

Malpractice Insurance in the Kingdom of Saudi Arabia: Registered Nurses' Perceptions and Willingness to Pay

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Background: In accordance with the healthcare transformation programs of the Saudi Vision 2030, the Kingdom of Saudi Arabia (KSA) established a mandatory malpractice insurance to improve the quality of patient care and the conditions of service delivery. Malpractice litigation has been an issue affecting nurses based on changing healthcare transparency and transformation of services. Professional liability insurance shields them despite the differences exist between perception and the willingness to pay the insurance. **Objective:** this study assessed nurses' perceptions of nursing malpractice insurance in the KSA, and their willingness to pay for such insurance. Moreover, examined the sociodemographic, professional, and contextual factors that predict these outcomes. **Methods:** A descriptive, cross-sectional, correlational study conducted an online survey of 720 registered nurses from governmental and private hospitals in 13 regions across the KSA between September and November 2025. **Results:** Among the 720 nurses, 92.5% perceived malpractice insurance to be required, and 79.2% indicated a willingness to pay. It was significantly correlated that perception had a positive relationship with age, income, and price and a negative relationship with nationality. While the price, insurance status, perception, and training were positively related to willingness to pay. **Conclusions:** Different predictors influence perception and willingness and that interventions could be designed differently based on perception considering cultural background, experience, and medico-legal education; whereas willingness could be done with price, affordability, training, and insurance facilitation to increase insurance uptake.

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1. Introduction

Professional medical liability (malpractice) insurance is a critical component of the contemporary healthcare environment. It protects healthcare professionals against financial and legal implications from lawsuits resulting from a failure to deliver high-quality care.¹ Fundamentally, it compensates injured patients, ensures remedial justice, and deters negligent practice by exposing clinicians to liability.² Although its capacity to directly enhance healthcare quality remains controversial—with evidence indicating its quality-deterrent effect is minimal, malpractice insurance is an indisputable component of clinical practice, playing a critical role in risk management, legal defense provision, and settlement coverage for practitioners.²

Individual malpractice insurance is particularly important for nurses due to their extensive clinical decision-making, frequent patient interactions, and high level of responsibility for patient outcomes.³ Malpractice claims against nurses frequently arise from medication errors, documentation discrepancies, or inadequate supervision.¹ Therefore, in addition to standard employer indemnity, individual malpractice insurance safeguards the legal and economic stability of nursing personnel, thereby bolstering their professional confidence and job security.³

Reflecting these global parameters, the Kingdom of Saudi Arabia (KSA) implemented mandatory malpractice insurance requirements for healthcare practitioners in November 2022, subsequently expanding coverage to 18 clinical specialties, including nursing.⁴ This policy shift coincides with a substantial increase in localized malpractice cases; specifically, the number of reported litigations rose by 26% from 2016 to 2018, reaching 1,379 cases. Within the Kingdom, the largest proportion of these claims occurred in obstetrics and gynecology (25.9%), followed by dentistry (13.5%) and internal medicine (10.55%).⁵

The rising trajectory of legal claims underscores a major clinical concern, as medical errors committed by the healthcare team, particularly

nursing staff, escalate occupational stress among nurses. These errors frequently stem from medication administration inaccuracies, poor communication, and procedural oversights. This stressful environment has fueled defensive medicine practices, including the avoidance of high-risk procedures to mitigate personal legal liability, which ultimately compromises healthcare efficiency.⁶

To counteract these challenges, elevating legal awareness and enhancing institutional safeguards can optimize patient safety and bolster nursing confidence. Malpractice insurance serves as a vital source of financial protection for practitioners against legal claims.⁷ While nursing professionals often view malpractice insurance as a safeguard for both emotional and financial security,^{8,9} many remain apprehensive regarding high premiums and litigation risks.⁷ Notably, more experienced nursing personnel demonstrate a higher inclination toward securing coverage due to their advanced awareness of malpractice risks.^{7, 8, 9}

1.1 Aim of the Study

This study aimed to evaluate nurses' perceptions regarding nursing practice liability and their willingness to pay (WTP) for malpractice insurance. In addition, it sought to analyze the sociodemographic, professional, and contextual factors that predict these outcomes. Specifically, the objectives of this study were to:

1. Assess the sociodemographic and professional characteristics of nurses employed in government and private healthcare organizations in the KSA.
2. Identify nursing personnel's attitudes regarding malpractice liability insurance in the KSA.
3. Examine the willingness of nurses to pay for malpractice liability insurance in the KSA.
4. Analyze the relationship between the sociodemographic and professional characteristics of nurses and their attitudes toward malpractice liability insurance in the KSA.
5. Explore the influence of sociodemographic and professional variables of nurses on their

willingness to purchase malpractice liability insurance in the KSA.

2. Methods

2.1 Study Design

This quantitative study employed a descriptive, cross-sectional, and correlational design. Data collection was conducted from September to November 2025 via an online survey administered to a convenience sample of registered nurses (RNs). This methodological framework facilitated the examination of relationships between the study variables using correlation analysis. Furthermore, it enabled the identification of predictors influencing nurses' perceptions and their WTP for malpractice insurance through binary logistic regression modeling.

2.2 Data Collection and Participant Eligibility

This study enrolled RNs across all 13 administrative regions of the KSA, who were sampled using an online survey distributed throughout public and private hospitals. To be eligible for inclusion, participants were required to hold a valid license issued by the Saudi Commission for Health Specialties and demonstrate sufficient proficiency in English.

2.3 Sampling Technique and Sample Size

A convenience sampling strategy was employed, which is suitable for exploratory research examining relationships and predictors, such as the associations between sociodemographic variables and nurses' attitudes toward malpractice insurance and WTP. An a priori power analysis (G*Power 3.1.9.7) was performed to determine the minimum sample size required for correlation and binary logistic regression modeling ($\alpha = 0.05$, power = 0.80), factoring in the various sociodemographic, occupational, organizational, and perceptual predictors. The resulting final study cohort comprised 720 RNs, which substantially exceeded the minimum required threshold for statistical reliability.

2.4 Ethical Considerations

Ethical approval was given by the Institutional Review Board (IRB) of King Saud University (IRB Ref. No. 25-753; approved on 18 June 2025). Participation was entirely voluntary, and online informed consent was obtained prior to data collection when participants selected the "I agree to participate" option. This digital consent interface detailed study parameters, assuring anonymity and confidentiality. Participants were permitted to access and complete the survey without restriction. All collected data were utilized exclusively for research purposes, and participants maintained the right to withdraw from the study at any stage without penalty.

2.5 Research Instruments

Data were gathered using a two-part, structured, self-administered online questionnaire. The first part (comprising 11 items) collected sociodemographic and professional characteristics, such as age, gender, years of clinical experience, education level, facility type, nationality, current professional role, monthly income, and previous training attendance regarding malpractice liability. These items primarily utilized single-choice categorical response formats.

2.6 Data Analysis

Data were cleaned utilizing Microsoft Excel and subsequently analyzed using IBM SPSS Statistics (version 30.0). Participant demographics and perceptions regarding malpractice insurance and WTP were summarized using descriptive statistics, including frequencies, percentages, means, and standard deviations (SDs). The Kolmogorov-Smirnov and Shapiro-Wilk tests demonstrated that the data were not normally distributed (all $p < 0.001$); consequently, nonparametric tests were applied. Specifically, Spearman's rank correlation coefficient was computed to identify bivariate relationships between the independent and dependent variables.

3. Results

The sociodemographic and professional characteristics of the 720 participating RNs are presented in Table 1. The mean age of the cohort was 36.76 years (SD = 7.84; range: 21–61 years). The majority of participants were female (81.5%, $n = 587$). Nationalities were relatively varied, with Saudi (30.1%), Filipino (27.9%), and Indian (27.9%) personnel constituting the largest shares. Most respondents held a bachelor's degree (74.9%), worked as staff nurses (68.8%), and possessed >10 years of clinical experience (47.6%). Furthermore, 95.6% were employed in governmental hospitals.

Table 1. Sociodemographic, Professional, and Malpractice Insurance Characteristics of Participants (N = 720)

The most highly represented administrative regions were Riyadh (20.8%), the Eastern Province (17.1%), and Al-Qassim (16.9%). In terms of monthly income, the majority of respondents earned between 5,000–10,000 SR (67.8%). Regarding malpractice insurance parameters, 70.0% reported receiving no formal training; however, 84.0% reported having active insurance coverage, while 16.0% reported lacking coverage. Notably, a majority of the cohort perceived that malpractice insurance should be mandatory (92.5%) and expressed WTP for individual policies (79.2%). Most respondents indicated that an annual premium of 300–400 SR was a fair price (71.1%), while preferred compensation levels centered between 50,000–100,000 SR (39.9%) and 100,000–250,000 SR (25.0%).

Regarding perception, significant but weak correlations were found with age ($\rho = 0.076$, $p = 0.040$), nationality ($\rho = -0.142$, $p < 0.001$), income ($\rho = 0.113$, $p = 0.002$), and price ($\rho = 0.290$, $p < 0.001$). In terms of WTP, significant positive correlations were found with training ($\rho = 0.097$, $p = 0.009$), insurance status ($\rho = 0.187$, $p < 0.001$), price ($\rho = 0.620$, $p < 0.001$; strongest correlation), and perception ($\rho = 0.373$, $p < 0.001$) (Table 2).

Table 2. Spearman Correlations Between Study Variables, Perception, and WTP

Multivariate logistic regression (Table 3) revealed that experience was significantly associated with the odds of demonstrating a positive perception (Wald = 9.741, $p = 0.021$). Specifically, nurses with <6 months of experience (odds ratio [OR] = 0.097, $p = 0.004$), 6 months–5 years (OR = 0.113, $p = 0.007$), and 6–10 years (OR = 0.092, $p = 0.005$) exhibited significantly lower odds of positive perceptions compared to the reference group. Furthermore, the model indicated that nationality showed a trend toward an association with perception (Wald = 9.413, $p = 0.094$); Saudi (OR = 0.183, $p = 0.044$), Filipino (OR = 0.117, $p = 0.007$), and Malaysian (OR = 0.069, $p = 0.034$) nurses were significantly less likely to report a positive perception than the reference group.

Table 3. Binary Logistic Regression Predicting Positive Perception of Malpractice Insurance

Although position demonstrated no significant global effect, a significant increase in positive perception was observed specifically among staff nurses (OR = 2.917, $p = 0.024$). Price was the strongest predictor overall (Wald = 47.336, $p < 0.001$); nurses preferring annual premiums of 401–500 SR (OR = 9.843, $p = 0.007$) and ≥ 601 SR (OR = 14.430, $p < 0.001$) exhibited markedly higher odds of reporting a positive perception. Liability compensation preference also exerted a significant influence (Wald = 11.397, $p = 0.022$), with nurses preferring limits of 100,000–250,000 SR showing higher odds of positive perception (OR = 3.053, $p = 0.011$).

Age was a significant positive predictor of WTP (OR = 1.075, $p = 0.027$; Table 4); for each incremental year of age, the odds of WTP increased by 7.5%. Furthermore, there was a significant overall effect for education (Wald = 12.123, $p = 0.002$). Nurses holding a diploma (OR = 0.268, $p = 0.011$) or a bachelor's degree (OR = 0.069, $p < 0.001$) were significantly less willing to pay compared to those in the reference group. The overall effect of administrative region was likewise significant (Wald = 23.468, $p =$

0.024), highlighted by ORs of 14.291 ($p < 0.001$) and 0.023 ($p = 0.034$) for nurses in Makkah and Hail, respectively. Additional significant predictors included malpractice training (OR = 2.793, $p = 0.008$), with trained personnel demonstrating almost three times the likelihood of being willing to pay. Similarly, the odds of WTP were more than fivefold higher among currently insured nurses than among non-insurers (OR = 5.102, $p < 0.001$).

Ultimately, price was the most important predictor within the model (Wald = 136.458, $p < 0.001$). Nurses accepting the highest premium bracket (≥ 601 SR) had significantly higher odds of WTP (OR = 242.630, 95% confidence interval = 95.443–616.798) than those preferring lower price categories. In contrast, compensation limits had a marginal effect, with nurses who preferred 50,000–100,000 SR having significantly reduced WTP (OR = 0.301, $p = 0.010$). WTP was best predicted by overall perception; nurses with positive perceptions were nearly 14 times more likely to be willing to pay for malpractice coverage (OR = 13.925, $p < 0.001$).

4. Discussion

The discussion is structured into three thematic components: factors predicting nurses' perceptions, determinants of their WTP, and the role of overall perception as a key predictor of WTP.

4.1 Factors Associated with and Predicting Nurses' Perceptions

4.1.1 Age and Professional Experience

Bivariate analysis revealed a weak positive relationship between age and positive perception. However, age did not remain a significant independent predictor after adjusting for experience in the multivariate model. This suggests that while professional maturity contributes to an individual's understanding of liability risk and protection mechanisms,^{6,10} accumulated clinical experience serves as a stronger predictor of this underlying relationship.

4.1.2 Experience as a Predictor of Perception

Experience was a strong and unique predictor of perception. All groups with <10 years of experience exhibited significantly lower odds of holding a positive perception compared to the most experienced nurses. Senior nurses have likely encountered more adverse events, near-misses, or litigation, deepening their understanding of the value of malpractice insurance compared to less experienced peers who may under-comprehend these liability risks.^{3,6,10}

Importantly, this dynamic does not reflect a simple linear relationship. For instance, Senturan¹¹ noted that even after gaining a few years of experience, mid-career nurses (specifically those with 5–10 years) remain at a heightened risk for burnout and malpractice tendencies, indicating that experience alone does not mitigate professional vulnerabilities. Educational cohort effects may also play a role; nurses who graduated over a decade ago may have received more explicit training regarding the medico-legal aspects of nursing practice compared to more recent graduates.¹²

4.1.3 Nationality and Cultural Influences

The odds of holding a positive perception were significantly lower among Saudi, Filipino, and Malaysian nurses compared to the reference group, suggesting distinct cultural and educational variations in attitudes toward liability insurance. These variations may be attributed to differences in the medico-legal systems, the prominence of a litigious culture, and professional socialization within the nurses' countries of origin.¹³ The evolving KSA medico-legal environment and low baseline legal awareness among local providers likely explain the lower perceived necessity among Saudi nurses.^{5,7} Furthermore, significant disparities exist within international regulatory and educational frameworks. For instance, the core content of liability and insurance courses in nursing curricula varies globally,¹⁴ while scope-of-practice regulations differ significantly even within unified health systems.¹⁵

4.1.4 Position and Professional Role

Despite a non-significant overall model effect for position, staff nurses demonstrated significantly greater odds of holding a positive perception. This finding may be linked to the increased personal responsibility associated with direct, ongoing patient contact and bedside clinical decision-making. Furthermore, frontline training and/or risk-management policies at the unit level, which disproportionately focus on frontline staff, may reinforce this heightened awareness. However, professional role is not necessarily an absolute predictor of perception; previous studies suggest that organizational culture, individual risk tolerance, and the specific practice context exert a more substantial influence than the job title alone.^{11,16}

4.1.5 Price as a Predictor of Perception

Price was the single most important predictor of perception; nurses who were willing to pay 401–500 SR/year, particularly ≥ 601 SR, demonstrated significantly greater odds of holding a positive perception (up to 14 times). This indicates that nurses who understand the financial impact of malpractice suits, including legal expenses, settlement costs, and reputational damage, are more inclined to prioritize full coverage.^{2,10} This high risk awareness aligns with the recent surge in malpractice cases documented across the Gulf states.⁴ These strong connections hold distinct educational significance. Presenting insurance premiums in isolation may not be the best way to improve nurses' understanding of the intrinsic value of malpractice protection; rather, framing insurance costs against realistic litigation expenses represents a far superior educational approach.

4.1.6 Compensation Preferences

Nurses with higher financial liability coverage limits (100,000–250,000 SR) tended to demonstrate more positive perceptions, which may be related to their awareness of the actual monetary scale of malpractice settlements.² Conversely, nurses selecting lower coverage thresholds may lack a realistic understanding of typical settlement and/or judgment amounts.¹⁶

This finding highlights the utility of targeted educational programs that emphasize realistic litigation outcomes. When nurses comprehend that legal claims can exceed minimal coverage limits, they are more inclined to opt for comprehensive options.¹²

4.1.7 Income and Perception

Income was weakly but significantly positively correlated with perception, suggesting that higher income levels make insurance more affordable and perceived as a regular professional expense. However, income was not a standalone predictor in the multivariate regression model, indicating that its impact is largely captured by other, stronger predictors—namely, price and experience.

4.2 Factors Associated with and Predicting WTP

4.2.1 Training and Professional Development

Nurses who participated in malpractice liability training programs were nearly three times more likely to demonstrate WTP for coverage. Emphasizing professional accountability and protective mechanisms through targeted medico-legal education^{14,17} and liability/risk management instruction is established to increase risk awareness and protective behaviors. Notably, while perception did not predict willingness as strongly as expected, these findings suggest that education can influence behavior directly by driving the intention to purchase, rather than acting solely through perception. Consequently, long-term cultural and educational reform is needed to profoundly shift foundational perceptions, whereas targeted training can modify immediate purchasing intentions. Motamedi¹⁸ however, noted that despite recognition of this educational necessity, a significant systemic gap remains regarding the actual institutional availability of such programs.

4.2.2 Current Insurance Status

Regarding non-price determinants, current insurance status was the strongest predictor of financial commitment. Specifically, currently insured nurses were more than five times more

likely to willingly pay for coverage than their uninsured counterparts. This finding must be evaluated in the context of KSA's recent regulatory shift, which mandated malpractice insurance for healthcare professionals since late 2022.^{4,19} Exposure to policy terms, claims processes, and coverage mechanisms is recognized to enhance practitioners' understanding and acceptance of professional liability structures.¹⁴ Conversely, a lack of prior experience leaves nurses without the immediate insights necessary to appreciate the protective value of individual policies. Motamedi¹⁸ also cited a lack of understanding regarding available coverage and organizational support as major impediments to securing professional indemnity. Since mandatory coverage appears to cultivate institutional acceptance over time, reducing the obstacles to initial coverage—such as facilitating corporate registration via employers or offering subsidized entry points—may represent the most powerful strategies to bolster systemic acceptance.^{7,18}

4.2.3 Age as a Predictor of Willingness

Multivariate analysis demonstrated a strong association between age and WTP, with the likelihood of financial commitment escalating by 7.5% for every additional year of age. This trend may be explained by the fact that senior nurses typically accumulate more personal assets requiring legal protection and possess greater financial security to absorb premium costs.² This demographic divergence is particularly insightful; while younger nurses may acknowledge the theoretical importance of insurance, they often lack the requisite financial capital or immediate sense of urgency. Conversely, older nursing professionals possess both risk awareness and the necessary funds. Therefore, it would be advantageous to integrate targeted instruction for early-career nurses focusing on professional liability and proactive financial management regarding insurance premiums from the onset of their careers.¹²

4.2.4 Education Level and WTP

Diploma- and bachelor's-level nurses were significantly less willing to pay than the reference group, which presumably comprises graduate-level or advanced-practice nurses facing heightened liability exposures from prescriptive authority and independent decision-making capabilities, increasing their motivation for individual coverage.¹⁴ This disparity may also stem from the broader integration of legal liability and insurance processes within graduate nursing curricula compared to undergraduate or baseline training programs.¹² Because education did not predict risk perception, its influence on WTP appears mediated by professional context, financial resources, and role responsibilities rather than baseline attitudes.

4.2.5 Regional Variations

Nurses practicing in Makkah demonstrated significantly higher WTP, likely driven by heightened litigation exposure and surging patient volumes during Hajj and Umrah. Beyond seasonal healthcare demands, regional disparities in litigation climates, healthcare market conditions, and workplace cultures heavily influence insurance purchasing behavior.¹³

4.2.6 Price as a Predictor of WTP

Price was the strongest predictor of WTP; nurses willing to pay ≥ 601 SR exhibited significantly higher odds (OR = 242.630) than other brackets, demonstrating that cost—not baseline attitudes or demographics—primarily drives purchase intentions. Cost was also the most frequent barrier to accessing liability coverage, particularly for early-career and lower-paid nurses, who tend to perceive premium expenses as a substantial financial burden.¹⁸ Thus, to translate positive perception into actual adoption, mechanisms such as group purchasing options, employer subsidies, and tiered pricing structures are crucial.^{4,14} Ultimately, price acceptance represents an independent behavioral gateway distinct from general insurance attitudes.¹⁰

4.2.7 Compensation Preferences

Compensation preference predictive power was minimal; however, nurses who selected lower limits (50,000–100,000 SR) demonstrated significantly reduced WTP, which may stem from an underestimation of actual liability exposure.^{8,16} This contrasts with perception analyses correlating higher compensation preferences with positive attitudes. This divergence indicates that while nurses theoretically value high-limit coverage, financial constraints render that ideal unattainable, forcing purchasing decisions that compromise between baseline protection and comprehensive, expensive options.

4.3 Perception as a Predictor of WTP

Risk perception is a strong, independent predictor of WTP, demonstrating a moderate positive correlation with the latter variable. This finding validates that attitudes influence insurance adoption decisions. Aligning with behavioral intention theories, nurses perceiving insurance as necessary demonstrated higher financial commitment to coverage than peers.²⁰ Crucially, WTP was more strongly predicted by price than perception. While favorable attitudes are essential, premium affordability remains the definitive prerequisite for adoption. Successful adoption strategies must combine affordability measures with risk-perception enhancement through culturally responsive education, as neither independently ensures widespread insurance uptake.¹²

5. Study Implications

Price, nationality, experience, and position had the greatest impact on nurses' perception of malpractice risk, while WTP was driven by product perception, insurance status, training, and price. This divergence underscores a critical conceptual gap: strategies focused solely on changing attitudes may not automatically translate to actual purchase. Consequently, culturally tailored education is required—particularly for internationally trained nurses with varied baseline knowledge—and must be integrated continuously throughout clinical careers alongside measures reducing burnout and

improving workplace environments to facilitate accurate risk judgments. Although there was evidence that perception is an important factor in willingness—suggesting changing attitudes mediate this relationship, price was more powerful than perception in predicting willingness. Therefore, interventions must combine attitude-building with direct affordability measures, as neither approach independently suffices for widespread insurance adoption.

6. Limitations and Future Research

First, the cross-sectional design precludes determining definitive causality. Longitudinal studies are required to determine whether risk perception precedes WTP, or vice versa, and track directional attitude shifts over time.¹⁶ Second, although multivariate regression models identified strong predictors, significant unexplained variance remained, suggesting unmeasured confounders like workplace burnout, job satisfaction, and organizational support influence insurance attitudes and warrant further investigation. Finally, regional estimates for certain regions were based on small subsamples, resulting in wide confidence intervals; therefore, employing larger, geographically balanced samples in subsequent studies would enhance regional comparison validity.¹³

7. Conclusion

The influence of clinical experience, nationality, and price on nurses' perceptions and WTP for malpractice insurance is largely independent yet interconnected. The effects of experience and nationality on risk perception are more pronounced than the effects of price on WTP, and the effects of price and training on perception, as well as that of perception on WTP, are similarly highly pronounced. Across both outcomes, price is the primary barrier and motivator, indicating financial feasibility—not mere attitude—dictates actual adoption. Thus, a multifaceted approach is imperative for ongoing adoption within the nursing profession, combining cultural and educational interventions

to strengthen perception alongside targeted cost-reduction measures.

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