

Midocean University

College of Management

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**Client Reliance on Artificial Intelligence (AI) Applications
for
Post-Diagnostic Decision-Making in Veterinary Services
(Applied Study on Pet Owners in Riyadh-Rahmah Clinic)**

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Dedication

This work is lovingly dedicated to the soul of my beloved father and teacher, may he rest in peace. His wisdom, integrity, and deep respect for knowledge shaped my character and inspired my lifelong pursuit of learning. Although he is no longer physically present, his values, teachings, and spirit continue to guide and motivate me every day.

I would also like to express my sincere appreciation to the person who first introduced me to this academy and opened the door to this academic journey. Your guidance marked the beginning of a path that ultimately led to the completion of this research.

My deepest gratitude goes to the person who supported me in overcoming the obstacles related to the registration process and continuously encouraged me to move forward. Your support, motivation, and belief in my abilities played a vital role in helping me overcome challenges and reach this important milestone.

I would also like to express my heartfelt appreciation to my family for their continuous support, patience, and encouragement throughout this journey. Their understanding, love, and belief in me provided the strength and motivation needed to persevere and complete this work.

Finally, I extend my heartfelt thanks and appreciation to my respected research supervisors for their guidance, patience, and valuable academic insights throughout the preparation of this study. Their continuous support and professional mentorship greatly contributed to the completion of this work.

This research stands as a humble tribute to all those who believed in me, supported my journey, and encouraged me to persevere until the end.

Abstract

This study aims to examine the extent to which pet owners rely on artificial intelligence (AI) applications after receiving a veterinary diagnosis and to analyze how such reliance influences post-diagnostic decision-making in veterinary services. The study adopts a descriptive-analytical research design. Data were collected using a structured questionnaire distributed to pet owners in Riyadh, with a particular focus on clients of Rahmah Veterinary Clinic. A total of 72 valid responses were collected and analyzed.

The data were analyzed using descriptive statistics, reliability testing through Cronbach's Alpha, and correlation analysis using SPSS software. The results indicate that AI applications are moderately used by pet owners after veterinary consultations. Clients primarily use AI tools to better understand their pets' medical conditions or to verify the information provided by the veterinarian.

The findings also reveal that trust in veterinarians remains significantly higher than trust in AI applications. When AI outputs align with veterinary recommendations, client confidence and reassurance increase. However, when AI recommendations contradict veterinary advice, respondents experience moderate uncertainty, although veterinary authority remains dominant. The study concludes that AI applications function mainly as complementary informational tools rather than substitutes for professional veterinary expertise. The study recommends that veterinary clinics improve communication with clients and guide them toward reliable digital information sources to maintain trust and support informed decision-making in veterinary services.

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Chapter 1:

Introduction

Chapter 1: Introduction

1.1 Introduction

Artificial intelligence (AI) is becoming more present in everyday decision-making. This is clear in how clients deal with health-related information. In veterinary services, AI is no longer limited to be used inside clinics as a diagnostic support tool. It is also used outside clinics through mobile applications and websites that pet owners can easily access at any time.

It is increasingly evident now that most clients do not stop after receiving a diagnosis from the veterinarian. What is recognizable in many cases, is that they continue the decision-making process at home or some times in the waiting area after finishing the consultation with the veterinarian by consulting AI applications. They may use the AI applications to confirm the diagnosis that had been made, explore alternatives, estimate risk, and evaluate treatment doses or options. This attitude is highly recognizable to most veterinarians working in the field.

This behavior is noticeable in practice, and it changes the traditional service relationship. In the past the veterinary consultation was a high-trust interaction. The veterinarian opinion guided the client's final choice. Today, post-diagnostic decisions may be influenced by additional "digital voice" that the clinic does not fully control.

When AI output aligns with the veterinarian's advice, clients usually feel more reassured and confident. On the other hand, when AI contradicts the veterinarian, uncertainty may increase, decisions can be delayed, and trust can be shifted.

This study mainly looks at the managerial and behavioral implications related to clients. It focuses on the reliance of the clients on AI applications after receiving a veterinary diagnosis. This study is conducted among pet owners in Riyadh, with particular focus on Rahmah Clinic clients during the 2025-2026 period.

This study is especially relevant due to the widespread use of technology and the high level of digital engagement, which made the AI based verification a part of the final decision after diagnosis has been made.

1.2 Problem Statement

The rapid spread of AI applications has introduced a new pattern in veterinary services, especially in post-diagnostic verification. Many clients have now turned to consulting AI tools post diagnosis by entering diagnostic terms or symptoms or even the laboratory results and the diagnostic images received from the clinic into applications to receive confirmation or alternative explanations.

This behavior can make it harder for clients to confidently decide on the final treatment. It may influence trust in the veterinarian and how much they are going to follow up the recommended treatment plan given to them.

Despite the importance of this issue in practice, there is still limited evidence in veterinary service sector regarding how clients rely on AI after receiving a diagnosis. What motivates them to find AI-based reassurance, and how agreement on contradiction between AI output and veterinary advice affects trust, decision speed, and acceptance of recommended procedures.

For this reason, this study aims to examine both the frequency and intensity of AI reliance. It will also assess its impact on client decision outcomes within the context of veterinary services in Riyadh.

1.3 Importance of the study

Practical (Managerial) Importance

Veterinary clinics operate in a competitive environment where trust plays an important role in diagnosis acceptance and treatment compliance.

Understanding how and why clients consult AI after a diagnosis can help clinic managers to improve communication strategies with their clients.

This will in a way reduce client confusion, prevent delays in decision making, and maintain the clinic's credibility. It will also acknowledge client's use of AI.

Scientific (Academic) Importance

This study collects three key frameworks (Technology Acceptance Model, Trust in Automation Theory, and Consumer Decision-making Behavior) within an applied veterinary service setting, specifically at Rahmah clinic.

This research provides empirical evidence on AI reliance after veterinary diagnosis done in the clinic, an area that remains underexplored in veterinary services.

1.4 Purpose of the study (Main Objective and sub-objectives)

Main Objectives

To assess the extent to which pet owners rely on AI-based applications after receiving a veterinary diagnosis and to examine how this reliance influences post-diagnostic decisions-making.

Sub-Objectives

To assess the frequency of AI application use among pet owners after veterinary consultations.

To evaluate the intensity of AI reliance (how strongly AI influences final treatment decisions).

To identify the main motivations for using AI applications for post-diagnostic verification such as a result of fear from diagnostic error, curiosity, perceived objectivity, cost sensitivity, and social influences.

To examine the effect of agreement or contradiction between AI output and veterinarian's advice on client's trust, decision speed, and treatment acceptance.

To analyze whether demographic characteristics (age, gender, education) and digital literacy affects the relationship between AI reliance and trust in the veterinarian.

To develop practical recommendations for veterinary clinics aimed to maintain client trust and improve communication in an environment where AI is used by the clients independently.

1.5 research Questions (Main and sub-questions)

Main Research question

To what extent do pet owners rely on AI applications after receiving a veterinary diagnosis, and how does this reliance influence their post-diagnostic decision-making in veterinary services?

Sub- questions

How frequently do clients consult AI applications after a veterinary diagnosis?

To what extent does AI feedback influence client's final decisions regarding treatment, procedures, or surgery?

What factors motivate clients to use AI applications for post-diagnostic verification?

How does the agreement between AI output and veterinary advice affect client trust, compliance, and decision speed?

How does the contradiction between AI output and the veterinary advice affect client trust, compliance, and decision speed?

Do demographic characteristics and digital literacy influence the level of AI reliance and its impact on trust in the veterinarian diagnosis?

1.6 Research Hypotheses (Null Form – H0)

Main Null Hypothesis (H0-Main)

H0-main: There is no statistically significant relationship between client reliance on AI applications after diagnosis and post-diagnostic decision-making outcomes in veterinary services.

Sub Null Hypotheses

H0-1: There is no statistically significant relationship between perceived usefulness of AI applications and client reliance on AI after a veterinary diagnosis.

H0-2: There is no statistically significant relationship between perceived ease of use of AI applications and client reliance on AI after a veterinary diagnosis.

H0-3: There is no statistically significant relationship between trust in AI applications and client reliance on AI after a veterinary diagnosis.

H0-4: There is no statistically significant difference in client trust and treatment acceptance when AI feedback aligns with the veterinarian's recommendations.

H0-5: There is no statistically significant difference in client trust, decision speed, and treatment acceptance when AI feedback contradicts the veterinarian's recommendation.

H0-6: Demographic variables such as age, education and digital literacy do not significantly moderate the relationship between AI reliance and trust in the veterinarian.

1.7 Theoretical Model Adopted in this Study:

This study is guided by an integrated model combining three complementary perspectives:

Technology Acceptance Model (TAM)

TAM explains why individuals choose to adopt and continue using a technology, mainly based on perceived usefulness and perceived ease of use. In this study, these factors help explain whether clients view AI applications as useful and easy to access, and whether they are likely to consult them after a veterinary visit.

Trust in Automation Theory

Trust is an important factor that affect the reliance on automated systems. In the post-diagnostic stage, clients may develop trust in AI based on previous experiences, perceived credibility, and consistency of AI output. Higher level of trust may increase reliance on AI especially when AI output aligns with the veterinarian advices so it appears reliable.

Consumer Decision Behavior Theory

Client decision-making can be viewed as a process that includes information search, evaluation of alternatives and post-decision evaluation. In veterinary services, AI applications may act as an additional source of information during the ‘information search’ stage, which can influence how clients evaluate options and ultimately accept or reject treatment recommendations.

Conceptual Relationship (summary)

Perceived usefulness, ease of use, and trust in AI are expected to influence the level of AI reliance after diagnosis. This AI reliance then affects post-diagnostic outcomes such as trust in the veterinarian, decision speed, treatment acceptance, satisfaction, and loyalty. Demographic factors and digital literacy may affect these relationships.

Chapter 2:

Literature Review

2.1 Introduction

Artificial intelligence (AI) has become more prominent across different service industries which has led to growing academic interest in understanding how people deal with such technologies after the initial stage of adoption. However, more recent studies have started to focus more on behavioral and managerial aspects, especially in situations where AI interacts with professional (Human) judgment.

In healthcare-related services, the decision- making process rarely ends at the point of diagnosis. Clients often continue searching for extra information, comparing alternatives, and seeking reassurance before they decide to commit to treatment options. With the widespread availability of AI-based applications, this post-diagnostic stage has become more influenced by automated advice.

As a result, trust, reliance, and perceived authority are no longer shaped only by human experts. Instead, they are increasingly affected by digital tools that clients use.

This chapter reviews the most relevant academic literature related on AI usage, trust in automation, and consumer decision- making behavior. It will also concentrate on how previous studies have addressed AI reliance in medical and service settings. It Identifies key findings, and highlights gaps that justify the current study.

Finally, this chapter presents the theoretical framework that supports the current research.

2.2 Previous studies

Research on artificial intelligence (AI) has clearly grown in recent years, especially within healthcare and service management fields. Many studies now are focusing on how users perceive, trust, and rely on automated systems during decision-making processes. However, most existing studies had only focused on human medicine or general services setting, while studies within veterinary services still remain limited.

Several studies have examined how client or patient respond to AI- supported medical decisions. For instance, (Longoni et al. 2019) examined resistance to medical artificial intelligence and found that people often hesitate to fully rely on AI recommendations, particularly when decisions involve high emotional or ethical considerations. Their findings suggest that although AI is viewed as technically capable, users continue to place greater trust in human professionals when responsibility and accountability are at stake (Longoni et al. 2019). This gives an overview on how the emotional part interferes in decision-making, which is highly relevant in the veterinary field where owners act on behalf of their animals.

In another study, Hoff and Bashir (2015) examined how trust in automated systems, emphasizing that reliance on such systems is influenced more by perceived trustworthiness than on objective accuracy. They also suggested that the trust tends to develop over time through repeated interactions and consistency of system performance. In veterinary services, this suggests that repeated agreement between AI output and veterinary advice may increase client confidence. On the other hand, frequent contradictions may lead to uncertainty and potentially weaken trust in either the technology or the veterinarian (Hoff & Bashir, 2015).

Other researchers have examined the role of AI as a source of information rather than a complete replacement for professional judgment. For instance,

Burton et al. (2022) examined algorithm appreciation in consumer decision-making and found that users tend to value AI more when it supports rather than overrides expert opinions. Their findings suggest that AI is most effective as a reassurance tool, helping to reinforce confidence in decisions that are already guided by professional advice. This perspective is consistent with the focus of the current study, which examines AI use in the post-diagnostic stage as a form of verification rather than a primary source for diagnosis.

In healthcare service setting, Tao et al. (2021) examined patient perceptions of AI-based telemedicine and found that both perceived usefulness and ease of use significant role in encouraging continued engagement with AI systems. Patients who considered these tools as accessible and informative were more likely to consult them repeatedly especially in the follow-up stages of care. These findings support the relevance of the Technology Acceptance Model (TAM) in explaining pattern of AI reliance after clinical interactions, which will also be reflected in this study.

Veterinary-specific research remains relatively limited. Huang et al. (2022) examined client reactions to AI-assisted diagnostic explanations in veterinary settings and found that younger and more digitally literate pet owners tend to be more interactive with AI based confirmation. However, the study focused primarily on diagnostic interactions within the clinic and did not explore post-diagnostic decision-making outside the clinical environment. Leaving a gap regarding how AI influences decisions after clients leave the consultation room, which will also be measured in this study.

From a practical service management perspective, Sharma and Patel (2023) examined the AI influence on client decision-making in outpatient medical services and found that contradictory AI feedback often led to delayed decisions and increased requests for second opinions. Their findings suggest that, when not properly managed, AI influence can disrupt service flow and negatively affect organizational efficiency (Sharma & Patel, 2023). This managerial implication is particularly important for veterinary clinics operating in competitive environment such as most Riyadh clinics.

Critical Reviews and Research Gap

Although previous studies provide useful insights into AI acceptance, trust in automation, and decision-making behavior, several limitations remain unidentifiable.

First, most existing research focused on human healthcare or generalized service sectors, with a limited focus to veterinary services.

Second, many studies tend to examine AI usage at the point of diagnosis rather than covering the post-diagnostic decision-making stage.

Third, only a few studies combined technological, psychological, and managerial perspective within a single applied framework.

Based on these points, a clear research gap can be identified regarding how pet owners rely on AI applications after receiving a veterinary diagnosis and how this reliance affects their trust, decision speed, and treatment acceptance.

The study addresses this gap by focusing on post-diagnostic AI reliance in the veterinary sector, within the applied context of Riyadh.

2.3 Theoretical Framework

This study is based on a theoretical framework that combines together key concepts from artificial intelligence adoption, trust in automated systems, and consumer decision-making behavior. The purpose of this framework is to explain how and why pet owners rely on AI-based applications after receiving a veterinary diagnosis and how this reliance may affect their post-diagnostic decisions.

2.3.1 Artificial Intelligence in service Contexts

Artificial intelligence is commonly used to describe systems that can analyze large amounts of data and identify patterns that support in decision-making by giving recommendations for the user.

In service industries, AI has been increasingly used to improve efficiency, reduce uncertainty, and support decision-making process.

Compared to traditional information sources, AI tools offer faster and more personalized information. They are also usually available at any time, which makes them more prominent to users who are looking for an instant response.

In Veterinary services, AI applications are often accessed through mobile apps or online platforms. These tools can provide the user with symptoms interpretation, possible diagnostic & basic treatment explanations. While they do not replace the veterinarian, they will play a role of additional source of information that the clients may use.

2.3.2 Technology Acceptance and AI Reliance

Technology Acceptance Theory is widely used to understand why individuals choose to adopt and continue using new technologies. Two main factors are usually considered; perceived usefulness and perceived ease of use.

When AI tools are seen as both useful and easy to use, clients are more willing to consult them right after a veterinary visit. By time, this repeat use may develop into a reliance, where AI feedback begins to be a major part in the client's final decisions.

In this study, technology acceptance is therefore considered an important factor affecting the level of post-diagnostic AI reliance.

2.3.3 Trust in Automation and Professional Authority

Trust is an important factor that influences how individuals rely on automated systems. According to the trust in automation theory, people do not depend on technology only based on accuracy, but also on how reliable and consistent they are.

In veterinary services, clients often need to make a trust balance between two sources which are the veterinarian and the AI application.

When AI feedback is aligned with veterinary advice, trust may be reinforced in both sources, leading to quick decision-making and greater acceptance of recommended treatments. However, when AI output contradicts professional recommendations, clients may have uncertainty, hesitation, or reduced confidence. This situation can shift the authority away from the veterinarian or, sometimes, weaken trust in AI systems.

2.3.4 Consumer Decision-Making Behavior

Consumer decision-making is commonly described as a multi-stage process that includes problem recognition, information search, evaluation of alternatives, decision selection, and post decision evaluation. In veterinary services, pet owners act as decision makers on behalf of their animals especially under emotional pressure and uncertainty.

AI applications can influence the information search and evaluation stages. By giving additional interpretations and comparisons after diagnosis. This information may increase confidence, delay decisions, or lead clients to reconsider treatment options.

2.3.5 Integrated Conceptual Framework

Based on the above discussion, this study adopts a framework in which perceived usefulness, ease of use, and trust in AI influence the extent to which clients rely on AI applications after diagnosis.

This reliance is expected to affect post-diagnostic decision making outcomes, including trust in the veterinarian, decision speed, and treatment acceptance.

In addition, demographic factor and digital literacy are considered variables that may strengthen or weaken these relationships.

Overall, this framework provides a clear theoretical basis for the study's hypotheses and supports the empirical analysis presented in the following chapters.

Chapter 3:

Research Methodology

3.1 Introduction

This chapter explains the methodological approach adopted to examine client reliance on artificial intelligence (AI) applications after receiving a veterinary diagnosis. It outlines the research design, population and sampling procedures, data collection tools, and methods of analysis. The methodology is structured to ensure that the research objectives and hypotheses are tested systemically and in line with the requirements of scientific research in management studies.

3.2 Research Design

The study adopts a descriptive-analytic research design. This design is appropriate because the research aim to describe the extend of AI reliance among pet owners and analyze the relationships between AI reliance and post-diagnostic decision-making outcomes such as trust, decision speed, treatment acceptance.

A quantitative approach is primarily used to collect measurable data through a structured questionnaire, supported by limited qualitative insights from open ended questions. This approach allows for statistical analysis of relationships between variables while maintaining clarity and objectivity.

3.3 Population of the study

The population of the study consist of pet owners in Riyadh city who have received a veterinary diagnosis for their animals and have access to AI-based applications related to animal health. The applied focus of the study is on clients of Rahmah Veterinary Clinic, as it represents an active veterinary service environment with high client interaction and technology exposure.

3.4 Sample Characteristics and Sample Size Determination

A random sampling technique is used to select respondents from the study population in order to reduce selection bias and enhance representativeness.

The target sample size for the quantitative survey is approximately 150 respondents, which is considered sufficient for descriptive and correlational analysis in behavioral and management research. This sample size allows for meaningful statistical testing while remaining feasible within the study timeframe.

Sample characteristics includes:

- Gender
- Age group
- Education level
- Frequency of veterinary visits
- Level of digital literacy.

These characteristics are included to examine their potential moderating effects on AI reliance and trust in the veterinarian.

3.5 Data Collection Procedures and Research Instrument

3.5.1 Data Collection Method

Primary data are collected using a structured questionnaire distributed electronically and in printed form to pet owners.

Participation is voluntary, and respondents are informed of the academic purpose of the study.

3.5.2 Questionnaire Design

The questionnaire is designed in accordance with university guidelines and structured into five main sections:

- **Section A:** Demographic Information

Includes questions related to age, gender, education level, and digital literacy.

- **Section B:** AI Usage behavior

Measures the frequency and extent of AI application use after veterinary diagnosis.

- **Section c:** Perceptions and trust in AI

Assesses perceived usefulness, ease of use, and trust in AI applications.

- **Section D:** Post Diagnostic Decision Making

Evaluates the influence of AI on trust in the veterinarian, decision speed, and treatment acceptance.

- **Section E:** Open- Ended Questions

Allows respondents to briefly explain their motivations for using or not using AI applications.

Responses in Section B,C, and D are measured using a five point likert scale, ranging from (1) strongly disagree to (5) Strongly Agree.

3.6 Study Variables

- Independent Variables:
 - ✓ Perceived usefulness of AI
 - ✓ Perceived ease of use AI
 - ✓ Trust in AI applications
- Dependent Variables:
 - ✓ Client trust in the veterinarian
 - ✓ Decision-making speed
 - ✓ Treatment acceptance
- Moderating Variables:

- ✓ Age.
- ✓ Education.
- ✓ Digital literacy.

3.7 Method of Data Analysis

Collected data will be analyzed using statistical analysis software such as SPSS. The following techniques will be applied:

- ✓ Descriptive Statistics (frequencies, means, standard deviations)
- ✓ Reliability testing using Cronbach's Alpha
- ✓ Correlation analysis to examine relationships between variables.
- ✓ Comparative analysis to test differences related to AI agreement and contradiction.

These methods are appropriate for testing the study's null hypotheses and achieving the research objectives.

3.8 Study Determinants (Scope and Limitations)

The study is subject to several boundaries:

- ✓ Spatial boundary: Veterinary clients in Riyadh city
- ✓ Temporal boundary: Data collection conducted during the academic year 2025-2026
- ✓ Subject boundary: Client reliance on AI applications after veterinary diagnosis

Limitations include reliance on self-reported data and restriction to a single veterinary service setting. However, these limitations do not reduce the relevance of the findings within similar urban veterinary contexts.

3.9 Ethical Considerations

All ethical principles of scientific research are respected. Participants are informed about the purpose of the study, assured of confidentiality, and given the right to withdraw at any time. No personal identifying information in accordance with university research ethics guideline.

Chapter 4:

Results and Recommendations

4.1 Introduction

This chapter presents the empirical findings of the study based on 72 valid responses collected from pet owners in Riyadh, Rahmah clinic owners. The purpose of this chapter is to analyze the extent to which clients rely on artificial intelligence (AI) applications after receiving a veterinary diagnosis and to examine how such reliance influences post-diagnostic decision-making outcomes.

The analysis includes demographic description, descriptive statistics, reliability testing using Cronbach's Alpha, and correlation analysis to study hypotheses.

4.2 Demographic Characteristics of respondents (n=72)

A total of 72 valid questionnaires were analyzed.

This section presents the demographic characteristic of the respondents, including gender, age group, education level, and digital literacy. These variables help describe the study sample and provide context for interpreting AI usage behavior among pet owners.

4.1 Gender Distribution 1

Table 4.1: Gender Distribution

Gender Frequency Percentage

Gender	Frequency	Percentage
Male	19	26.4 %
Female	53	73.6 %
Total	72	100 %

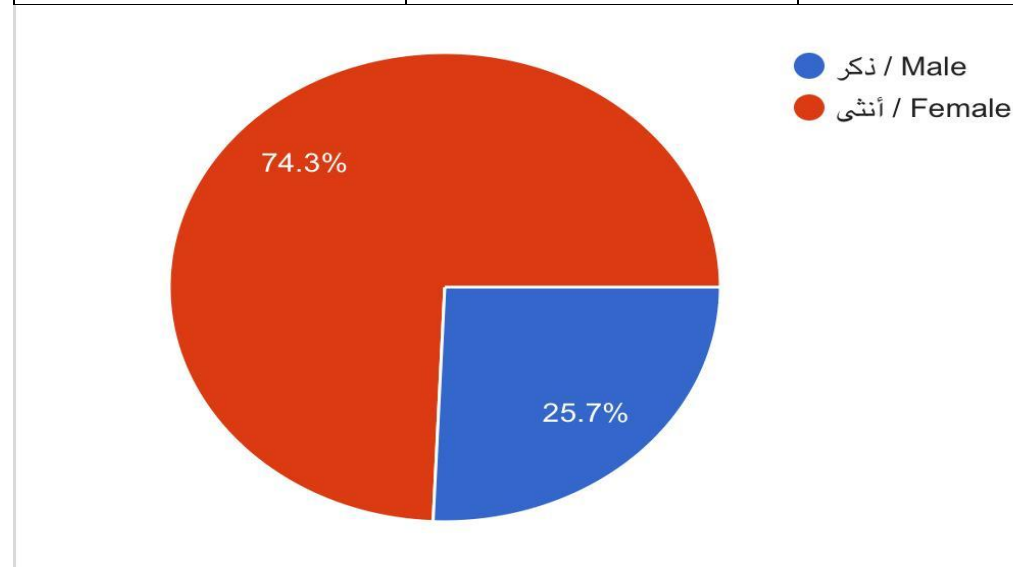


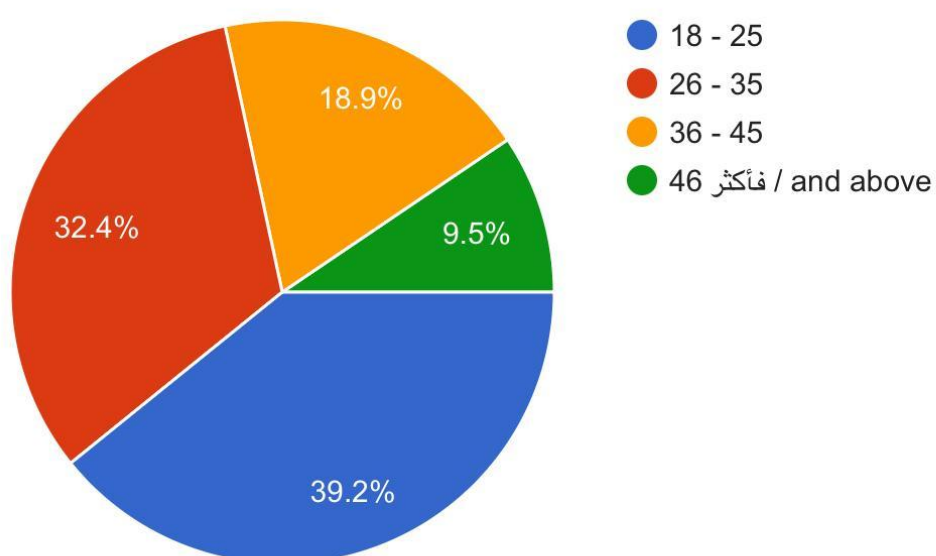
Figure 1 : 4.1 Gender Distribution

Interpretation:

The majority of respondents were female (73.6%), indicating that women represent a larger proportion of active decision-makers in veterinary healthcare within the sampled population.

Table 4.2: Age Group Distribution

Age Group	Frequency	Percentage
18-25	29	40.3 %
26-35	24	33.3%
36-45	12	16.7%
46+	7	9.7%
Total	72	100%

*Figure 2: 4.2 Age Group Distribution***Interpretation:**

The largest age group was 18-25 years (40.3%), followed by 26-35 years (33.3%). This indicates that the sample is largely composed of young and digitally active individuals, which may increase the likelihood of consulting AI-based applications after veterinary consultations.

Table 4.3: Education level Distribution

Education level	Frequency	Percentage
High School	17	23.6%
Bachelor's	32	44.4%
Postgraduate	17	23.6%
Other	6	8.3%
Total	72	100%

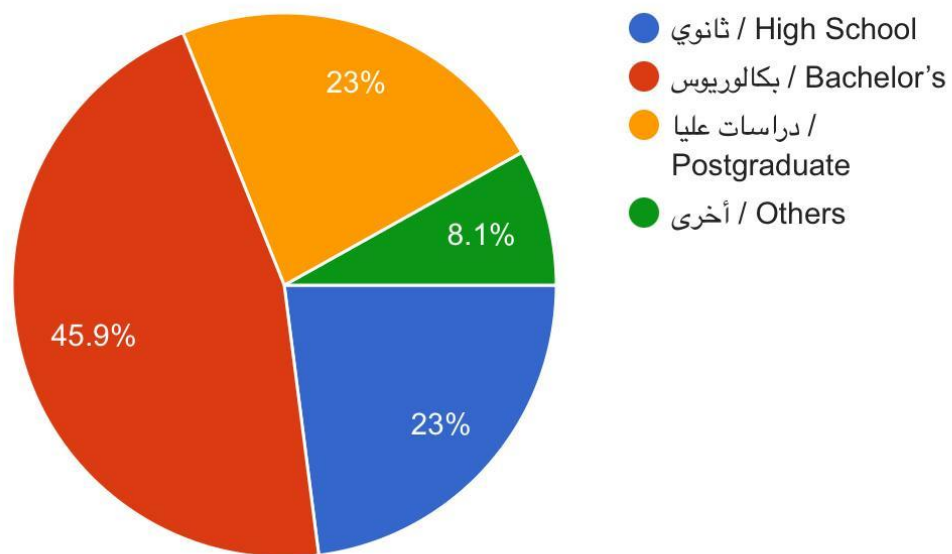


Figure 3: 4.3 Education Level Distribution

Interpretation:

Most respondents hold a bachelor's degree or higher (68%), suggesting a relatively well-educated sample, which may contribute to greater awareness and willingness to use digital technologies such as AI applications.

Table 4.4: Digital Literacy Level

Digital Literacy	Frequency	Percentage
Low	4	5.6%
Moderate	26	36.1%
High	42	58.3%
Total	72	100%

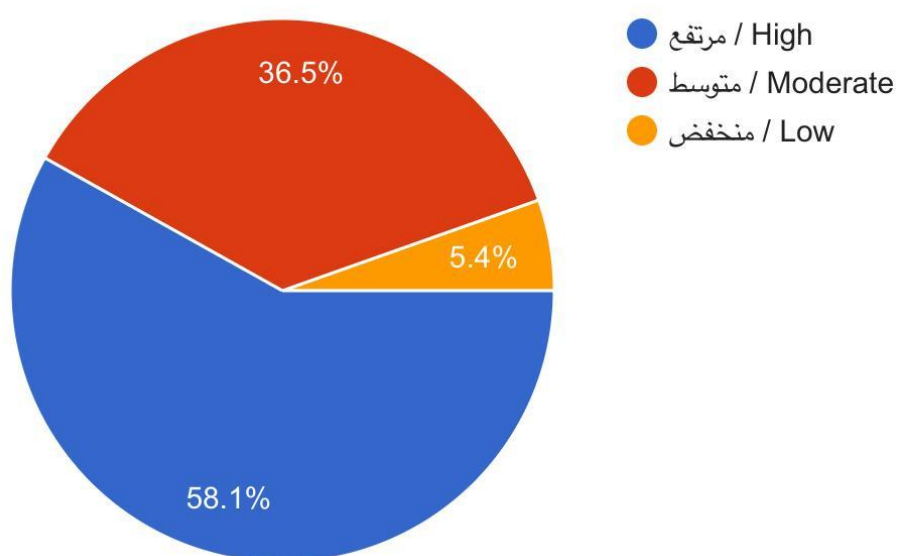


Figure 4: 4.4: Digital Literacy Level

Interpretation:

A majority of respondents reported high digital literacy (58.3%), indicating that most participants are comfortable using digital technologies, which supports the relevance of examining AI application usage in this population.

4.3 Descriptive Analysis of AI Usage Behavior

4.5: Descriptive Statics for AI Usage5

Table 4.5: Descriptive Statistics for AI Usage

Statement	Mean	Std. Deviation
Use AI to confirm diagnosis	3.01	1.04
Consult AI before costly procedures	2.93	1.08
Use AI to understand condition	3.38	1.14
AI influences final decision	2.60	1.12
Check AI after leaving clinic	3.11	1.11

Interpretation:

AI is moderately used after veterinary consultations. The highest mean (3.38) indicates that AI is mainly used to better understand medical information. The lowest mean (2.6) shows that AI does not strongly dominate final treatment decisions.

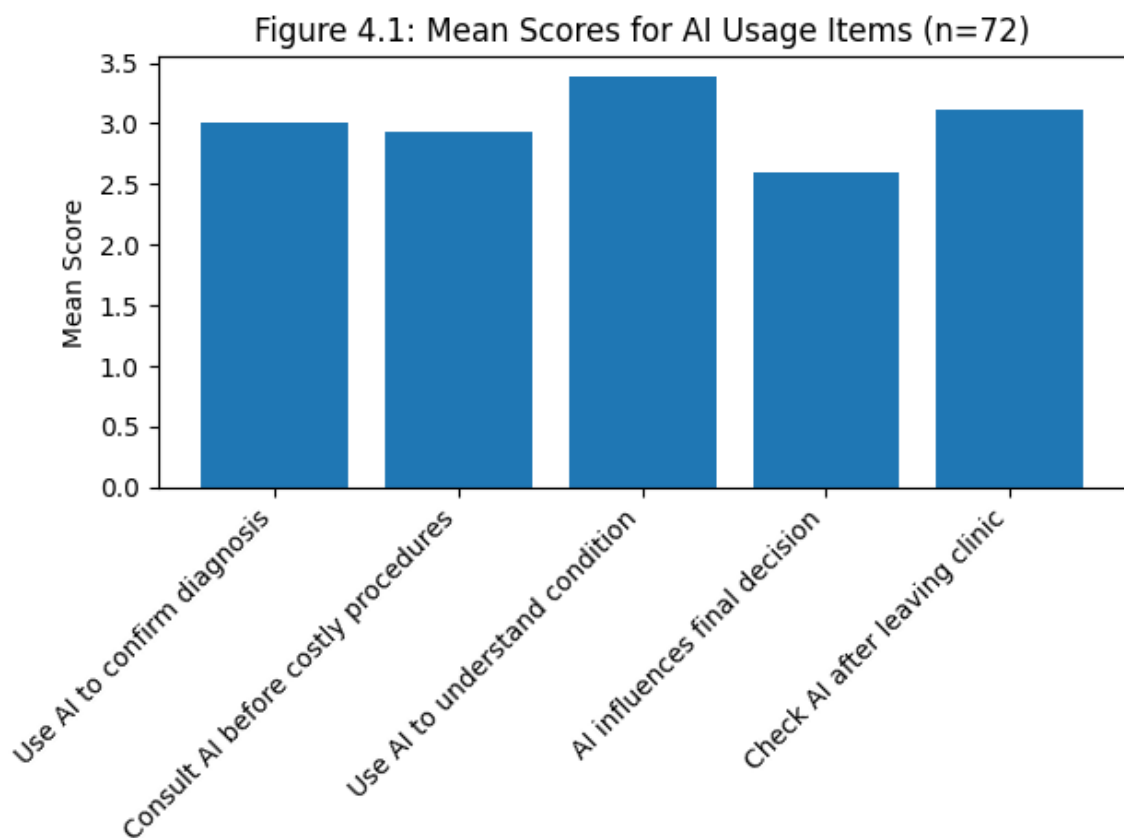


Figure 4.5: Mean Scores for AI usage items (n=72)

Figure 5: 4.5 : Mean Scores for AI usage items (n=72)

4.4 Perception and Trust in AI

4.6: Descriptive Statistics For Trust and Perception 6

Table 4.6: Descriptive Statistics for Trust and Perception

Variable	Mean	Std. Deviation
Perceived Usefulness	3.68	0.98
Ease of use	4.25	0.83
Trust in AI Accuracy	2.75	0.90
Trust Veterinary More Than AI	4.24	1.04

Interpretation:

AI applications are perceived as highly easy to use (Mean=4.25). However, respondents strongly agree that they trust their veterinarian more than AI (Mean=4.24). This confirms that professional authority remains dominant.

4.5 Effect of AI Alignment and Contradiction

4.7: Alignment vs. Contradiction Impact 7

Table 4.7: Alignment vs. Contradiction Impact

Condition	Mean
AI aligns with veterinarian-confidence	4.08
AI contradicts veterinarian-uncertainty	3.04

Interpretation:

AI agreement significantly increases client confidence.

Contradiction introduces moderate uncertainty but does not fully replace professional trust.

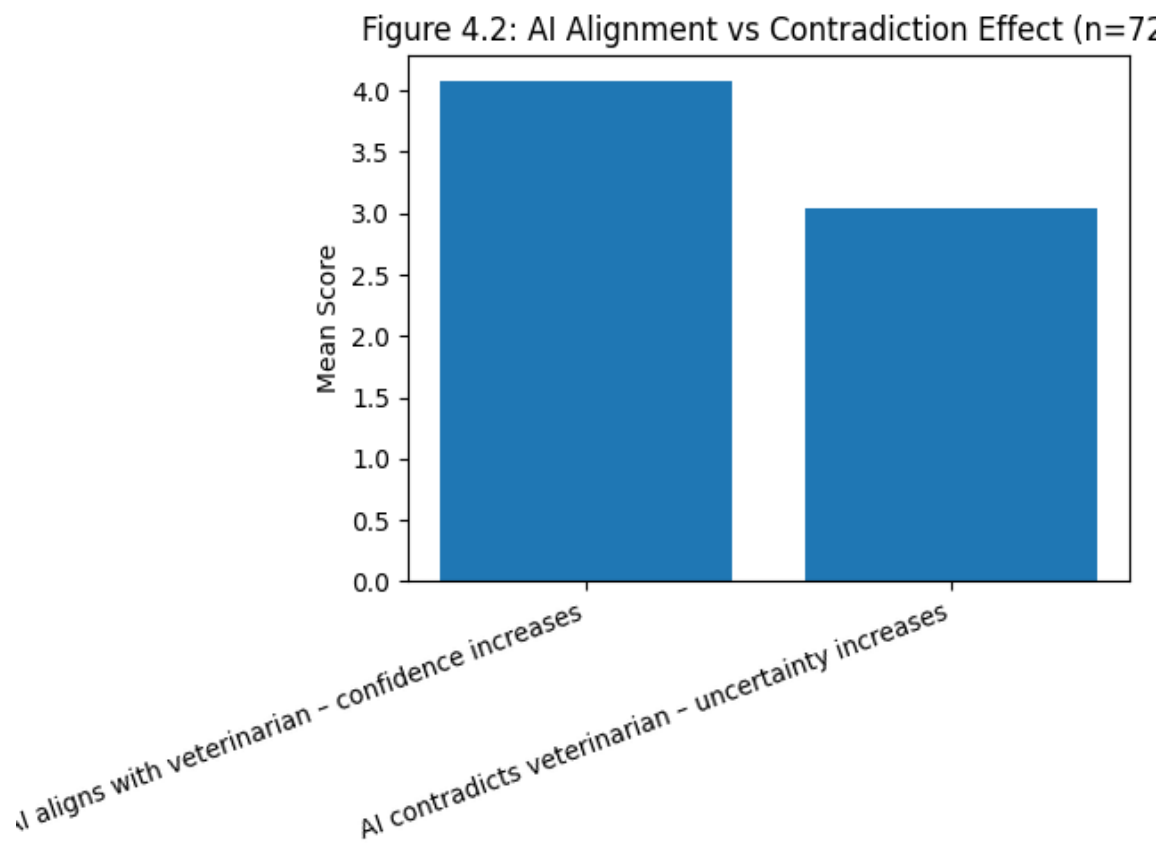


Figure 4.6: AI Alignment Vs. Contradiction Effect(n=72)

Figure 6 : 4.6 AI Alignment Vs. Contradiction Effect(n=72)

4.6 reliability Analysis

4.8: Cronbach's Alpha Results⁸

Table 4.8: Cronbach's Alpha Results

Scale	Number of Items	Alpha
AI Usage	5	0.83
Decision Outcomes	5	0.82
Trust & Perception	5	0.74

Interpretation:

AI Usage and Decision scales demonstrate strong reliability.

The trust scale shows moderate reliability, acceptable for exploratory behavioral research.

4.7 Correlation Analysis and Hypothesis Testing

4.9: Correlation Matrix⁹

Table 4.9: Correlation Matrix

Variables	AI Reliance	Decision Outcomes	Trust Perception
AI Reliance	1	0.61	0.44
Decision Outcomes	0.61	1	0.39
Trust Perception	0.44	0.39	1

Interpretation:

A moderately strong positive relationship was found between AI reliance and decision outcomes ($r=0.61$). This indicates that increased AI consultation is associated with stronger influence on decision-making.

Accordingly, the main null hypothesis is rejected at the exploratory level.

4.8 Summary of Empirical Findings

Based on the analysis:

1. AI applications are moderately used for post-diagnostic reassurance.
2. AI enhances understanding but does not replace professional authority.
3. Trust in veterinarians remains significantly stronger than trust in AI.
4. AI alignment strengthens confidence.
5. AI contradiction introduces hesitation but does not dominate decisions.
6. AI reliance positively correlates with decision-related outcomes.

Overall, AI functions as a complementary decision-support tool within veterinary services rather than a disruptive authority.

4.9 Results of the study

Based on the statistical analysis of the questionnaire responses ($n = 72$), several important findings emerge regarding the role of artificial intelligence applications in post-diagnostic decision-making in veterinary services.

First, the results indicate that AI applications are moderately used by pet owners after receiving a veterinary diagnosis. Respondents mainly use AI tools to better understand their pet's medical condition or confirm the veterinarian's explanation rather than to replace professional advice.

Second, the findings show that AI applications are perceived as easy to use and accessible, which encourages clients to consult them after leaving the clinic. This supports the Technology Acceptance Model assumption that ease of use increases the likelihood of technology adoption.

Third, although AI tools are used for information verification, trust in veterinarians remains significantly higher than trust in AI systems. Respondents strongly agreed that they rely more on veterinary expertise when making final treatment decisions.

Fourth, the analysis shows that AI agreement with veterinary advice increases client confidence and reassurance, suggesting that AI can act as a confirmation tool that reinforces trust in the veterinarian's diagnosis.

Fifth, when AI recommendations contradict veterinary advice, respondents experience moderate uncertainty. However, this contradiction does not completely replace professional authority, indicating that veterinarians remain the primary decision reference for clients.

Finally, correlation analysis reveals a moderate positive relationship between AI reliance and post-diagnostic decision outcomes, suggesting that consulting AI tools can influence how clients evaluate treatment options and finalize decisions.

Overall, the findings confirm that AI applications function mainly as complementary decision-support tools rather than substitutes for veterinary expertise.

4.10 Recommendations:

Based on the findings of the study, several recommendations can be proposed for veterinary clinic managers and practitioners.

First, veterinary clinics should acknowledge the growing role of AI applications in client decision-making and proactively address client questions related to AI-generated information during consultations.

Second, veterinarians should provide clear and comprehensive explanations of diagnoses and treatment options, as better understanding may reduce the need for clients to seek confirmation from external AI sources.

Third, clinics may consider guiding clients toward reliable and scientifically validated digital resources rather than leaving them to rely on unverified AI applications that may provide misleading information.

Fourth, veterinary professionals should view AI not as a threat but as a complementary communication tool that can enhance client education when used responsibly.

Fifth, training programs for veterinary staff should include communication strategies for dealing with clients who consult AI tools, especially when AI-generated advice contradicts professional recommendations.

Finally, future research is recommended to expand the sample size and include multiple veterinary clinics or cities, in order to obtain a broader understanding of AI influence on veterinary service management.

المستخلص:

تهدف هذه الدراسة إلى تحليل مدى اعتماد أصحاب الحيوانات الأليفة على تطبيقات الذكاء الاصطناعي بعد تلقي تشخيص بيطري، ودراسة تأثير هذا الاعتماد على قرارات ما بعد التشخيص في الخدمات البيطرية. اعتمدت الدراسة على المنهج الوصفي التحليلي، حيث تم جمع البيانات باستخدام استبيان منظم وُزِعَ على عينة من أصحاب الحيوانات الأليفة في مدينة الرياض، مع تركيز تطبيقي على عملاء عيادة رحمة البيطرية. بلغ حجم العينة (72) استبانة صالحة للتحليل.

تم تحليل البيانات باستخدام الإحصاءات الوصفية واختبار معامل الثبات (كرونباخ ألفا) وتحليل الارتباط باستخدام برنامج SPSS. أظهرت النتائج أن استخدام تطبيقات الذكاء الاصطناعي بعد التشخيص البيطري يتم بدرجة متوسطة، حيث يلجأ العملاء إلى هذه التطبيقات بشكل أساسي لفهم الحالة المرضية للحيوان بشكل أفضل أو للتأكد من المعلومات الطبية المقدمة من الطبيب البيطري.

كما أظهرت النتائج أن الثقة في الطبيب البيطري ما زالت أعلى من الثقة في تطبيقات الذكاء الاصطناعي، وأن توافق نتائج الذكاء الاصطناعي مع رأي الطبيب يعزز ثقة العميل ويزيد من سرعة اتخاذ القرار. في المقابل، قد يؤدي تعارض نتائج الذكاء الاصطناعي مع توصيات الطبيب إلى قدر من التردد دون أن يؤدي إلى استبدال الرأي الطبي المهني.

وتوصي الدراسة بضرورة تعزيز التواصل بين الأطباء البيطريين والعملاء، وتوجيه العملاء نحو مصادر رقمية موثوقة للمعلومات البيطرية، بما يساهم في الحفاظ على ثقة العملاء وتحسين جودة اتخاذ القرار في الخدمات البيطرية.

References

- Burton, J. W., Stein, M. K., & Jensen, T. B. (2022). Algorithm appreciation: People prefer algorithmic to human judgment in decision-making. *Journal of Marketing*, 86(3), 1–20.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.
- Hoff, K. A., & Bashir, M. (2015). Trust in automation: Integrating empirical evidence on factors that influence trust. *Human Factors*, 57(3), 407–434.
- Huang, J., Yang, Y., & Liang, H. (2022). Artificial intelligence in veterinary healthcare: Adoption and perception among pet owners. *Veterinary Sciences*, 9(8), 395.
- Lee, J. D., & See, K. A. (2004). Trust in automation: Designing for appropriate reliance. *Human Factors*, 46(1), 50–80.
- Longoni, C., Bonezzi, A., & Morewedge, C. K. (2019). Resistance to medical artificial intelligence. *Journal of Consumer Research*, 46(4), 629–650.
- Sharma, R., & Patel, K. (2023). Artificial intelligence and decision-making behavior in healthcare services. *International Journal of Healthcare Management*, 16(2), 145–154.
- Tao, D., Wang, T., Wang, T., Zhang, T., Zhang, X., & Qu, X. (2021). A systematic review of user acceptance of artificial intelligence in healthcare. *Artificial Intelligence in Medicine*, 114, 102036.

مدى اعتماد العملاء على تطبيقات الذكاء الاصطناعي (AI) في اتخاذ القرارات
بعد التشخيص
في الخدمات البيطرية
(دراسة تطبيقية على ملاك الحيوانات الأليفة في مدينة الرياض-عيادة رحمة)

إعداد الطالب/

عبدالرحمن سامح عبدالرحمن فهمي

إشراف/

د.الفیصل عبد الحمید

د.فايز جراد

العام الدراسي:

2026

Appendix:

-Questionnaire Link:

<https://forms.gle/GKACrPhB17gABiYx7>

-Questionnaire Word Form:

Dear Participant,

This questionnaire is part of an academic research project conducted for a master's degree in project management at Midocean University. The study aims to examine the extent to which pet owners rely on artificial intelligence (AI) applications after receiving a veterinary diagnosis and how this reliance influences their treatment decisions.

Your participation is voluntary and all responses will remain confidential. The questionnaire will take approximately 5-8 minutes to complete.

Thanks in advance for your cooperation.

Researcher

AbdelRahman S. Fahmy

عزيزي المشارك

تهدف هذه الاستبانة الي جمع بيانات لأغراض بحث علمي ضمن متطلبات درجة الماجستير في إدارة المشاريع بجامعة ميدأوشنز يهدف البحث الي قياس مدى اعتماد مربى الحيوانات الاليفة على تطبيقات الذكاء الاصطناعي بعد الحصول على تشخيص بيطري، وتأثير ذلك على قراراتهم العلاجية. مشاركتك تطوعية، وجميع الإجابات سرية وتستخدم لأغراض علمية فقط. يستغرق ملء الاستبانة حوالي 5-8 دقائق.

شاكرين ومقدرين تعاونكم

الباحث

عبدالرحمن سامح فهمي

➤ **Section A: Kindly mark on front of your answer:**

1. Gender/الجنس :

☐ Male / ذكر ☐ Female/انثي

2. Age Group/الفئة العمرية:

☐ 18-25 ☐ 26-35 ☐ 36-45 ☐ 46 and above/فأكثر

3. Education Level/المستوي التعليمي:

☐ High School/ثانوي ☐ Bachelor's/بكالوريوس ☐ Postgraduate/دراسات عليا

☐ Others/اخرى

4. How would you rate your digital literacy?

كيف تقيم مستوي استخدامك للتقنية؟

☐ Low/منخفض ☐ Moderate/متوسط ☐ High/مرتفع

5. Have you ever used an AI application related to animal health?

هل سبق لك استخدام تطبيق ذكاء اصطناعي متعلق بصحة الحيوان؟

☐ Yes/نعم ☐ No/لا

➤ **Section B:**

(5-Point Likert scale)

1= Strongly Disagree / لا أوافق بشدة

2= Disagree/أوافق

3=Neutral/محايد

4=Agree/أوافق

5=Strongly Agree/أوافق بشدة

1. I use AI applications to confirm my veterinarian's diagnosis. ()

1. أستخدم تطبيقات الذكاء الاصطناعي لتأكيد تشخيص الطبيب البيطري ()

2. I consult AI tools before deciding on costly treatments or surgeries.

أستشير تطبيقات الذكاء الاصطناعي قبل الموافقة على إجراءات علاجية مكلفة. ()

3. I rely on AI to better understand my pet's medical condition.
أعتمد على الذكاء الاصطناعي لفهم الحالة الطبية لحيواني بشكل أفضل. ()
4. AI applications influence my final treatment decision.
تؤثر تطبيقات الذكاء الاصطناعي على قراري العلاجي النهائي. ()
5. I check AI feedback after leaving the veterinary clinic.
أراجع النتائج تطبيقات الذكاء الاصطناعي بعد مغادرة العيادة البيطرية. ()

➤ **Section C:**

1. AI applications provide useful medical information.
توفر تطبيقات الذكاء الاصطناعي معلومات طبية مفيدة. ()
2. AI applications are easy to use.
تطبيقات الذكاء الاصطناعي سهلة الاستخدام ()
3. I trust the accuracy of AI-generated advice.
أثق في دقة التوصيات الصادرة عن الذكاء الاصطناعي. ()
4. AI advice appears objective and unbiased.
تبدو توصيات الذكاء الاصطناعي موضوعية وغير متحيزة. ()
5. I trust my veterinarian more than AI applications.
أثق بالطبيب البيطري أكثر من تطبيقات الذكاء الاصطناعي. ()

➤ **Section D:**

1. When AI agrees with the veterinarian, I feel more confident.
عندما يتفق الذكاء الاصطناعي مع الطبيب، أشعر بثقة أكبر. ()
2. When AI contradicts the veterinarian, I feel uncertain.
عندما يتعارض الذكاء الاصطناعي مع الطبيب، أشعر بعدم يقين. ()
3. AI contradictions delay my treatment decisions.
تؤدي متعارضات الذكاء الاصطناعي الي تأخير قراراتتي العلاجية. ()

4. AI confirmation increase my willingness to accept treatment.

يزيد تأكيد الذكاء الاصطناعي من رغبتني في قبول العلاج. ()

5. I would request a second opinion if AI advice differs from the veterinarian's recommendation.

أطلب رأيا طبيا اخر إذا اختلفت توصية الذكاء الاصطناعي عن توصية الطبيب. ()

➤ **Section F:**

Answer the Following Questions:

1. Why do you use (or not use) AI applications after a veterinary visit?

لماذا تستخدم (أو لا تستخدم) تطبيقات الذكاء الاصطناعي بعد زيارة العيادة؟

2. Describe a situation where AI influenced your treatment decision.

صف موقفا أثر فيه الذكاء الاصطناعي على قرارك العلاجي. ()
