

The Impact of Psychological Contract Fulfillment on Job Satisfaction and Mental Well-being among Nurses: A Systematic Review

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Abstract

This systematic review synthesized recent international evidence on the relationship between psychological contract (PC) fulfillment and key nursing outcomes. Following PRISMA 2020 guidance, a comprehensive search of five electronic databases (PubMed, CINAHL, PsycINFO, Cochrane Library, Medline) was conducted for peer-reviewed studies published or available online between January 2020 and 31 October 2025, including several online-first articles with 2025 publication dates. Fifteen cross-sectional studies met inclusion criteria, encompassing 4,437 nurses across 12 countries. A qualitative narrative synthesis was performed because the included studies were methodologically and conceptually heterogeneous. Four studies directly measured PC fulfillment, breach, or status, whereas the remaining studies examined theoretically related employer obligations, job resources, or occupational stressors and were interpreted as PC-adjacent evidence. Synthesis suggested a clear pattern: PC fulfillment characterized by autonomy, empowerment, and justice was associated with higher job satisfaction and well-being, whereas contract breach or unmet safety, resource, and fairness obligations were associated with burnout, psychological distress, and turnover intention. Importantly, job satisfaction appeared to be a central mediating variable between PC-related experiences and turnover outcomes. The findings were interpreted through the integrated theoretical framework of Social Exchange Theory (SET) and the Job Demands-Resources (JD-R) model. Because all included studies were cross-sectional, the findings should be interpreted as associations rather than causal effects. These findings suggest that proactively managing the PC through fair processes, safe environments, and empowering practices may support healthcare organizations seeking to foster a resilient nursing workforce. Future research should employ longitudinal and interventional designs to explore potential causal pathways and theory-driven retention interventions.

Keywords: psychological contract, job satisfaction, nurse retention, Social Exchange Theory, Job Demands-Resources

How to cite this article: Alrasheedi MA, Ali DA, Hassan HC. The Impact of Psychological Contract Fulfillment on Job Satisfaction and Mental Well-being among Nurses: A Systematic Review. *Int J Drug Deliv Technol*. 2026;16(67s):773-785. DOI: 10.25258/ijddt.16.67s.63

for understanding how employees respond to their perceptions of employer's obligations. This concept is highly complementary to the Job Demands-Resources (JD-R) model (6), a predominant theory of occupational well-being. The JD-R model posits that job resources such as autonomy, supervisory support, and career opportunities buffer the negative effects of job demands and stimulate motivation and well-being. Many of these resources can be conceptualized as the tangible fulfillment of relational and transactional PC elements. Therefore, this review utilizes the JD-R model as a complementary theoretical lens to interpret how PC fulfillment or breach is associated with nurses' well-being by altering their balance of job demands and resources.

For conceptual clarity, this review distinguishes direct PC evidence, in which studies explicitly measured PC fulfillment, breach, or status, from PC-adjacent evidence, in which constructs such as burnout, resilience, fear of COVID-19, job insecurity, organizational justice, or demographic factors were interpreted only when they were theoretically linked to employer obligations, job resources, or the nurse-organization exchange relationship.

1. INTRODUCTION

Job satisfaction reflects an employee's overall sense of fulfillment and contentment with their work. It is a subjective assessment closely associated with enhanced motivation, reduced turnover and absenteeism, and improved organization efficiency and productivity (1). However, nursing workforces globally face persistent challenges with job dissatisfaction, threatening healthcare system sustainability. In Malaysia, where health system development has been a central national priority for decades, the nursing workforce faces a particularly acute crisis of dissatisfaction (2). A study conducted in Malaysia have highlighted concerning levels of nurse dissatisfaction, with studies in a private hospital revealing low overall job satisfaction score. Nurses consistently report dissatisfaction regarding their pay, heavy task requirements involving excessive clerical work, and insufficient professional respect from physicians (3).

The fulfillment of the psychological contract (PC), the unwritten, reciprocal expectations between employees and employers, has emerged as a crucial factor influencing these outcomes. Grounded in Social Exchange Theory (SET) (4) and later operationalized by Rousseau (5), the PC framework offers a theoretical lens

The Impact of Psychological Contract Fulfillment on Job Satisfaction and Mental Well-being among Nurses: A Systematic Review

relevant journals aligned with the research question. To ensure the retrieval of contemporary and scholarly evidence, filters were applied to limit the search to peer-reviewed studies published or available online between January 2020 and 31 October 2025. This time frame was selected to capture the most recent evidence and the specific impact of the COVID-19 pandemic on the nursing workforce. It is important to note that the final search captured several studies listed as 'in press' or 'online first' with formal publication dates in 2025; these were included as they represent the most current available evidence and were accessible within our search period. Table 1 summarises the literature search and eligibility criteria.

PubMed/Medline used MeSH and title/abstract terms; CINAHL and PsycINFO used subject headings and free-text fields; and Cochrane Library used keyword/title/abstract fields. The core search string applied across all databases was: (nurses OR nursing staff OR registered nurses OR healthcare workers) AND (psychological contract OR psychological contract fulfillment OR psychological contract breach OR psychological contract violation OR organizational justice OR psychological empowerment OR work engagement OR burnout OR resilience) AND (job satisfaction OR work satisfaction OR psychological well-being OR mental health OR burnout OR stress OR psychological distress OR turnover intention). PubMed and Medline were retained as separate sources because PubMed includes ahead-of-print and PubMed Central records, whereas Medline was searched through the institutional interface to capture database-specific indexing. The final search was completed on 31 October 2025. Complete database-specific search strings with full field syntax and applied filters for all five databases are provided in Supplementary Table S1.

2.2 Inclusion and Exclusion Criteria

This systematic review employed predefined inclusion and exclusion criteria to ensure the identification of pertinent and high-quality evidence. Studies were included if they utilized a quantitative, cross-sectional design; investigated registered nurses working in hospital, community, aged-care, oncology, pediatric, or comparable clinical settings; directly measured PC fulfillment, PC breach, PC status, or a theoretically justified PC-adjacent construct linked to employer obligations or job resources; and reported job satisfaction and/or mental well-being-related outcomes, including psychological well-being, psychological distress, burnout, stress, resilience, work engagement, or turnover intention. Furthermore, only peer-reviewed journal articles published in English and available between January 2020 and 31 October 2025 were considered for inclusion. On the other hand, studies were excluded if they were editorials, commentaries, reviews, qualitative-only studies without separable quantitative data, focused on non-nursing populations without separable nurse data,

In the nursing context, the extent to which PCs are fulfilled has been recognized as a key determinant of nurses' mental health outcomes. When the PC is breached, it can result in occupational stress, burnout, and job dissatisfaction, which subsequently compromise psychological health(7,8). Malaysia studies have demonstrated high prevalence rates of burnout among nurses: personal burnout affects four in ten, work-related burnout affects a one-third, and client-related burnout affects one-seventh(9). The COVID-19 pandemic significantly exacerbated the psychological stress experienced by nurse worldwide, amplifying pre-existing occupational challenges and emotional burdens (10–12).

In this review, mental well-being is used as an umbrella term for positive psychological functioning, whereas psychological distress, burnout, anxiety/stress, work engagement, and resilience are treated as related but distinct outcomes or mechanisms.

In this demanding context, the unwritten, mutual expectations between employees and employers has emerged as a significant factor shaping workplace well-being and retention. While research on this concept within the Malaysian nursing context remains limited, robust international evidence demonstrates its predictive power. A strong PC significantly influences job satisfaction, organizational commitment, and workplace trust, all of which are crucial for improving mental health outcomes and reducing turnover intention (3,13).

Therefore, this systematic review seeks to synthesize global evidence on the relationship between PC fulfillment and key nursing outcomes, including job satisfaction, mental well-being, and turnover intention. While the included studies span diverse international contexts, the primary aim is to identify actionable insights and evidence-based strategies from the international literature that can be critically evaluated and potentially adapted by healthcare administrators and policymakers in Malaysia and similar resource-constrained healthcare systems to support and retain this vital workforce. The review therefore provides a global synthesis while drawing practice and policy implications for Malaysia and comparable healthcare contexts.

2. METHODOLOGY

This study was conducted in accordance with Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines.

2.1 Search Strategy and Eligibility Criteria

A comprehensive and systematic literature search was conducted, encompassing multiple electronic databases, including PubMed, CINAHL, Medline, Cochrane Library, and PsycINFO, in conjunction with Boolean operators ("AND" and "OR") to refine the search results. This targeted approach yielded a strong corpus of

The Impact of Psychological Contract Fulfillment on Job Satisfaction and Mental Well-being among Nurses: A Systematic Review

Studies published or available online between January 2020 and 31 October 2025	Studies published before 2020 or outside the eligibility window	Date limit: January 2020 to 31 October 2025	Medline	46
Primary quantitative studies using a cross-sectional design	Non-quantitative studies, editorials, commentaries, reviews	Study design: analytical cross-sectional studies	Total	508

2.3 Selection Process

The study selection process was guided by the PRISMA framework and is summarised in Figure 1. The database search initially identified 508 records, which were imported into Mendeley reference management software. After removing 309 duplicates, 199 unique records remained. These were screened based on title and abstract by two independent reviewers (D.A. and M.A.) using the predefined eligibility criteria, resulting in the exclusion of 140 records.

Full texts were obtained for the remaining 59 articles and assessed in detail for eligibility. Of these, 44 were excluded for specific reasons such as incorrect population, absence of a PC or PC-adjacent construct, or outcomes not aligned with the review focus. Specifically, 15 were excluded due to incorrect population, 18 due to absence of a PC or PC-adjacent construct, 7 due to outcomes not aligned with the review focus, and 4 due to incorrect study design or language. In the end, 15 studies met *all* inclusion criteria and were included in the qualitative synthesis. Any disagreements between the two reviewers were resolved through discussion, with a third reviewer (H.C.) consulted when necessary. Thus, 44 excluded full-text articles plus 15 included studies equalled the 59 full-text articles assessed.

or failed to address either the PC concept or a clearly justified PC-adjacent construct. A comprehensive summary of the inclusion and exclusion criteria is presented in Table 1.

Table 1. Summary of Literature Search Based on Inclusion Criteria

Inclusion criteria	Exclusion criteria	Search/application notes	Data base	Records
Registered nurses working in hospital or community settings	Other healthcare professionals without separable nurse data	Population terms: nurses, nursing staff, registered nurses, healthcare workers	PubMed	176
Studies measuring PC fulfillment /breach or theoretically justified PC-adjacent constructs	Studies not addressing PC concepts or justified PC-adjacent constructs	PC terms: psychological contract, fulfillment, breach, violation; PC-adjacent terms: organizational justice, empowerment, engagement, burnout, resilience	CINAHL	122
Studies reporting job satisfaction and/or mental well-being outcomes	No relevant outcomes reported	Outcome terms: job satisfaction, work satisfaction, psychological well-being, mental health, burnout, stress, emotional exhaustion, turnover intention	Cochrane Library	83
Studies written in English	Studies in languages other than English	Language limit: English	PsycINFO	81

The Impact of Psychological Contract Fulfillment on Job Satisfaction and Mental Well-being among Nurses: A Systematic Review

description of the background and the use of appropriate statistical analyses. Overall risk-of-bias ratings were interpreted transparently: low risk required at least six “Yes” responses with no critical concern in exposure/outcome measurement or statistical analysis; moderate risk reflected unclear or negative judgements in confounding or measurement domains; and high risk reflected multiple methodological concerns or insufficient reporting in key domains.

Most studies demonstrated rigorous adherence to core methodological standards, particularly in the application of clear inclusion criteria, valid and reliable measurement approaches, and appropriate analytical techniques. A significant proportion of the research, including the studies conducted by De los Santos & Labrague (2020), Chipps *et al.* (27), Rodwell *et al.* (28), and Pu *et al.* (29), satisfied all or nearly all JBI criteria and were classified as having an overall low risk of bias.

Several other studies, such as those by Soomro *et al.* (17), Cabrera-Aguilar *et al.* (18), and Ebrahimzadeh *et al.* (23), employed robust sampling and data collection procedures, though limitations were noted in the reporting or adjustment for confounding variables. Studies have shown a moderate risk of bias, as noted by Alkhraishi *et al.* (2023) and Alhassan *et al.* (2025), and Lam (2023) (30), partially met the appraisal criteria, with discernible shortcomings in areas such as the identification of confounders and the validity of measurement methods.

Finally, two studies conducted by Giménez-Espert *et al.* (19) and Ezaka *et al.* (2024), were scored as high risk of bias, largely attributable to insufficient detail concerning the measurement of exposures, control of confounding factors, and overall methodological reporting. Notwithstanding these limitations, the methodological quality of the broader body of evidence was judged to be satisfactory, thereby supporting a reasonable degree of confidence in the synthesized findings. Table 2 presents a summary of JBI studies included.

Table 2. JBI Critical Appraisal Checklist for Analytical Cross-Sectional Studies

Author (Year)	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Overall Rating
De los Santos & Labrague (2020) (16)	Y	Y	Y	Y	Y	Y	Y	Y	Low
Soomro <i>et al.</i> (2025) (17)	Y	Y	Y	Y	N	N	Y	Y	Moderate
Cabrera-Aguilar <i>et al.</i> (2023) (18)	Y	Y	Y	Y	N	N	Y	Y	Moderate

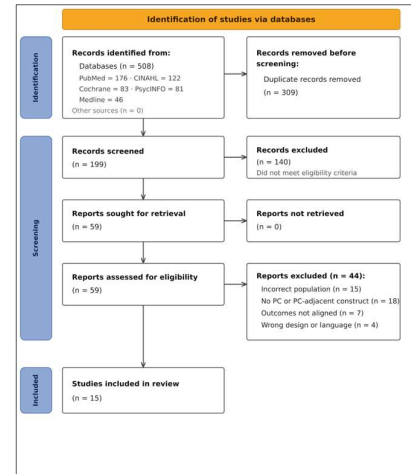


Figure 1: Prisma diagram of search strategy

2.4 Data Extraction

Data extraction was performed independently by two reviewers using a piloted, standardized form to ensure accuracy and consistency. The extracted information included author and country details, study design, sample size, key variables, including psychological contract constructions, job satisfaction, mental well-being, and primary findings. Any discrepancies between reviewers were resolved through consensus, with a third reviewer available for adjudication. The extraction form also recorded whether each study directly measured a PC construct or was included as PC-adjacent evidence based on a stated theoretical link to employer obligations, job resources, or exchange processes.

2.5 Synthesis Method

A qualitative narrative synthesis was conducted because the included studies varied in exposure definitions, outcome measures, and analytical models. The synthesis proceeded in three steps: first, studies were grouped as direct PC evidence or PC-adjacent evidence; second, findings were coded according to whether they described fulfillment/resources, breach/unmet obligations, mediating mechanisms, or contextual/personal moderators; and third, these coded findings were organized into themes using SET and JD-R as sensitizing theoretical frameworks. No meta-analysis was conducted because of heterogeneity in constructs and effect estimates.

2.6 Quality Appraisal

Table 2 presents the studies included in this systematic review guided by Joanna Briggs Institute (JBI) Critical Appraisal Checklist for analytical cross-sectional studies (15). The appraisal was reviewed by two independent reviewers (D.A. and M.A.) and any disagreement referred to a third reviewer (H.C.). The checklist contains eight questions that measure the risk of bias in study methods. Study quality was judged based on clear and comprehensive reporting, including an adequate

The Impact of Psychological Contract Fulfillment on Job Satisfaction and Mental Well-being among Nurses: A Systematic Review

between psychological contract constructs such as fulfillment, breach, and related antecedents like organizational justice and key outcome variables including job satisfaction, psychological well-being, including distress, resilience, burnout, and turnover intention.

Table 3. Characteristics of Included Studies (n = 15)

Author (Country, Year)	Sample Size	Key Independent Variable(s)	Key Dependent Variable(s)	Primary Finding Related to PC
De los Santos & Labrague (2021) (16) Philippines	385 Nurses	Fear of COVID-19	Psychological Distress, Turnover Intention	Fear of COVID-19 was associated with distress and turnover, highlighting a critical safety breach in the PC.
Soomro <i>et al.</i> (2025) (17) Malaysia	301 Nurses	PC Fulfillment (Autonomy, Benefits, Growth)	Job Satisfaction, Psychological Well-being	Fulfillment of transactional/relational contracts was associated with higher satisfaction and well-being.
Cabrera-Aguilar <i>et al.</i> (2023) (18) Peru	459 Nurses	Resilience, Stress	Work Engagement	Personal resources (resilience, self-efficacy) may buffer job demands, aligning with JD-R model and PC balance.
Giménez-Espert <i>et al.</i> (2020) (19) Spain	92 Nurses	COVID-19 Resources, Job Insecurity	Job Satisfaction, Work Engagement, Psychosomatic Problems	Adequate organizational resources during crisis were associated with well-being protection, fulfilling the

Giménez-Espert <i>et al.</i> (2020) (19)	N	Y	U	Y	N	N	U	Y	High
Manulik <i>et al.</i> (2025) (20)	Y	Y	N/A	Y	Y	Y	Y	Y	Low
Ding & Wu (2023) (21)	Y	Y	U	U	Y	Y	U	Y	Moderate
Rodwell & Ellershaw (2024) (22)	Y	Y	U	U	Y	Y	U	Y	Moderate
Ebrahimzadeh <i>et al.</i> (2024) (23)	Y	Y	U	U	Y	Y	U	Y	Moderate
Alkhraishi <i>et al.</i> (2023) (24)	Y	Y	U	U	U	U	U	Y	Moderate
Ezaka <i>et al.</i> (2024) (25)	Y	N	U	Y	N	N	Y	N	High
Alhassan <i>et al.</i> (2025) (26)	Y	Y	N/A	Y	N	N	Y	Y	Moderate
Chippis <i>et al.</i> (2025) (27)	Y	Y	Y	Y	Y	Y	Y	Y	Low
Rodwell <i>et al.</i> (2022) (28)	Y	Y	Y	Y	Y	Y	Y	Y	Low
Pu <i>et al.</i> (2025) (29)	Y	Y	Y	Y	Y	Y	Y	Y	Low
Lam (2023) (30)	Y	Y	Y	Y	N	U	Y	Y	Moderate
Note. Q1 = criteria for inclusion clearly defined; Q2 = study subjects and setting described in detail; Q3 = exposure measured validly and reliably; Q4 = objective and standard criteria used for measuring the condition; Q5 = confounding factors identified; Q6 = strategies to deal with confounding factors stated; Q7 = outcomes measured validly and reliably; Q8 = appropriate statistical analysis used. Y = Yes; N = No; U = Unclear; N/A = Not applicable.									

3. RESULTS

3.1 Study Characteristics

The systematic search and selection process identified 15 studies that met the inclusion criteria for this review. The characteristics of these studies are presented in Table 3. The included studies were published or available online between January 2020 and 31 October 2025, several studies listed as 'in press' or 'online first' with formal publication dates in 2025, providing a contemporary evidence base that includes the challenging context of the COVID-19 crisis. The studies were conducted in 12 various countries, including Europe, Africa, South America, and Australia, offering a diverse international perspective. All studies employed a cross-sectional design. Sample sizes varied widely, from 92 to 507 nurses, with a cumulative total of 4,437 participants. The studies consistently investigated the relationship

The Impact of Psychological Contract Fulfillment on Job Satisfaction and Mental Well-being among Nurses: A Systematic Review

(2024) (25) Nigeria	Nurses	Distress, Job Satisfaction	Well-being	improving satisfaction are key employer duties for upholding the PC and well-being.
Alhassan <i>et al.</i> (2025) Nigeria	286 Nurses	Demographics (e.g., Duration of Service)	Psychological Well-being	Long-term employment stability (an employer obligation) was associated with psychological well-being.
Chipps <i>et al.</i> (2025) (27) South Africa	167 Nurses	Moral Distress, Fear of COVID-19	Psychological Distress, Resilience	Lack of resources (time, protection) was associated with moral distress, indicating a breach of the PC.
Rodwell <i>et al.</i> (2022) Australia (28)	177 Nurses	PC Status, PC breach	Engagement, Job Satisfaction, Performance	PC status was positively associated with performance via engagement, beyond the association with PC breach.
Pu <i>et al.</i> (2025) (29) China	406 Nurses	Demographics (Age, Title, Income)	Psychological Resilience	Career advancement and fair compensation (fulfilled contracts) were associated with greater resilience.
Lam (2023) (30) Singapore	168 Nurses	Experience Level, COVID-19 Fears	Anxiety, Burnout	A breach of safety and support during crisis was associated with mental

				"relational" PC.
Manulik <i>et al.</i> (2025) (20) Poland	475 Nurses	Work Factors (Shift, Pay, Stress)	Job Satisfaction, Life Satisfaction, Optimism	Employer "deal" on pay, schedules, and environment was associated with well-being and outlook.
Ding & Wu (2023) (21) China	507 Nurses	Psychological Empowerment	Turnover Intention, Job Satisfaction, Emotional Exhaustion	Empowerment (a fulfilled obligation) was associated with lower turnover via increased satisfaction and reduced exhaustion.
Rodwell & Ellershaw (2024) (22) Australia	380 Nurses	PC Promises, Fulfillment, Breach	Job Satisfaction, Psychological Distress, Org. Commitment	PC breach and fulfillment were key correlates; context (hospital vs. aged care) moderated their impact.
Ebrahimpzadeh <i>et al.</i> (2024) (23) Iran	328 Nurses	Organizational justice (procedural, interactional, distributive)	PC breach	Procedural and interactional justice were negatively associated with PC breach; both explained 41% of the variance.
Alkhraishi, Eivazzadeh & Yesiltaş (2023) UAE	186 Nurses	Burnout	Turnover Intention, Job Satisfaction	Burnout, a consequence of PC breach, was associated with turnover intention, mediated by lower job satisfaction.
Ezaka <i>et al.</i>	120	Psychological	Psychological	Reducing distress and

The Impact of Psychological Contract Fulfillment on Job Satisfaction and Mental Well-being among Nurses: A Systematic Review

Furthermore, Work Engagement was identified as another vital mechanism. Rodwell *et al.* (28) demonstrated that PC status was positively associated with engagement, which is linked to performance and well-being, while PC breach was negatively associated with it.

3.2.3 Antecedents and Moderators: Shaping the PC Experience

The review identified factors that may precede or influence the PC relationship. Organizational Justice was an important antecedent. Ebrahimzadeh *et al.* (23) reported that procedural and interactional justice were significantly negatively associated with PC breach, collectively explaining 41% of its variance, underscoring that fair treatment is foundational to preventing perceptions of broken promises.

Personal resources such as resilience and self-efficacy served as crucial buffers. Cabrera-Aguilar *et al.* (18) showed that self-efficacy fully mediated the impact of resilience on work engagement, highlighting how individual capacities can mitigate the negative effects of job demands and preserve the perceived PC balance. Finally, contextual factors were significant. Rodwell & Ellershaw (22) found that the impact of PC breach on occupational commitment was context-dependent, being significant only in aged care nurses, suggesting that workplace setting moderates the PC-outcome relationship.

4. DISCUSSION

This systematic review synthesized evidence from 15 international studies encompassing 4,437 nurses across 12 countries to elucidate the relationship between PC fulfillment and nurses' job satisfaction and mental well-being. The findings consistently demonstrate that the PC is a pivotal framework for understanding nurse workforce outcomes. The discussion interprets these results within broader theoretical contexts, outlines practical implications, acknowledges limitations, addresses cross-cultural considerations and proposes directions for future research.

4.1 Principal Findings and Theoretical Integration

The synthesized evidence suggests that the PC is an important factor of nursing workforce stability and well-being. Our analysis reveals a clear duality: fulfillment of the PC, particularly relational aspects such as autonomy, organizational support, and empowerment, is consistently associated with enhanced job satisfaction, psychological well-being, and work engagement (17,21). Conversely, breach of the PC manifested as a lack of inadequate safety provisions, resource deficits, or procedural injustice was associated with psychological distress, burnout, and turnover intention (16,24,27).

These findings are consistent with SET (4), which posits that employment relationships operate on the principle of

				health differentially by experience level.
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3.2 Synthesized Findings: The PC Relationship

The synthesis of evidence reveals a consistent and multifaceted relationship between PC-related experiences and nurse outcomes, which can be organized into three primary themes: (i) the direct impact of fulfillment and breach, (ii) the mediating psychological pathways, and (iii) the contextual and personal moderating factors.

3.2.1 The Direct Duality: Fulfillment versus Breach

A consistent association was observed between the state of the PC and key outcomes. PC fulfillment was associated with positive outcomes. The study by Soomro *et al.* (17) provided the clearest test, demonstrating that fulfillment of transactional such as benefits and relational included autonomy, professional growth contract terms was associated with higher job satisfaction ($\beta=0.45$, $p<0.01$), which subsequently improved psychological well-being. This was corroborated by Ding & Wu (21), who found that psychological empowerment key relational obligations significantly increased job satisfaction and reduced emotional exhaustion.

On the other hand, PC breach was associated with detrimental outcomes. Rodwell & Ellershaw (22) reported breach as significantly negatively associated with job satisfaction and positively associated with psychological distress across nursing contexts. This relationship was often triggered by specific organizational failures. For instance, De los Santos & Labrague (16) and Chipps *et al.* (27) identified an essential "safety breach" during the COVID-19 pandemic, where perceived lack of protection ($\beta=0.36$, $p<0.001$) and resources was associated with moral distress, heightened psychological distress, and increased turnover intentions.

3.2.2 Mediating Pathways: The Psychological Mechanisms

The analysis uncovered vital mediating variables that help explain how PC-related experiences are associated with distal outcomes such as turnover. Job satisfaction emerged as a central mediator. Alkhraishi, Eivazzadeh & Yesiltaş (24) reported an association pattern in which burnout was negatively associated with job satisfaction ($r=-0.51$, $p<0.01$), which in turn partially mediated the relationship with turnover intention ($r=0.75$, $p<0.01$). Ding & Wu (21) further detailed this model, showing that empowerment reduces turnover intention entirely through the serial mediation of increased job satisfaction and reduced emotional exhaustion ($\beta = -0.12$, $p<0.05$).

The Impact of Psychological Contract Fulfillment on Job Satisfaction and Mental Well-being among Nurses: A Systematic Review

obligations. Consequently, interventions aimed solely at reducing burnout symptoms without addressing the underlying contract breaches that generate dissatisfaction are likely to yield only temporary or superficial improvements. Effective retention strategies must address the root causes of dissatisfaction by actively managing psychological contract fulfillment.

4.3 Cross-cultural and contextual considerations

While this review synthesizes evidence from diverse international contexts spanning Europe, Asia, Africa, South America, and Australia, important contextual variations warrant consideration. Rodwell & Ellershaw (22) demonstrated that the impact of PC breach on occupational commitment varies significantly across healthcare settings, being more pronounced in aged care compared to acute hospital environments. This finding suggests that the salience and impact of specific contract elements may be context dependent, influenced by factors such as organizational culture, healthcare system structure, regulatory frameworks, and societal expectations.

Furthermore, although only one included study was conducted in Malaysia (17), the consistency of findings across diverse cultural contexts provides reasonable confidence that core PC mechanisms particularly the fulfillment-satisfaction and breach-distress relationship may operate across contexts. However, the specific content and relative importance of contract elements likely vary across cultures; collectivist contexts may emphasize team support and organizational loyalty, whereas individualistic cultures may prioritize transactional elements like compensation and career advancement. Future research should explicitly examine cultural moderators of PC processes. These cross-cultural interpretations should be treated cautiously because most included studies were cross-sectional and did not formally test cultural moderation.

4.4 Implications for Practice and Policy

The findings offer actionable insights for healthcare administrators and policymakers, with particular relevance to the Malaysian context outlined in the introduction:

4.4.1 Transcend Transactional Fulfillment

While fair compensation remains important (20), organizational leaders must actively manage the relational dimensions of the psychological contract. This requires fostering clinical autonomy, providing structured opportunities for professional growth and skill development, implementing empowering leadership practices, and ensuring nurses have meaningful input into decisions affecting their practice. Organizations should regularly assess nurses' perceptions of contract fulfillment through validated instruments and use this data to guide targeted interventions.

reciprocity. When healthcare organizations fulfill their perceived obligations such as providing a safe working environment, fair treatment, and professional development opportunities, nurses may reciprocate with positive attitudes and behaviors, including increased job satisfaction, organizational commitment, and reduced turnover intention. However, a perceived breach may create an imbalance, in the exchange relationship, triggering negative reciprocity manifesting as psychological distress, reduced commitment, and withdrawal behaviors. The robust burnout-turnover intention pathway identified in our review (24) exemplifies this negative reciprocity mechanism.

Furthermore, our findings align with and extend the JD-R model (6). The PC can be conceptualized as a macro-level framework encompassing vital job resources, including empowerment, organizational justice, autonomy, and supportive leadership. Our review confirms that when these resources are provided and the contract is fulfilled, they effectively buffer job demands, support mental well-being, and foster work engagement (18,19). Conversely, breach of these contractual obligations may exacerbate job demands, and may lead to energy depletion and emotional exhaustion characteristic of burnout. This theoretical integration suggests that PC management represents a potential strategic lever for optimizing the demand-resources balance in nursing practice environments. However, SET and JD-R overlap conceptually because both frameworks emphasize reciprocity, resources, and strain processes; therefore, the theoretical integration should be viewed as an interpretive framework rather than a causal model established by the included evidence.

4.2 The Centrality of Job Satisfaction: A Crucial Mediating Mechanism

A particularly significant finding of this review is the identification of job satisfaction as a central mediating variable between PC status and distal outcomes such as turnover intention. The studies by Ding & Wu (21) and Alkhraishi *et al.* (24) provide robust empirical models demonstrating that the effects of both contract fulfillment (via empowerment) and breach (via burnout) on turnover intention are channeled through job satisfaction. Specifically, Ding & Wu (21) demonstrated that psychological empowerment reduces turnover intention entirely through serial mediation of increased job satisfaction and reduced emotional exhaustion ($\beta = -0.12$, $p < 0.05$), while Alkhraishi *et al.* (24) established that burnout erodes job satisfaction ($r = -0.51$, $p < 0.01$), which in turn partially mediates turnover intention ($r = 0.75$, $p < 0.01$).

The mechanistic insight has profound implications: job satisfaction functions not merely as an outcome but as the psychological indicator of the employment exchange relationship. It represents nurses' evaluative judgment of whether their employer is fulfilling contractual

The Impact of Psychological Contract Fulfillment on Job Satisfaction and Mental Well-being among Nurses: A Systematic Review

countries, with only one Malaysian study identified. This geographic concentration in high-income contexts may limit generalizability of findings to resource-constrained healthcare systems where contract elements and fulfillment challenges may differ substantially.

Third, reliance on self-reported data introduces potential common method bias, which may inflate observed correlations. Future research should incorporate objective indicators such as actual turnover rates and performance metrics, alongside subjective perceptions.

Fourth, the inclusion of two high-risk-of-bias studies (19,25) warrants consideration. These studies were retained to ensure comprehensive evidence coverage and because their core findings aligned with the broader pattern of results. However, their methodological limitations, particularly inadequate confounder control and measurement validity concerns suggest their individual findings should be interpreted cautiously.

Despite these limitations, the review's strengths include rigorous PRISMA-compliant methodology, a contemporary evidence base spanning the critical COVID-19 period, comprehensive quality appraisal using standardized criteria, and novel synthesis clearly mapping mediating pathways between psychological contract status and critical nursing outcomes.

5. CONCLUSION AND FUTURE RESEARCH

This systematic review indicates that PC is an important factor shaping nurse well-being and retention. The synthesis of international evidence demonstrates a clear duality: the fulfillment of relational and transactional obligations - including provision of safety, organizational justice, clinical autonomy, and professional growth opportunities - is associated with job satisfaction and psychological health, whereas breach of this implicit agreement is associated with burnout, distress, and turnover intention.

The crucial insight emerging from this review is the identification of job satisfaction as the central mechanism through which PC-related experiences are associated with workforce outcomes. This underscores that nurse satisfaction represents not merely a desirable outcome but an important mediator of workforce stability and organizational effectiveness.

For healthcare organizations, globally and particularly in resource-constrained contexts such as Malaysia, these findings translate to an urgent strategic imperative: proactively managing the PC through fair processes, safe environments, and empowering practices is not a peripheral concern but a strategic necessity for building a resilient nursing workforce.

5.1 Recommendations for Future Research

4.4.2 Prioritize Organizational Justice as a foundation

The strong negative relationship between procedural and interactional justice and contract breach (23) demonstrated that how organizational decisions are made and communicated is as important as the decisions themselves. Specifically, Ebrahimzadeh *et al.* (23) reported that procedural and interactional justice collectively explained 41% of the variance in perceived contract breach. Healthcare organizations should implement transparent decision-making processes, provide clear rationales for policies affecting nurses, train managers in principles of fair treatment and respectful communication, and establish accessible grievance mechanisms. Justice perceptions serve as a protective factor against contract breach, even when resource constraints limit tangible benefits.

4.4.3 Invest in Structural and Psychological Safety

The "safety breaches" identified during the COVID-19 pandemic underscore that ensuring workplace safety, both physical and psychological, represents a fundamental, non-negotiable employer obligation (16,27). Proactive investment in adequate staffing ratios, provision of personal protective equipment, implementation of violence prevention protocols, and creation of psychologically safe environments where nurses can voice concerns without fear of reprisal are essential for upholding the contract and protecting workforce well-being. Organizations that fail to meet these basic safety obligations may increase perceived PC breach and related negative outcomes.

4.4.4 Support Resilience as a Complementary Strategy

While organizational responsibility for contract fulfillment remains paramount, supporting the development of personal resources, including resilience, self-efficacy, and coping skills, can help nurses manage inevitable job demands (18). Organizations should provide accessible well-being programs, mental health support, peer support networks, and resilience training. However, resilience intervention must not become a substitute for addressing organizational deficiencies. The primary responsibility for contract fulfillment rests with the employer, not the employee.

4.5 Methodological Limitations and Study Quality Considerations

This review has several limitations that warrant acknowledgment. First, the exclusive use of cross-sectional studies precludes causal inference. The relationship between psychological contract breach and burnout, for instance, is likely bidirectional: breach may be associated with burnout, but experiencing burnout may also heighten sensitivity to perceived breaches. Longitudinal research is urgently needed to clarify temporal sequences and explore potential causal pathways.

Second, geographic representation was broad but revealed limited research from low- and middle-income

The Impact of Psychological Contract Fulfillment on Job Satisfaction and Mental Well-being among Nurses: A Systematic Review

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1. Longitudinal Research: Employ longitudinal designs to clarify temporal precedence and potential causal pathways between PC states, job satisfaction, burnout, and turnover.
2. Intervention Studies: Develop and test theory-driven interventions (e.g., RCTs on structured onboarding or justice training) to evaluate proactive psychological contract management.
3. Cultural and Contextual Nuances: Investigate how national culture and healthcare system characteristics moderate the PC, with more studies from diverse and under-researched settings.
4. Integration of Objective Measures: Triangulate self-report data with objective metrics (e.g., actual turnover, performance indicators) to strengthen validity.
5. Mixed-Methods Approaches: Use qualitative and mixed-methods designs to uncover the nuanced, lived experience of the "unwritten agreement."

Ultimately, honoring the mutual commitments of the nurse-organization relationship is fundamental to safeguarding both the nursing profession and the quality of patient care. By addressing the research priorities outlined above, scholars can build the robust evidence base required to guide the strategic organizational transformations necessary to support and retain the global nursing workforce.

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The Impact of Psychological Contract Fulfillment on Job Satisfaction and Mental Well-being among Nurses: A Systematic Review

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Supplementary Table S1. Database-specific search strategy

Database	Search syntax/fields used	Limits/filters
PubMed	((("nurses"[MeSH Terms] OR nurse*[tiab] OR "nursing staff"[tiab] OR "registered nurse*" [tiab] OR "healthcare worker*" [tiab])) AND	English; peer-reviewed journal articles; January 2020 to 31 October 2025; final search date:

The Impact of Psychological Contract Fulfillment on Job Satisfaction and Mental Well-being among Nurses: A Systematic Review

	OR TI burnout OR AB burnout OR TI resilience OR AB resilience) AND (TI "job satisfaction" OR AB "job satisfaction" OR TI "psychological well-being" OR AB "psychological well-being" OR TI "mental health" OR AB "mental health" OR TI stress OR AB stress OR TI "turnover intention" OR AB "turnover intention")			("psychological contract"[tiab] OR "psychological contract fulfillment"[tiab] OR "psychological contract fulfillment"[tiab] OR "psychological contract breach"[tiab] OR "psychological contract violation"[tiab] OR "organizational justice"[tiab] OR "psychological empowerment"[tiab] OR "work engagement"[tiab] OR burnout[tiab] OR resilience[tiab]) AND ("job satisfaction"[MeSH Terms] OR "job satisfaction"[tiab] OR "work satisfaction"[tiab] OR "psychological well-being"[tiab] OR "mental health"[tiab] OR stress[tiab] OR "psychological distress"[tiab] OR "turnover intention"[tiab]))	31 October 2025
PsycINFO	(DE "Nurses" OR TI nurse* OR AB nurse* OR TI "registered nurse*" OR AB "registered nurse*") AND (TI "psychological contract" OR AB "psychological contract" OR TI "psychological contract breach" OR AB "psychological contract breach" OR TI "organizational justice" OR AB "organizational justice" OR TI "psychological empowerment" OR AB "psychological empowerment" OR TI "work engagement" OR AB "work engagement" OR TI burnout OR AB burnout OR TI resilience OR AB resilience) AND (TI "job satisfaction" OR AB "job satisfaction" OR TI "psychological well-being" OR AB "psychological well-being" OR TI "mental health" OR AB "mental health" OR TI "psychological distress" OR AB "psychological distress" OR TI "turnover intention" OR AB "turnover intention")	English; peer-reviewed; January 2020 to 31 October 2025			
			CINAHL	((MH "Nurses+") OR TI nurse* OR AB nurse* OR TI "nursing staff" OR AB "nursing staff") AND (TI "psychological contract" OR AB "psychological contract" OR TI "psychological contract fulfillment" OR AB "psychological contract fulfillment" OR TI "psychological contract breach" OR AB "psychological contract breach" OR TI "organizational justice" OR AB "organizational justice" OR TI "psychological empowerment" OR AB "psychological empowerment" OR TI "work engagement" OR AB "work engagement"	English; peer-reviewed; January 2020 to 31 October 2025

The Impact of Psychological Contract Fulfillment on Job Satisfaction and Mental Well-being among Nurses: A Systematic Review

	"mental health".ti,ab. OR stress.ti,ab. OR "psychological distress".ti,ab. OR "turnover intention".ti,ab.)		Cochrane Library	(nurse* OR "nursing staff" OR "registered nurse*" OR "healthcare worker*") in Title Abstract Keyword AND ("psychological contract" OR "psychological contract fulfillment" OR "psychological contract breach" OR "psychological contract violation" OR "organizational justice" OR "psychological empowerment" OR "work engagement" OR burnout OR resilience) in Title Abstract Keyword AND ("job satisfaction" OR "work satisfaction" OR "psychological well- being" OR "mental health" OR stress OR "psychological distress" OR "turnover intention") in Title Abstract Keyword	English; January 2020 to 31 October 2025
			Medline	(exp Nurses/ OR nurse*.ti,ab. OR "nursing staff".ti,ab. OR "registered nurse*".ti,ab. OR "healthcare worker*".ti,ab.) AND ("psychological contract".ti,ab. OR "psychological contract fulfillment".ti,ab. OR "psychological contract fulfilment".ti,ab. OR "psychological contract breach".ti,ab. OR "psychological contract violation".ti,ab. OR "organizational justice".ti,ab. OR "psychological empowerment".ti,ab. OR "work engagement".ti,ab. OR burnout.ti,ab. OR resilience.ti,ab.) AND ("job satisfaction".ti,ab. OR "work satisfaction".ti,ab. OR "psychological well- being".ti,ab. OR	English; journal article; January 2020 to 31 October 2025