

Review

Beyond Flying Bliss: An Integrative Review of Passenger Stress During the Aviation Experience

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Abstract

Air travel is widely regarded as a safe mode of transport, yet the aviation journey remains a significant source of psychological and physiological stress for many passengers. Existing research has largely focused on fear of flying during the flight itself, with limited synthesis of stress experienced across the entire passenger journey. This integrative review aimed to synthesize evidence on stressors affecting commercial airline passengers during the pre-flight, in-flight, and post-flight stages of travel. A comprehensive search of Google Scholar, Scopus, Web of Science, and PubMed identified peer-reviewed studies published between 2013 and 2025. Following screening and quality appraisal using an adaptation of Critical Appraisal Skills Program (CASP) principles, 46 studies met the inclusion criteria. The review identified 12 major categories of passenger stressors across the aviation journey. Pre-flight stress was primarily associated with procedural, socio-psychological, and financial factors, while in-flight stress centered on perceived loss of control, physical cabin constraints, environmental conditions, and disruptive passenger behavior. Post-flight stress was linked to physical fatigue, communication gaps, baggage-related challenges, immigration procedures, and ground transport difficulties. The review also revealed a substantial geographical imbalance, with most evidence originating from high-income countries. By providing a comprehensive temporal synthesis of passenger stressors, this review offers an evidence-based framework to inform passenger wellbeing initiatives, aviation policy, and future cross-cultural research.

Keywords: passenger stress; flight anxiety; air travel; aviation experience; fear of flying

1. Introduction

Over the past two decades, the global civil aviation industry has experienced unprecedented growth, significantly transforming the nature of human mobility and connectivity [1]. Current estimates indicate that commercial airlines transport over 4.5 billion passengers annually worldwide, a figure projected to reach 8.2 billion by 2037 [2]. This notable growth reflects air travel's evolution from a luxury service to an indispensable pillar of contemporary social and economic infrastructure, facilitating international business, tourism, family connections, and cultural exchange across previously insurmountable geographical barriers [3]. Despite remarkable advancements in aviation safety, operational efficiency, and passenger comfort, flying remains an anxiety-provoking experience for many individuals [4]. Commonly termed flight phobia, aviophobia, or fear of flying, this condition manifests as an intense emotional state triggered by an appreciation of risks disproportionate to the actual statistical safety of air travel [5,6]. Its prevalence is both notable



Academic Editor: Raphael Grzebieta

Received: 4 March 2026

Revised: 25 July 2026

Accepted: 27 July 2026

Published: 30 July 2026

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and concerning from public health and aviation industry perspectives. Estimates suggest that it affects approximately 10 to 30 percent of the population, though prevalence rates vary considerably across different demographic groups, cultural contexts, and geographical regions [4]. In mild cases, flight phobia takes away joy from the travel experience and may result in mental and physical exhaustion for the traveler [7]. In more severe cases, it may lead to physiological responses such as hyperventilation, elevated blood pressure, gastric distress, frequent panic attacks, and professional and social impairment [8].

Traditionally, both academic research and public discourse have conceptualized aviophobia narrowly, primarily focusing on the in-flight experience, particularly moments of perceived vulnerability such as takeoff, landing, and turbulence [7]. Contemporary aviation psychology scholars increasingly recognize this viewpoint as reductive and inadequate for capturing the entirety of passenger stress [5,8,9]. Recent studies propose that flight phobia is not an isolated event confined to the hours in the air but rather a complex, multi-stage phenomenon that unfolds from the initial planning stages through to post-journey recovery [6,10]. This broader temporal understanding fundamentally reconceptualizes the nature of aviation-related anxiety. It implies that the stressor is not solely the flight itself, but rather the entire process of flying [10].

Against this background, it is important to situate the present review within the existing scholarly landscape. The most directly relevant prior synthesis is that of Swanson and McIntosh [11], who provided a broad psychological overview of stress affecting airline passengers. That contribution presented a meaningful early step in consolidating passenger-focused knowledge and explicitly acknowledged the temporal dimensions of aviation anxiety. However, its scope was constrained in several important respects. First, the empirical base it drew upon predates the significant body of post-2016 research on topics including post-COVID-19 pandemic anxiety, virtual reality interventions, disruptive passenger behavior, and the growing recognition of Low- and Middle-Income Country (LMIC) underrepresentation in aviation psychology. Second, and crucially, its geographic scope was limited to developed-world contexts, with no significant engagement with stress profiles of passengers from LMICs. Beyond [11], no comparable synthesis has been identified within the scope of the databases and timeframe examined in this review. Studies in adjacent fields, such as cabin crew mental health [12–14] and passenger service quality [15–17], address overlapping constructs but do not foreground psychological and physiological stress as their central concern, nor do they adopt the pre-flight, in-flight, and post-flight temporal framing employed here. The present review therefore builds upon and extends [11] by applying an integrative methodology, expanding the empirical base to include a decade of more recent evidence, and engaging with underrepresented geographic contexts.

These gaps carry practical consequences. Passenger stress represents a significant and increasingly important issue within commercial aviation. It affects wellbeing, health-seeking behavior, and airline service design across a global industry transporting billions of people annually. Yet the fragmented and geographically imbalanced nature of the existing evidence base means that interventions developed in high-income contexts may not transfer effectively to the diverse populations that now constitute a rapidly growing share of global air travel. Without synthesized, cross-contextual evidence, efforts to design equitable and evidence-based passenger wellbeing initiatives remain constrained. Against this background, the present integrative review aims to: (i) synthesize the available literature on stressors encountered by commercial airline passengers during the aviation experience organized within a pre-flight, in-flight, and post-flight framework, (ii) produce a structured, evidence-mapped categorization of stressor types at each travel stage, drawing on a decade

of literature not captured in prior syntheses, and (iii) highlight areas for future research and policy development.

2. Materials and Methods

2.1. Research Question

What is currently known in the literature regarding the primary stressors encountered by passengers during the various stages of air travel?

2.2. Rationale for an Integrative Review

This study employs an integrative review methodology, as conceptualized by Cronin and George [18], which synthesizes diverse empirical and theoretical literature to provide a comprehensive, holistic understanding of complex topics. Unlike systematic reviews, which prioritize homogenous quantitative studies, integrative reviews accommodate methodological diversity while maintaining rigorous inclusion criteria. This approach is epistemologically aligned with the study's constructivist orientation, recognizing that passenger stress is a socially and contextually situated phenomenon best understood through pluralistic evidence. It is, thus, the most appropriate design for synthesizing the heterogeneous literature across the entire aviation passenger journey.

2.3. Search Methods

The search strategy was designed to retrieve research articles published between 2013 and 2025. The search used Google Scholar, Scopus, Web of Science, and PubMed databases. An English-language restriction and a publication date range of 2013–2025 were applied consistently across all four databases. Publications were restricted to the Article and Review document types in Scopus, and to the Article and Review Article document types in Web of Science. In PubMed, results were restricted to the Journal Article, Review, and Systematic Review article types. Google Scholar does not support a document-type or peer-review filter; results from this database were therefore subjected to the same title/abstract and full-text screening described in Section 2.6 to exclude non-peer-reviewed sources (e.g., theses, conference proceedings, preprints). Three book chapters included in the final review (refs. [3,8,11]) were identified through manual screening of reference lists of included studies, rather than the primary database searches, consistent with the supplementary search strategy described below.

2.4. Search Terms

The following search strategies were applied across all four databases. Boolean operators were standardized using capitalized AND and OR, with parentheses used to group each concept (aviation/air travel context, stress/anxiety, passenger/traveler, and travel stage) to ensure correct operator precedence and improve the reproducibility of the search strategy. Database-specific search fields were used where appropriate: TITLE-ABS-KEY in Scopus, TS (Topic Search) in Web of Science, MeSH terms and Title/Abstract fields in PubMed, and free-text searching in Google Scholar. Searches across all databases were conducted between October 2025 and January 2026. The literature searches were conducted manually across the selected databases. To enhance transparency and reproducibility, the complete Boolean search strategies, searched fields, and applied filters for each database are reported in Table S1.

2.5. Inclusion and Exclusion Criteria

The inclusion criteria for this review focused on studies that could provide meaningful and reliable insights into passenger stress and well-being during the entire aviation experi-

ence. Only peer-reviewed journal articles, relevant scholarly book chapters, and full-text publications published in the English language between 2013 and 2025 were prioritized. Conversely, non-peer-reviewed sources unrelated to passenger stress and well-being during the entire aviation experience were excluded, along with publications not in English. Consistent with the integrative review methodology described in Section 2.2, eligible publication types included not only empirical studies but also literature reviews, conceptual papers, contextual analyses, and policy analyses, provided they met the peer-review, relevance, and language criteria. Additionally, studies were assessed for their direct relevance to the research question outlined in the integrative review. Table 1 outlines these criteria in detail.

Table 1. Eligibility criteria for inclusion.

Criterion	Inclusion	Exclusion	Justification
Population	Studies focusing on adult commercial airline passengers.	Studies focusing solely on cabin crew-related stress. Studies on passengers traveling on private planes. Studies on children traveling by air.	Focuses on the stress experienced by adults who are the main user group of commercial air travel.
Intervention	Studies examining stressors related to the commercial flying experience and its specific aspects (pre-flight, in-flight, and post-flight).	Studies focusing on non-commercial or non-air travel.	Ensures relevance to the study’s scope.
Outcome	Studies discussing psychological or physiological stress related to the aviation experience.	Studies that do not investigate passenger stress associated with air travel.	Ensures the review remains aligned with its central research question.
Language	English.	Non-English articles.	Ensures easy comprehension and accessibility without translation.
Type of source	Peer-reviewed journal articles, relevant scholarly book chapters, full-text publications encompassing empirical studies, reviews, conceptual papers, contextual analyses, and policy analyses.	Non-peer-reviewed sources, editorials, or unavailable full texts.	Emphasizes credible, relevant sources across both empirical and non-empirical designs.
Publication year	Published between 2013 and 2025.	Studies published before 2013.	Captures recent trends in passenger safety and well-being within the aviation industry.

2.6. Screening and Selection

To ensure the selection of relevant articles, the researchers employed a pre-specified multi-stage screening process [19]. A structured screening form operationalizing the eligibility criteria was developed and agreed upon by both reviewers prior to the commencement of screening. A brief calibration exercise on a pilot sample of ten studies was conducted to align interpretations before the main screening commenced. Two independent post-graduate researchers conducted screening at each stage. At the title and abstract stage, each reviewer independently assessed relevance against the pre-specified eligibility criteria. At the full-text stage, the same process was applied. Where disagreement arose, a structured resolution process was followed: (i) each reviewer independently re-examined the disputed study against the documented eligibility criteria; (ii) a structured discussion was held to reconcile differing interpretations with reference to the criteria; and (iii) where consensus could not be reached through discussion, the matter was referred to the senior author for final determination. It is, however, important to note that the frequency of disagreements was low, occurring primarily at the title and abstract screening stage. It

is important to note that [18]’s integrative review framework does not prescribe formal statistical interrater reliability coefficients as a requirement. Consistent with this design, rigor is pursued through systematic process transparency, pre-specification of eligibility criteria, and structured documentation.

The initial systematic search yielded 1030 studies. After removing duplicates and non-English publications, 847 studies remained for further consideration. These studies underwent a preliminary screening, resulting in the exclusion of 623 articles that did not meet the peer-review criteria. The remaining 224 were subjected to a selection process involving scrutiny of their titles, abstracts, and full texts. Subsequently, 132 articles were removed as they failed to align with the inclusion criteria. This process yielded 92 studies directly relevant to the research area, which underwent further in-depth examination. A quality assessment of these 92 studies led to the exclusion of 46 publications that did not meet the predetermined quality standards. Ultimately, 46 research articles satisfying the selection criteria and demonstrating outstanding quality in terms of clarity and comprehensiveness of key concepts, methodological rigor, sampling techniques, and valuable findings were included in the final review. These 46 studies provided the foundation for a comprehensive analysis and synthesis of the research findings. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) [20] flow diagram (Figure 1) provides a clear illustration of the systematic search and study selection process. While this study is an integrative rather than systematic review, PRISMA reporting guidelines were adopted as a transparency tool to document the search and selection process. This reflects best practice in integrative review reporting.

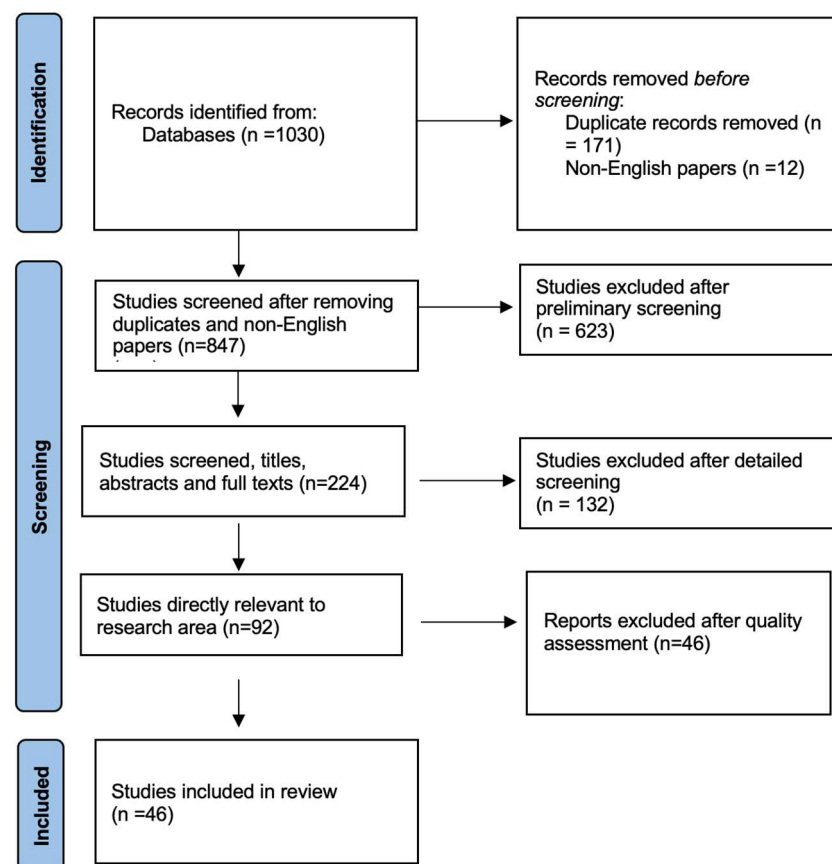


Figure 1. PRISMA flow diagram of the study selection process for the review.

2.7. Quality Assessment

The methodological quality of the included studies was assessed using an adaptation of the Critical Appraisal Skills Program (CASP) principles to evaluate the credibility, rigor, and relevance of the evidence included in this integrative review [19]. As the review incorporated diverse publication types, including empirical studies, qualitative research, mixed-methods studies, clinical studies, systematic and narrative reviews, conceptual papers, and contextual sources, a design-sensitive adaptation of general CASP principles was adopted, rather than the application of an identical CASP checklist across all study designs. The assessment was guided by the core CASP principles while recognizing the methodological differences among the included publications.

To ensure consistency across the heterogeneous evidence base, all studies were appraised using four common quality domains adapted from general CASP principles: (i) clarity and comprehensiveness of concepts, (ii) methodological rigor, (iii) sampling or evidence adequacy, and (iv) value of the findings. These domains were interpreted according to the nature of each publication. For empirical studies, the third domain considered the appropriateness of participant selection, sampling procedures, or data sources. For reviews, conceptual papers, and contextual publications, it evaluated the adequacy, transparency, and relevance of the evidence used to support the study's conclusions. This approach enabled a consistent appraisal framework while accommodating differences in study design. Consistent with CASP guidance, studies were assigned an overall qualitative rating rather than a numerical score. Studies demonstrating clear aims, appropriate methodological rigor, an adequate sampling strategy or evidence base, and findings that made a meaningful contribution to the review objectives were rated Strong. Studies with minor methodological limitations but that nevertheless provided credible and relevant evidence were rated Moderate. Studies assessed as having significant methodological weaknesses across multiple appraisal domains were classified as weak and were excluded from the final synthesis. An overall rating of Strong required both the methodological rigor and value-of-findings domains to be rated Strong; the sampling/evidence adequacy domain could be rated Moderate without changing this rating, given its more variable interpretation across study designs. Quality appraisal was undertaken independently by the first author and reviewed by the co-author. Any differences in interpretation were resolved through discussion until consensus was reached. The appraisal was used to inform the interpretation of the evidence and the overall confidence in the findings rather than to generate weighted scores. A detailed summary of the quality appraisal for all included studies is presented in Table S2.

2.8. Data Extraction

Data extraction was conducted manually using a standardized extraction form applied consistently across all 46 included studies. For each study, the following information was extracted: author(s) and year, country/region, study design, sample/participants, travel stage, key stressors, and findings. The extracted data were then organized and presented in Table S3.

3. Results

This review synthesized findings from 46 studies conducted across 25 countries and six continents, published between 2016 and 2025. The included studies comprised surveys and empirical studies ($n = 17$), reviews ($n = 14$), clinical and experimental studies ($n = 6$), qualitative and mixed-methods studies ($n = 5$), and policy, contextual, or other study designs ($n = 4$). Findings were synthesized thematically using the a priori temporal framework of the pre-flight, in-flight, and post-flight stages of the passenger journey.

Within each stage, stressors were grouped into thematic categories and classified according to their frequency of reporting across the included studies rather than the overall strength or quality of the evidence. Accordingly, stressor categories are described as frequently reported, moderately reported, or infrequently reported, reflecting the consistency with which they appeared in the reviewed literature.

The included studies identified 12 stressor categories across the three travel stages and their frequency of reporting. Pre-flight stressors were the most extensively investigated, with procedural/logistical and socio-psychological stressors being the most frequently reported. During the in-flight stage, perceived loss of control was the most frequently reported stressor, whereas post-flight studies reported physical fatigue and circadian disruption the most. The distribution of reported stressors across the passenger journey indicates that some aspects of passenger stress have received considerably greater research attention than others, highlighting areas where further investigation is warranted. Table 2 summarizes the findings.

Table 2. Summary of Passenger Stressors by Travel Stage and Reporting frequency.

Travel Stage	Stressor Category	Key Stressors	No of Supporting Studies	Reporting Frequency
Pre-flight	Procedural & Logistical	Security screening, flight delays, terminal navigation, baggage concerns	13	Frequently reported
Pre-flight	Socio-Psychological	Anticipatory anxiety, aviophobia, health concerns in crowded terminals	12	Frequently reported
Pre-flight	Financial	Complex fare structures, hidden costs, unexpected baggage fees	5	Frequently reported
In-flight	Perceived Loss of Control	Turbulence, inability to escape, unpredictable flight events	5	Frequently reported
In-flight	Physical Cabin Constraints	Limited legroom, personal space invasion, seating discomfort	4	Moderately reported
In-flight	Disruptive Passenger Behavior	Alcohol-fueled incidents, mental health crises, physical altercations	2	Infrequently reported
In-flight	Cabin Environmental Factors	Low humidity, poor ventilation, engine noise, recirculated air	2	Infrequently reported
Post-flight	Information gaps, poor communication	Inadequate multilingual support, unclear airport signage, limited staff assistance, post-flight reception failures	6	Frequently reported
Post-flight	Physical Fatigue & Circadian Processing	Jet lag, sleep disturbance, cognitive impairment, cardiovascular strain	4	Moderately reported
Post-flight	Ground Transport & Wayfinding	Transport difficulties, poor signage, unfamiliar destinations	3	Moderately reported
Post-flight	Baggage-Related Stressors	Lost/delayed luggage, disproportionate impact on international travelers	2	Infrequently reported
Post-flight	Immigration & Customs Processing	Long queues, language barriers, tight connections	2	Infrequently reported

3.1. Factors Contributing to Passenger Stress Prior to Departure

The included studies consistently identified procedural, socio-psychological, and financial stressors experienced before departure. These factors were synthesized into thematic categories to illustrate their influence on passenger mental health. Table 3 summarizes these findings.

Table 3. Summary of Key Pre-Flight Stress Factors.

Key Sources	Key Factor Category	Specific Stressor	Passenger Concerns
[11,16,21–31]	Procedural/Logistical	Airline choice anxiety Security screening Airport safety concerns Baggage-related concerns Airport navigation Transportation to the airport	Anxiety in navigating unfamiliar terminals and long waiting times. Long queues and strict security procedures. Fear of misplaced or delayed checked baggage. Fear of baggage size and weight restrictions. Lack of control over flight delays, cancellations and disruption to connecting flights. Fear of busy traffic, car accidents or losing too much time on the way to the airport.
[4,6,7,10,11,22,25,26,32–35]	Socio-Psychological	Aviophobia (fear of flying) General anxiety	Anticipatory anxiety of air travel, manifesting days or weeks before departure. Concerns about health risks at crowded airports. Concerns about pre-flight and in-flight safety. Lack of personal space in crowded terminals.
[16,24,26,27,36]	Financial	Financial pressure and hidden costs	Complexity of air fare pricing structures. Decision paralysis when comparing fare classes and restrictions. Stress of unexpected baggage fees, seat selection charges and flight change penalties.

Pre-flight stressors were identified in 24 of the 46 included studies, representing the most extensively examined travel stage in the literature. Three distinct stressor categories emerged from the synthesis: procedural and logistical, socio-psychological, and financial. Procedural and logistical stressors were the most frequently and consistently reported stressor category across the included studies. Security screening procedures were identified as a salient pre-flight stressor by [21–23]. Common concerns included anxiety about inadvertently violating complex and frequently changing security regulations [22], stress associated with physical screening procedures [23], fear of being singled out for additional screening [21], and time pressure related to unpredictable queue lengths [23]. Notably, two studies reported that security-related stress was compounded by perceived impoliteness or excessive authority displayed by security personnel, generating confrontational rather than cooperative interactions [21,22]. Kim et al. [23], using a survey of airport security passengers in South Korea, found that waiting time at security screening negatively affected passengers' emotional responses and airport image, adding quantitative support to this pattern. Flight delays and cancellations and anxiety in navigating unfamiliar terminals were reported across multiple studies as additional procedural stressors [11,16,24], though reported less consistently across studies.

Socio-psychological stressors were identified across 12 of the 24 pre-flight studies. Anticipatory anxiety arising from anticipating upcoming air travel was the most frequently reported socio-psychological pre-flight stressor, documented across five studies, predominantly survey-based designs conducted in Europe and North America, with sample sizes ranging from approximately 80 to 500 participants [4,6,7,10,11]. Swanson & McIntosh [11] reported that this anxiety may manifest days or even weeks before scheduled flights, interfering with sleep, concentration, and daily functioning. For individuals with diagnosed aviophobia, anticipatory anxiety was found to be severe and disabling [7,10]. Health-related concerns in crowded airport environments also emerged as significant pre-departure stressors, particularly in research conducted during and following the COVID-19 pandemic [25,32–35]. Passengers reported concerns regarding the potential for exposure to infectious diseases in densely populated terminals and the inability to control hygiene practices of others sharing airport space [32–34]. While acute pandemic-related fears have subsided, several post-pandemic studies noted that health-related anxiety has not disappeared entirely [34,35]. Song et al. [34], in a longitudinal survey of tourists and travelers,

reported that passengers continue to express concerns about seasonal influenza, respiratory illnesses, and general hygiene in airport environments, a finding reinforced by [35] in a Nigerian context, providing rare corroboration from an LMIC setting.

Financial stressors were identified in five studies [16,24,26,27,36], representing a moderately reported stressor category. Complex airline pricing structures, hidden costs, and unexpected fees were consistently identified as sources of pre-departure anxiety, particularly among budget-conscious and international travelers. Batra [36], in a conceptual and mixed-methods study of air travelers, reported that decision paralysis arising from fare complexity and unexpected baggage fees constitutes a significant pre-flight stressor. The complexity of airline pricing emerged as a notable source of anxiety and frustration [36], with passengers reporting confusion about varying fare structures, restrictions, and inclusions across different fare classes. Hidden or unexpected costs represent another dimension of financial stress, with passenger frustration documented regarding additional fees for checked baggage, seat selection, and flight changes not clearly communicated during initial booking [16,26]. Currency conversion fees and the perception that advertised fares misrepresent true travel costs were identified as compounding factors for international passengers [36]. While financial stressors were reported less frequently than procedural or socio-psychological ones, their consistent identification across geographically diverse contexts—India [16], Nigeria [24], and Indonesia [26]—suggests cross-contextual relevance.

3.2. Factors Contributing to In-Flight Anxiety Among Passengers

In-flight stressors were identified across 25 of the 46 included studies, with four major stressor categories emerging from the synthesis: perceived loss of control, physical cabin constraints, cabin environmental factors, and disruptive passenger behavior. Perceived loss of control was the most frequently and consistently reported stressor, appearing across five studies [5,8,9,37,38]. Multiple studies converged on the finding that passengers' inability to control their immediate environment, act, or escape during flight triggers a physiological and psychological stress response even in the absence of objective threat [5,9]. Laker et al. [5] documented cases where loss of control triggered epileptic-like neurological symptoms, indicating that this stressor has clinically significant physiological consequences beyond mild anxiety. Azevedo [37] identified turbulence and unpredictable flight events as primary triggers, with cognitive reframing and in-flight mindfulness proposed as mitigation strategies. Inability to control unpredictable events such as plane crashes, turbulence, and weather conditions was also found to undermine passenger autonomy and increase anxiety [37]. While considered minor by some passengers, situational control factors such as food, entertainment, and when to go to the toilet were also identified to further reduce passengers' sense of autonomy during flights and cause a degree of stress [38]. The convergence of clinical, survey, and review evidence across multiple geographic contexts including the UK, Portugal, and the Czech Republic, reinforces the consistency of this finding. Physical cabin constraints were identified across four studies [39–42], representing a moderately reported stressor category, though with notable variation across studies. dell'Olio et al. [39], in a survey of airline passengers in Spain, reported that 26% of passengers cited limited legroom as a comfort-affecting stressor producing mild stress. While aircraft cabin dimensions are broadly standardized across commercial aviation globally, this finding should be interpreted with caution given its reliance on self-report measures of perceived discomfort, which are shaped by individual physical characteristics, prior travel experience and carrier type. These factors thus vary considerably across passenger populations and are not controlled for in a single-country study. Patel and D'Cruz [40] corroborated the legroom-anxiety correlation in a synthesis of passenger-centric comfort studies, while Lewis et al. [41] identified personal space invasion by fellow passengers as

a specific and distinct in-flight stressor. Importantly, Ahmadpour et al. [42], in a qualitative and empirical study of Australian and French passengers, provided a counterpoint. Ahmadpour et al. [42] further highlight that physical constraints are subjective stressors moderated by individual physical characteristics, flight duration, and adaptive coping strategies, with larger, older, or musculoskeletal-impaired passengers disproportionately affected on long-haul flights. This cross-study variation indicates that the impact of physical constraints is neither uniform nor universal.

Cabin environmental factors were identified across two empirical studies [17,43], representing a limited but consistently reported stressor category. Lou et al. [43], in an empirical environmental study of aircraft cabin passengers in China, documented that low humidity levels, typically 10–20% in aircraft cabins compared to 30–65% in typical indoor environments, inadequate ventilation, recirculated air, and volatile organic compounds contribute to passenger discomfort and stress during flight. Aircraft engine noise, air circulation systems, and ambient sounds within the cabin were identified as contributing to passenger fatigue and stress, particularly on longer flights [17]. Taken together, these environmental stressors suggest a cumulative exposure effect, with the impact intensifying with flight duration. Disruptive passenger behavior was identified across two studies as a source of in-flight stress for passengers in the confined cabin space [15,44]. Hu et al. [15] highlighted that airline passenger misbehavior ranges from relatively minor acts such as loud conversations and armrest encroachment to more serious and potentially life-threatening acts, including attempts to breach the cockpit, seize control of the craft, and physical assaults. Research examining trends in disruptive passenger behavior identified two primary triggers: alcohol consumption (particularly excessive drinking before or during flights) [15], and mental health crises or instability [44]. The consistency of these triggers across studies from the USA, Vietnam, and the UK strengthens their cross-contextual applicability.

3.3. Post-Flight Stress Factors

The review identified recurring post-flight stressors that influence passengers' physical and psychological well-being after arrival. These factors were synthesized into thematic categories to illustrate their effects on the post-flight travel experience. Table 4 summarizes these findings.

Table 4. Summary of Key Post-Flight Stress Factors.

Specific Stressor	Description	Impact on Passengers	Key Source(s)
Baggage delays or lost luggage	Prolonged waiting times at baggage claim Lost or mishandled luggage Disproportionate impact on international travelers	Frustration, anxiety and logistical disruption Heightened stress when medications or work materials are affected	[29,45]
Immigration and customs processing	Long queues and strict security scrutiny Language barriers during immigration interactions Tight connections to onward transportation	Vulnerability, fatigue and heightened anxiety Particularly acute for first-time international travelers	[28,46]
Physical fatigue and disorientation	Jet lag and circadian rhythm disruption Sleep disruption and inability to maintain normal sleep–wake patterns Dehydration from low cabin humidity during flight	Mental exhaustion and irritability Reduced alertness and cognitive impairment Fatigue prevalence twice as high among frequent flyers	[8,16,47,48]
Ground transport difficulties	Challenges securing transportation from the destination airport Pricing issues and missed transport connections Compounded by jet lag, language barriers and baggage delays	Confusion and stress, particularly in unfamiliar locations Exacerbation of both physiological and psychological stress	[25,30,31]

Table 4. *Cont.*

Specific Stressor	Description	Impact on Passengers	Key Source(s)
Information gaps and poor communication	Lack of multilingual support for international travelers Inadequate or unclear airport signage Limited staff availability for passenger assistance	Perceived lack of support, confusion and uncertainty Heightened anxiety for first-time and non-English-speaking travelers	[24,26,27,30,31,49]

Post-flight stressors were identified in 15 of the 46 included studies. Five stressor categories emerged: physical fatigue and circadian disruption, immigration and customs processing, baggage-related stressors, ground transport and wayfinding difficulties, and information gaps and poor communication. Physical fatigue and circadian disruption was the most frequently reported post-flight stressor category, identified across four studies [8,16,47,48]. Bin et al. [47], in a cross-sectional online survey of long-haul flight passengers ($n = 878$), found that fatigue prevalence was twice as high among frequent flyers compared to infrequent travelers, with frequent flyers more likely to have sought medical attention specifically for travel-related fatigue. This finding, derived from a moderately large sample with a cross-sectional design, provides the most direct quantitative data among the post-flight studies, though its cross-sectional design limits causal inference. Katoch et al. [48] corroborated these findings in a medical review documenting circadian rhythm disruption, sleep disturbance, and cognitive impairment as cardiovascular and neurological consequences of multi-time zone flights. Passengers reported sleep disruption and inability to maintain normal sleep–wake patterns, resulting in reduced alertness and cognitive impairment [48]. Foreman et al. [8] and Raju & Priya [16] further concluded that physical fatigue represents a genuine health concern for regular commercial air travelers, not merely a minor inconvenience. The convergence of empirical and clinical evidence across this category justifies classifying physical fatigue as a frequently reported post-flight stressor. Nonetheless, short-term airport stressors can often be reduced through immediate infrastructural and operational interventions, such as improved signage, staffing, and baggage systems [16]. Longer-term effects, particularly jet lag and circadian disruption, require clinical attention and passenger self-management strategies extending well beyond the airport environment [8].

Immigration, customs, and administrative processing were identified as post-flight stressors across two studies [28,46], representing a limited but consistently reported stressor category. Stricter security clearances and prolonged waiting times at immigration lines were found to increase anxiety, particularly when passengers have tight connections to ground transportation or scheduled appointments [46]. Djaya et al. [46], in a qualitative interview study of passengers at Makassar International Airport in Indonesia, documented that immigration and customs interactions provoke vulnerability, fatigue, and heightened anxiety. This is particularly prevalent for first-time international travelers, with language barriers as a compounding factor. Baggage-related stressors were identified across two studies [29,45], representing a limited but consistently reported stressor category. Lost or delayed baggage emerged as a significant stressor, particularly when essential items such as medications and work materials are in checked bags [45]. Singh [45] further reported that baggage challenges disproportionately affect international travelers due to additional complications in recovering delayed bags across national borders. Mtafya & Mutalemwa [29] reinforced this finding from a Tanzanian context, identifying baggage handling and airport services as key post-flight stressors, providing a sub-Saharan African perspective on this stressor category. Ground transport and wayfinding difficulties were identified in three studies [25,31,49], constituting a limited but conceptually important stressor category. Setiawan et al. [49] reported that arriving at a destination airport does

not end passenger stress. Alharasees et al. [30] noted that ground transport difficulties, particularly in unfamiliar settings, are coupled with jet lag, language barriers, and baggage delays, which exacerbate both physiological and psychological stress. Alharasees et al. [30] further provided supporting evidence that multilingual and digital signage systems at airports contribute to traveler autonomy and reduce stress, particularly for non-local and first-time users, indicating that this stressor is amenable to infrastructural intervention. Information gaps and poor communication emerged as a cross-cutting post-flight stressor, evidenced across six studies [24,26,27,30,31,49]. Inadequate multilingual signage, limited staff assistance, and unclear post-arrival procedures were consistently associated with heightened passenger anxiety, particularly among non-local and first-time travelers [30,49]. Poor post-flight reception quality and unmet service expectations further compounded stress during the transition from aircraft to ground [24,26,27]. Critically, this stressor disproportionately affects passengers from linguistically and culturally diverse backgrounds, suggesting that these communication gaps are structural challenges, reflecting systemic gaps in inclusive airport design and passenger-centered service delivery.

4. Discussion

This review synthesized evidence on psychological and physiological stress experienced by commercial airline passengers across the pre-departure, in-flight, and post-flight phases of the travel journey. Unlike previous reviews that have examined isolated aspects of aviation-related anxiety, this review provides a stage-based framework that demonstrates how passenger stress evolves throughout the travel experience. Rather than representing independent events, the evidence indicates that stress is cumulative, with stressors encountered during one stage often influencing passenger perceptions and emotional responses during subsequent stages. This perspective highlights passenger stress as a dynamic process requiring integrated management across the entire travel journey rather than isolated interventions targeting individual phases.

A consistent finding across the reviewed studies was that fear of flying (aviophobia) remains one of the most significant psychological stressors affecting commercial airline passengers [4,5]. Although prevalence estimates ranging from 10% to 30% were reported [4], these estimates originate predominantly from studies conducted in high-income countries [3,4]. Consequently, the available evidence provides only a partial understanding of the global burden of flight-related anxiety. The limited representation of low- and middle-income countries (LMICs) in the reviewed literature should therefore not be interpreted as evidence of lower prevalence, but rather as an indication of an important geographical research gap. This interpretation is supported by studies highlighting significant disparities in mental health infrastructure, access to psychological services, and aviation-specific support programs between developed and developing settings [7,33].

Across the reviewed literature, differences in the recognition and management of passenger anxiety appeared to reflect broader health system and societal contexts rather than differences in passenger psychology alone. Studies consistently reported that developed countries generally provide greater access to specialized interventions, including cognitive behavioral therapy [4], virtual reality exposure therapy [6], pharmacological treatment [4], and airline-supported fear-of-flying programs [4]. In contrast, evidence from LMICs suggests that limited mental health resources, low public awareness, and persistent stigma surrounding anxiety disorders restrict both diagnosis and treatment [50–52]. Collectively, these findings suggest that the observed geographical differences in reported prevalence may be influenced by variations in healthcare capacity and reporting practices rather than true differences in the occurrence of aviation-related stress [51]. Nevertheless, this interpretation should be viewed cautiously because of the limited empirical evidence

currently available from LMICs. The review also highlights the importance of considering cultural context when interpreting passenger stress. Some studies suggested that cultural attitudes towards uncertainty and perceived control may influence emotional responses to air travel [53,54]. However, the available evidence remains limited and is insufficient to establish definitive cross-cultural differences in aviation-related anxiety. Consequently, any explanation based on cultural beliefs should be regarded as a plausible interpretation rather than a confirmed conclusion. This finding underscores the need for future comparative studies involving diverse geographical and cultural settings before generalizable conclusions can be drawn.

Another important observation emerging from this review is the influence of external events on passenger stress. Studies conducted during the COVID-19 pandemic demonstrated that passenger stress profiles can change rapidly in response to global crises [25,32,34,35]. Concerns regarding infection risk, evolving travel restrictions, health screening procedures, and uncertainty surrounding international travel substantially altered passengers' psychological experiences [25,35]. These findings indicate that passenger stress is not determined solely by the aviation environment but is also shaped by broader public health, political, and societal conditions [34,35]. This reinforces the need for airlines and airports to adopt flexible and adaptive passenger wellbeing strategies that can respond effectively to emerging changes rather than relying exclusively on routine operational procedures. Collectively, the evidence reviewed suggests that passenger stress should be understood as a multidimensional phenomenon arising from the interaction of operational, psychological, environmental, and contextual factors throughout the passenger journey. While individual studies focused on specific stressors, the collective evidence demonstrates that uncertainty, perceived loss of control, and inadequate communication consistently underpin many passenger concerns across all travel stages. This overarching pattern provides a more comprehensive understanding of passenger wellbeing than considering isolated stressors independently. Additionally, the findings highlighted interconnections between public health, travel regulations, and passenger psychology that warrant enhanced interdisciplinary attention [25].

5. Conclusions

This integrative review synthesized evidence from 46 studies conducted across 25 countries to examine psychological and physiological stressors experienced by commercial airline passengers throughout the aviation journey. The findings demonstrate that passenger stress is a multidimensional phenomenon extending across the pre-departure, in-flight, and post-flight phases, with distinct yet interconnected stressors characterizing each stage. By systematically categorizing these stressors, this review provides a structured framework that advances previous work and offers practical guidance for airlines, airports, and policymakers seeking to improve passenger wellbeing. A key contribution of this review is the development of an evidence-based classification of passenger stressors across the travel journey, highlighting how procedural, environmental, psychological, and operational factors collectively influence the passenger experience. This framework can inform the design of targeted interventions aimed at reducing stress and enhancing the overall quality of air travel. Despite these contributions, the review identified a substantial geographical imbalance in the available evidence. Most studies originated from Europe, North America, and Australia, with limited representation from low- and middle-income countries. Consequently, the findings should be interpreted cautiously, as context-specific stressors and intervention strategies relevant to underrepresented regions may not be adequately captured. Future research should prioritize geographically diverse, cross-cultural, and longitudinal studies to strengthen the global evidence base and validate

interventions across different aviation contexts. Expanding research to emerging aviation markets will support the development of more inclusive, contextually appropriate, and evidence-based strategies for improving passenger wellbeing and promoting safer, more passenger-centered air transport systems.

6. Implications for Policy and Practice

The findings presented in this review have several implications for aviation industry practice and policy development:

For Airlines: enhanced passenger communication, particularly regarding delays, cancellations, and procedural changes, can significantly reduce stress. Investment in cabin crew training for recognizing and supporting anxious passengers, implementation of specialized programs for fearful flyers, and consideration of passenger well-being in service design decisions can improve overall experiences. Airlines should also consider partnerships with mental health providers to offer accessible interventions for anxious passengers. These recommendations are supported by evidence, consistently documented across 10 reviewed studies in the pre-flight and in-flight evidence base.

For health care systems: the integration of aviation psychology into comprehensive mental health services, the training of clinicians in evidence-based interventions for aviophobia, the development of accessible treatment options, and public education about fear of flying as a treatable condition can significantly enhance support for anxious flyers. This approach holds relevance to LMICs where specialized aviation psychology services may not be economically viable. These recommendations are supported by clinical evidence, principally from randomized controlled trials and clinical reviews of VR-based and cognitive behavioral interventions included in this review.

For Airports: Improved wayfinding through clear and multilingual signage, adequate staffing for passenger assistance, and efficient security and customs procedures can mitigate procedural stressors. Digital information systems providing real-time updates and multilingual support can also enhance passenger autonomy and reduce anxiety, particularly for international and first-time travelers.

For researchers: Priorities should include cross-cultural research examining aviation stress in diverse populations. The development and validation of cultural interventions represent a critical research gap requiring immediate attention. Longitudinal studies tracking stress trajectories across the complete travel journey would provide valuable insights into temporal patterns of aviation anxiety. Additionally, research examining scalable and accessible intervention models suitable for resource-limited contexts would enhance implementation feasibility in LMICs. Increased research on underrepresented populations and contexts is crucial for advancing equitable knowledge development and ensuring the generalizability of findings across global settings. These directions are driven by limited evidence from LMIC contexts and should be treated as research priorities rather than practice-ready recommendations.

7. Study Limitations

This review exhibits several limitations. Firstly, its exclusive reliance on English-language publications might have precluded insights from studies published in other languages, thus potentially limiting the comprehensiveness of the review's findings. To overcome the reliance on English-language publications, subsequent reviews should broaden their search to include multilingual databases and non-English scholarly literature, potentially involving a diverse research team with proficiency in various languages to ensure a more global perspective of aviophobia. Secondly, this review only included peer-reviewed studies, possibly leading to publication bias. Valuable findings from the grey literature

sources were not captured, despite their potential to provide insights into aviophobia. A third limitation concerns geographic representativeness. Most included studies originate from Europe, North America, and Australia. LMIC representation remains sparse and uneven. Consequently, the stressor classification and prevalence estimates reflect research environments that differ from emerging aviation markets in Africa, Asia, and Latin America, limiting the generalizability of this review's conclusions.

A further limitation arises from the scope of the databases and journals searched; although the review systematically consulted four databases, potentially relevant literature published on other scholarly platforms, or conference proceedings not indexed within the selected sources that might have been inadvertently excluded. This could imply that the review's findings, whilst robust within its defined parameters, may not encompass the entirety of the published scholarship on passenger stress during the aviation journey. To mitigate this limitation, future endeavors should consider expanding the search strategy to incorporate a wider array of academic databases, the grey literature repositories, and relevant conference proceedings, thereby striving for a more exhaustive capture of the extant literature on flying-related anxiety among passengers. A related limitation concerns search documentation: the exact final search date and per-database record counts were not recorded during the original searches and could not be reconstructed retrospectively. Only the overall search window (October 2025–January 2026) and combined PRISMA-stage yields are reported. Future reviews should log this information at the time of searching.

Supplementary Materials: The following supporting information can be downloaded at <https://www.mdpi.com/article/10.3390/safety12040099/s1>, Table S1: Database-specific search strings, searched fields, and filters; Table S2: Quality appraisal summary of included studies; Table S3: Characteristics of studies included in the Integrative Review (N = 46), ordered chronologically by publication year.

Author Contributions: Conceptualization, S.R.T.C. and P.N.; methodology, S.R.T.C. and P.N.; validation, P.N.; formal analysis, S.R.T.C.; writing—original draft preparation, S.R.T.C.; writing—review and editing, P.N.; visualization, S.R.T.C.; supervision, P.N. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Data Availability Statement: The original contributions presented in this study are included in the article/Supplementary Material. Further inquiries can be directed to the corresponding author.

Conflicts of Interest: The authors declare no conflicts of interest.

Abbreviations

The following abbreviations are used in this manuscript:

LMICs	Low- and Middle-Income Countries
CASP	Critical Appraisal Skills Program
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses

References

1. Wandelt, S.; Sun, X.; Zhang, J. GraphCast for solving the air transportation nexus among safety, efficiency, and resilience. *Commun. Transp. Res.* **2024**, *4*, 100120. [CrossRef]
2. Modarress Fathi, B.; Ansari, A.; Ansari, A. Green commercial aviation supply chain—A European path to environmental sustainability. *Sustainability* **2023**, *15*, 6574. [CrossRef]
3. Vasigh, B.; Azadian, F. The globalization and evolution of the aviation industry. In *Aircraft Valuation in Volatile Market Conditions: Guiding Toward Profitability and Prosperity*; Springer International Publishing: Cham, Switzerland, 2022; pp. 1–65.

4. Abuso, A.B.V.; Hashmi, M.; Hashmi, H.; Khoo, A.; Parsaik, A. Overcoming fear of flying: A combined approach of psychopharmacology and gradual exposure therapy. *Cureus* **2023**, *15*, e39773. [[PubMed](#)]
5. Laker, M.K.; Bob, P.; Riethof, N.; Raboch, J. Fear of flying, stress, and epileptic-like symptoms. *Neuropsychiatr. Dis. Treat.* **2024**, *20*, 777–782. [[CrossRef](#)] [[PubMed](#)]
6. Arıkan, Z.Ö. The role of online virtual reality therapy: New Approaches in Treatment of Aviophobia. *Hum. Factors Aviat. Aerosp.* **2025**, *2*, 57–69. [[CrossRef](#)]
7. Ribé-Viñes, J.M.; Gutiérrez-Maldonado, J.; Zabolipour, Z.; Ferrer-Garcia, M. Efficacy of virtual reality-based exposure therapy for the treatment of fear of flying: A systematic review. *Cogn. Behav. Ther.* **2023**, *16*, e19. [[CrossRef](#)]
8. Foreman, E.I.; Bor, R.; van Gerwen, L. The Nature, Characteristics, Impact, and Personal Implications of Fear of Flying. In *Aviation Mental Health*; Routledge: Abingdon, UK, 2016; pp. 53–68.
9. Gottlieb, A.; Doniger, G.M.; Hussein, Y.; Noy, S.; Plotnik, M. The efficacy of a virtual reality exposure therapy treatment for fear of flying: A retrospective study. *Front. Psychol.* **2021**, *12*, 641393. [[CrossRef](#)] [[PubMed](#)]
10. Mor, S.; Botella, C.; Campos, D.; Tur, C.; Castilla, D.; Soler, C.; Quero, S. An internet-based treatment for flying phobia using 360 images: Study protocol for a feasibility pilot study. *Internet Interv.* **2021**, *24*, 100387. [[CrossRef](#)] [[PubMed](#)]
11. Swanson, V.; McIntosh, I.B. Psychological stress and air travel: An overview of psychological stress affecting airline passengers. In *Aviation Mental Health*; Routledge: Abingdon, UK, 2016; pp. 13–25.
12. Görlich, Y.; Stadelmann, D. Mental health of flying cabin crews: Depression, anxiety, and stress before and during the COVID-19 pandemic. *Front. Psychol.* **2020**, *11*, 581496. [[CrossRef](#)] [[PubMed](#)]
13. Kumari, P.; Aithal, P.S. Impact of emotional labour, work-life balance, and job satisfaction on cabin crews' job performance. *Int. J. Manag. Technol. Soc. Sci.* **2022**, *7*, 225–240. [[CrossRef](#)]
14. Xu, W.; Bao, Y.; Zhang, L.; Li, Y.; Zhang, E.; Li, H.; Jin, Q.; Chen, Y.; Duan, Q.; Shi, F.; et al. Challenges and support needs in psychological and physical health among pilots: A qualitative study. *Front. Public Health* **2024**, *12*, 1351568. [[CrossRef](#)] [[PubMed](#)]
15. Hu, H.H.S.; Hu, H.Y.; King, B. Impacts of misbehaving air passengers on frontline employees: Role stress and emotional labor. *Int. J. Contemp. Hosp. Manag.* **2017**, *29*, 1793–1813. [[CrossRef](#)]
16. Raju, J.K.; Priya, N.R. Air traveler satisfaction: An analysis of pre-flight, in-flight, and post flight service quality. *ZENITH Int. J. Multidiscip. Res.* **2019**, *9*, 50–59.
17. Faiyetole, A.A.; Sivowaku, J.T. The effects of aircraft noise on psychosocial health. *J. Transp. Health* **2021**, *22*, 101230. [[CrossRef](#)]
18. Cronin, M.A.; George, E. The why and how of the integrative review. *Organ. Res. Methods* **2023**, *26*, 168–192. [[CrossRef](#)]
19. Long, H.A.; French, D.P.; Brooks, J.M. Optimising the value of the critical appraisal skills programme (CASP) tool for quality appraisal in qualitative evidence synthesis. *Res. Methods Med. Health Sci.* **2020**, *1*, 31–42. [[CrossRef](#)]
20. Page, M.J.; McKenzie, J.E.; Bossuyt, P.M.; Boutron, I.; Hoffmann, T.C.; Mulrow, C.D.; Shamseer, L.; Tetzlaff, J.M.; Akl, E.A.; Brennan, S.E.; et al. The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ* **2021**, *372*, n71. [[CrossRef](#)] [[PubMed](#)]
21. Ceccato, V.; Masci, S. Airport environment and passengers' satisfaction with safety. *J. Appl. Secur. Res.* **2017**, *12*, 356–373. [[CrossRef](#)]
22. Lee, C.C.; Wang, S.W.; Hsu, M.K.; Jan, S.M. Air passengers' perception toward pre-flight safety briefing videos: Does it matter? *J. Air Transp. Manag.* **2018**, *72*, 20–31. [[CrossRef](#)]
23. Kim, M.H.; Park, J.W.; Choi, Y.J. A study on the effects of waiting time for airport security screening service on passengers' emotional responses and airport image. *Sustainability* **2020**, *12*, 10634. [[CrossRef](#)]
24. Faiyetole, A.A. Pre-flight considerations, in-flight services, and post-flight receptions: Factors influencing passengers' international airline choices. *J. Air Transp. Stud.* **2018**, *9*, 1–23. [[CrossRef](#)]
25. Choi, J.H. Changes in airport operating procedures and implications for airport strategies post-COVID-19. *J. Air Transp. Manag.* **2021**, *94*, 102065. [[CrossRef](#)] [[PubMed](#)]
26. Anggrayni, I.; Amalia, A.; Setiawan, E.B.; Ozali, I. Building passenger trust through improvements of service quality (pre-flight, in-flight, and post-flight) and passenger satisfaction (a case study of Citilink Indonesia). *Adv. Transp. Logist. Res.* **2020**, *3*, 244–252.
27. Rebollo, H.P.M.; Pacana, N.R. The influence of pre-flight service quality, in-flight service quality, post-flight service quality, passenger satisfaction, and repeat purchase. *J. Soc. Responsib. Tour. Hosp.* **2023**, *32*, 31–42. [[CrossRef](#)]
28. Booranakittipinyo, A.; Li, R.Y.M.; Phakdeephirot, N. Travelers' perception of smart airport facilities: An X (Twitter) sentiment analysis. *J. Air Transp. Manag.* **2024**, *118*, 102600. [[CrossRef](#)]
29. Mtafya, R.; Mutalemwa, D. Exploring the impact of airport services on passenger satisfaction in Tanzania: A case study of Julius Nyerere International Airport. *Afr. J. Empir. Res.* **2024**, *5*, 332–349. [[CrossRef](#)]
30. Alharasees, O.; Jazzar, A.; Kale, U.; Rohacs, D. Aviation communication: The effect of critical factors on the rate of misunderstandings. *Aircr. Eng. Aerosp. Technol.* **2023**, *95*, 379–388. [[CrossRef](#)]
31. Da Rocha, P.M.; Costa, H.G.; Da Silva, G.B. Gaps, trends, and challenges in assessing quality of service at airport terminals: A systematic review and bibliometric analysis. *Sustainability* **2022**, *14*, 3796. [[CrossRef](#)]

32. Kumar, A.; Bhardwaj, A.; Indolia, U. Addressing the effect of COVID19 pandemic on the Tourism Industry in Haridwar and Dehradun Districts of Uttarakhand, India. *Dev. Sanskriti Interdiscip. Int. J.* **2020**, *16*, 48–55. [\[CrossRef\]](#)
33. Khan, S.; Ali, A.; Siddique, R.; Nabi, G. Novel coronavirus is putting the whole world on alert. *J. Hosp. Infect.* **2020**, *104*, 252–253. [\[CrossRef\]](#) [\[PubMed\]](#)
34. Song, H.; Hsu, C.H.; Pan, B.; Liu, Y. How COVID-19 has changed tourists' behaviour. *Nat. Hum. Behav.* **2025**, *9*, 43–52. [\[CrossRef\]](#) [\[PubMed\]](#)
35. Faiyetole, A.A. COVID-19 stimulated travel behavior policy framework with evidence from travel change in southwestern Nigeria. *Trans. Transp. Sci.* **2022**, *13*, 23–36. [\[CrossRef\]](#)
36. Batra, A. Beyond travel dreaming, planning, check-in, and boarding. . . stress? *Anatolia* **2021**, *32*, 46–58. [\[CrossRef\]](#)
37. Azevedo, A. Travel anxiety and (non) pathologic phobias: A critical reflection and mitigation strategies. *J. Hosp. Tour. Insights* **2025**, *9*, 1010–1026. [\[CrossRef\]](#)
38. Campos, D.; Bretón-López, J.; Botella, C.; Mira, A.; Castilla, D.; Baños, R.; Tortella-Feliu, M.; Quero, S. An Internet-based treatment for flying phobia (NO-FEAR Airlines): Study protocol for a randomized controlled trial. *BMC Psychiatry* **2016**, *16*, 296. [\[CrossRef\]](#) [\[PubMed\]](#)
39. Dell'Olio, L.; Eboli, L.; Fotino, M.P.; Mazzulla, G. Passengers' perception of airlines' services: Addressing systematic and random variation in tastes. *Transp. Res. Part A Policy Pract.* **2025**, *191*, 104329. [\[CrossRef\]](#)
40. Patel, H.; D'Cruz, M. Passenger-centric factors influencing the experience of aircraft comfort. *Transp. Rev.* **2018**, *38*, 252–269. [\[CrossRef\]](#)
41. Lewis, L.; Patel, H.; D'Cruz, M.; Cobb, S. What makes a space invader? Passenger perceptions of personal space invasion in aircraft travel. *Ergonomics* **2017**, *60*, 1461–1470. [\[CrossRef\]](#) [\[PubMed\]](#)
42. Ahmadpour, N.; Robert, J.M.; Lindgaard, G. Aircraft passenger comfort experience: Underlying factors and differentiation from discomfort. *Appl. Ergon.* **2016**, *52*, 301–308. [\[CrossRef\]](#) [\[PubMed\]](#)
43. Lou, X.; Sun, Y.; Lv, D.; Yin, Y.; Pei, J.; He, J.; Yang, X.; Cui, X.; Liu, Y.; Norback, D.; et al. A study on human perception in aircraft cabins and its association with volatile organic compounds. *Build. Environ.* **2022**, *219*, 109167. [\[CrossRef\]](#)
44. Phan, Q.T.N.; Tran, V.; Huynh, N.H.; Huynh, T.P.; Ho, D.N. Using the best-worst scale to assess the relative impact of these behaviors on other passengers on the same flight: The disruptive passenger behavior. *Int. J. Aviat. Aeronaut. Aerosp.* **2023**, *10*, 12. [\[CrossRef\]](#)
45. Singh, R. Innovative baggage handling solutions to enhance passenger experience. *J. Airpt. Manag.* **2023**, *18*, 18–31. [\[CrossRef\]](#)
46. Djaya, D.I.; Unde, A.A.; Fatimah, J.M. Confidential interaction between passengers and customs officers at Makassar Sultan Hasanuddin International Airport. *J. Konseling Pendidikan. Islam* **2023**, *4*, 265–278. [\[CrossRef\]](#)
47. Bin, Y.S.; Ledger, S.; Nour, M.; Postnova, S.; Stamatakis, E.; Cistulli, P.A.; de Chazal, P.; Allman-Ferinelli, M.; Caillaud, C.; Bauman, A.; et al. How do travelers manage jetlag and travel fatigue? A survey of passengers on long-haul flights. *Chronobiol. Int.* **2020**, *37*, 1621–1628. [\[CrossRef\]](#) [\[PubMed\]](#)
48. Katoch, T.; Pinnamaneni, S.; Medatwal, R.; Anamika, F.N.U.; Aggarwal, K.; Garg, S.; Jain, R. Hearts in the sky: Understanding the cardiovascular implications of air travel. *Future Cardiol.* **2024**, *20*, 651–660. [\[CrossRef\]](#) [\[PubMed\]](#)
49. Setiawan, D.; Priyanto, S.; Amrozi, M.R.F. Integration of public transport systems for enhanced passenger mobility: A systematic review. *Int. J. Transp. Dev. Integr.* **2024**, *8*, 109–118. [\[CrossRef\]](#)
50. Bolton, P.; West, J.; Whitney, C.; Jordans, M.J.; Bass, J.; Thornicroft, G.; Murray, L.; Snider, L.; Eaton, J.; Collins, P.Y.; et al. Expanding mental health services in low- and middle-income countries: A task-shifting framework for delivery of comprehensive, collaborative, and community-based care. *Camb. Prism. Glob. Ment. Health* **2023**, *10*, e16. [\[CrossRef\]](#)
51. Cavagnetto, N.; Tomasello, P.; Arrigoni, V.; Tackacs, V.; Simons, R.; Wagstaff, A.; De Rooy, D.; Brambati, F. Integrating Mental Health into Aviation Safety in an AI-powered Future. *Transp. Res. Procedia* **2025**, *88*, 209–216. [\[CrossRef\]](#)
52. Bor, R.; Hubbard, T. Aviation mental health: An introduction. In *Aviation Mental Health*; Routledge: Abingdon, UK, 2016; pp. 1–9.
53. Delvecchio, E.; Cenci, G.; Lis, A.; Li, J.B.; Vazsonyi, A.T.; Nartova-Bochaver, S.; Zadworna, M.; Mazzeschi, C. Anxiety and stress among American, Chinese, Italian, and Russian emerging adults: Does uncertainty avoidance matter? *Healthcare* **2023**, *11*, 3101. [\[CrossRef\]](#) [\[PubMed\]](#)
54. Ngueutsa, R.; Tchagneno, C.L.; Wassouo, E.; Kouabenan, D.R. Fatalistic beliefs, cultural beliefs, and socio-instrumental control beliefs: What are the links? Can we speak of an active fatalism? *Psychol. Rep.* **2024**, *127*, 3109–3132. [\[CrossRef\]](#) [\[PubMed\]](#)

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