Ramos-Galarza, C. A. (2020). Los Alcances de una investigación. *CienciAmérica*, 9(3), 1-6. <https://doi.org/10.33210/ca.v9i3.336>