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The impact of Emotional Intelligence of Employees Behavior on Flight Safety: A study of Pakistan's Aviation sector

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Abstract

The aim of this study is to investigate the relationship between Emotional Intelligence (EI), Employee Behavior (EB) and Flight Safety (FS) in aviation industry and the role of employee behavior as the mediating variable in the relation. The study is based on Emotional Intelligence Theory, Human Factors Theory and Crew Resource Management (CRM) and suggests that emotional competencies would have a significant influence on the safety-related outcomes through behavioural mechanisms. A quantitative research design (cross section) was used and data were gathered from 230 aviation professionals including those working in the airlines, ground handling agencies, civil aviation authority and general aviation organizations in Pakistan. The data were analyzed descriptively, reliability and validity test, normality data test, and structural equation modeling. The results show that there is a positive significant relation between Emotional Intelligence and Employee Behavior and Flight Safety. Furthermore, Employee Behavior plays a key role in Flight Safety, suggesting its importance in operational safety performance. The findings also support the partial mediation of the relationship between Emotional Intelligence and Flight Safety by Employee Behavior, indicating that the relationship between Emotional Intelligence and Flight Safety is mediated not only directly, but also indirectly through the Employee Behavior. The descriptive results also show that the respondent's perceptions of their Emotional Intelligence were at the moderate level and their perceptions of their Employee Behaviour and Flight Safety were at the high level. The results indicate that the use of emotional intelligence training for employees in aviation should be integrated into recruitment, selection and professional development programs to improve employee behavior and therefore the overall safety of flight.

Keywords: *Emotional Intelligence; Employee Behavior; Flight Safety; Aviation Sector; Crew Resource Management*

Introduction

Aviation is one of the most complex and safety-sensitive environments in today's world. Flight safety has been a top priority, and the industry has made significant technological advances in aircraft systems, navigation, and procedures over the years. Regardless of such technological advances, however, human factors continue to be the principal cause of aviation accidents and incidents. This enduring fact has brought a renewed focus in both academic and practical studies on the psychological and behavioural aspects that affect human performance in aviation operations. Emotional intelligence (EI) has become one of the most significant psychological concepts in organizational behavior studies, especially in contexts where the making of decisions, team collaboration, and stress management play a vital role. Emotional intelligence is the ability to perceive, understand, regulate and manage

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emotions in oneself and in others (Mayer et al., 2008). This function is important in safety-critical contexts because it greatly affects risk perception, decision-making and behavioral consequences. Emotional Intelligence theory has its foundations in two basic models: the ability model by Mayer, Salovey, and Caruso and the mixed model by Goleman. These frameworks view EI as consisting of self-awareness, self-regulation, motivation, empathy and social skills, all of which are applicable to aviation operations. Aviation industry presents very special challenges that require highly developed emotional competencies among aviation personnel.

Frequently working in high stress situations, with high workloads, time pressure, emergencies and responsibility for human lives, as in the case of air traffic controllers and ground handling staff, pilots and cabin crew are also exposed to such stress (Lee & Hyun, 2016). These experts need to be able to make quick decisions, effectively communicate under pressure, mediate interpersonal conflict and be aware of what is going on at any given time when dealing with a range of team members. As technology and human factors come more and more into play in the safety and efficiency of modern aviation operations, emotional intelligence has become more and more important in this regard. In recent years, studies have highlighted the importance of emotional intelligence in an aviation environment.

According to the systematic literature review conducted by Samu et al. (2025), people with higher EI are consistently reported to make safer decisions and are less likely to engage in risky behaviors in safety-critical situations. More specifically, pilots with Higher EI show superior situational awareness and performance in making decisions. Research on 117 pilots in 2024 also found that increased EI was associated with improved performance in decision-making situations that involve safety (Beling & Wild, 2024). In addition, studies have revealed that aviation leaders with emotional intelligence produce healthier work environments, put premium on safety, and promotes working together and collaboration among teams or individuals on the cockpit, cabin, control tower, and ground operations (Taşcı et al., 2025).

In the field of aviation, the recognition of the importance of emotional intelligence has led to practical applications in training and development. This course draws on the principles of aviation safety, such as Crew Resource Management (CRM) and Threat and Error Management (TEM), to provide aviation practitioners the emotional competencies needed for effective communication, conflict resolution, and safety promotion. Crew Resource Management is especially aware of the need for interpersonal skills, leadership and emotional control to improve safety and effectiveness. Emotional intelligence and its relationship with employee behavior in aviation is complex. Employees with good emotional intelligence (EI) are more likely to behave in ways that support safety, communicate in advance, work and play well with team members, and be aware of their surroundings. Emotional intelligence has been shown to have positive effects on employee thriving, which positively impacts safety performance (Martin et al., 2024).

Furthermore, emotional intelligence's positive influence on safety performance is more pronounced for pilots who are higher in career adaptability. These findings indicate that emotional intelligence also has direct associations with improvements in safety outcomes as well as behavioral mechanisms that foster a culture of safety. Although many studies have been conducted on the relationship between emotional intelligence and organizations, there is limited research that has explored the effects of emotional intelligence on employee behaviour within aviation and flight safety. The existing

literature tends to deal with emotional intelligence and flight safety as two distinct constructs, neglecting the mediating variable of employee behavior between these two constructs. Moreover, although there are already frameworks in place for the improvement of flight safety, such as the Crew Resource Management and the Safety Management Systems, the employment of emotional intelligence in these frameworks is not fully explored.

In order to fill these gaps, this study examines the direct and indirect impact of emotional intelligence on flight safety by employee behavioral outcomes. Safety in aviation continues to be a top priority for both passengers and operators and regulators. Although the technology and safety regulations in aviation have improved greatly, and the regulations are strictly enforced, the human factor is the leading cause of aviation accidents and incidents (Zia et al., 2023). Aviation safety management has largely been dominated by technical, equipment reliability, and procedural safety. All these factors are critical but not enough to tackle the multifaceted nature of human performance psychology and emotionality. Aviation personnel, such as pilots, cabin crew, air traffic controllers, and ground personnel, must work in a fast-paced, complex, and sometimes chaotic environment, with multiple people to interact with, making quick and accurate decisions.

These practitioners face various and challenging situations, which involve handling passengers' emotions, making quick decisions and communication, under stress (Tasci et al., 2025). However, the emotional skills needed for such performance (empathy, emotional regulation, stress management and interpersonal skills) have not been sufficiently studied or emphasized. There is a considerable lack of knowledge regarding the relationship between emotional intelligence and employee's behavior, and hence flight safety. Although the importance of non-technical skills is gradually being accepted, empirical studies on the specific ways emotional intelligence impacts safety outcomes are still scarce. Research has demonstrated that EI is linked to increased rates of empathy, self-control in stressful situations, and communication, and thus plays a role in developing positive ways to resolve conflict (McCleskey, 2014), but the research on using these findings for aviation safety is limited. Moreover, the impact of employees' behavior between emotional intelligence and flight safety has not been studied well.

The impact of this gap in knowledge is significant. If aviation organizations are not aware of the significance of emotional intelligence on employee behaviour and safety performance, they cannot design training programs, selection procedures or safety management systems that are able to address the complete range of factors affecting flight safety. Incidents associated with human factors continue to be reported, indicating a lack of cultural adaptation and training implementation (Sheidu, 2025). The study aims to give empirical evidence about the relationship of the components of emotional intelligence with teamwork, decision making and employee behavior, which are essential in ensuring employee safety performance. The study will examine direct and indirect effects to gain insight into how emotional intelligence relates to improved safety outcomes. The results of this study would be helpful to the aviation industry, for their use in training programs that will teach the emotional intelligence skills that are needed for safety performance as well as technical skills.

Literature Review

Theoretical Underpinning

The theoretical foundation of this study is based on three complementary theories namely i) Emotional Intelligence (EI) Theory, ii) Human Factors Theory and iii) Crew Resource Management (CRM) Theory. These theories together offer a holistic description of the role of emotional competencies on employee attitude and behavior and their impact on aircrew safety in aviation operations. Emotional Intelligence Theory Emotional Intelligence (EI) Theory describes the process people go through in their perception, understanding, regulation, and use of emotions in themselves and others (Cherniss, 2006). As cited by Goleman et al., (2013), the five factors of emotional intelligence are: self-awareness, self-regulation, motivation, empathy, and social skills. The skills are especially important in the air transportation industry, where workers work in high-stress, dynamic, and safety-sensitive environments. Self-awareness can help aviation personnel identify their own stress and fatigue that may impact performance and self-regulation can help keep them calm during emergencies. Motivation is a catalyst to follow safety protocols and to constantly engage in further professional development. Empathy will help to understand the concerns of others (colleagues and passengers) while social skills will help to work together, lead others and communicate effectively. The results of recent studies showed that employees with emotional intelligence exhibited better performance in operational environments that involve high risk by regulating their emotions and showing cognitive effectiveness during stress (Geraniou & Jankvist, 2019). Human Factors Theory The major aspect of the Human Factors Theory is the relationship of human abilities and capabilities, limitations, and operational systems. The theory suggests that incidents are not caused by one individual fault or error, but are instead caused by a mix of individual, organisational and environmental factors (Mitchell & Evans, 2004). (Sumwalt et al., 2002) have concluded from research into the human factors of aviation that the critical non-technical skills that influence aviation safety are: communication, decision-making, teamwork, leadership, stress management, and situational awareness. From this point of view, emotional intelligence can be considered as a protective factor that helps employees to better handle stress, communicate effectively, and make decisions, thereby minimizing the risk of mistakes in operations.

Crew Resource Management (CRM) is an aviation specific application of Human Factors theory that aims to improve team working, communication, leadership and decision making within a team to increase the safety of flight (Khan et al., 2018). The need for CRM arose from accident investigations, finding that communication and teamwork were important factors in aviation incidents, especially when they were not effective. The skills that are highlighted in CRM are very similar to the emotional intelligence dimensions. Self-awareness and emotional management are critical for effective leadership, and empathy, communication, and interpersonal skills are essential for successful teamwork. Emotional intelligence has been found to have a positive relationship with employees' CRM skills and effectiveness in advancing safe aviation operations (Bogdane et al., 2019).

Emotional Intelligence

Emotional intelligence is the capacity for an individual to identify, understand, manage and optimally use their emotions (McCleskey, 2014). It has four components: self-awareness, self-regulation, motivation, empathy, and social skills. They help employees in aviation-related contexts to cope with

stress, communicate effectively, cooperate with colleagues and retain performance in critical situations. Employee Behavior Employee behavior is the behavior and attitudes of aviation staff that are manifested that affect organizational and safety outcomes. It consists of safety compliance, safety participation, communication, teamwork, and situational awareness (Neal & Griffin, 2006). Positive safety behaviors of employees enhance their willingness to follow procedures, report hazards, offer assistance and support others to be proactive in safety efforts of the organization. Flight Safety Flight safety is the avoidance of accidents, incidents and operational errors, achieved by safety management, adherence to regulations, risk management and ongoing evaluation of operational performance. It includes safety culture, human error reduction, threat management and safety standards (Blom et al., 2006).

EI and Employee Behavior

Emotional intelligence plays a crucial role in shaping behavior in the workplace, as it enhances emotional control, relationship skills, communication competence, and team collaboration. Emotionally intelligent employees are more likely to effectively cope with job stress, deal with conflict in the workplace, work cooperatively with others and to engage in proactive safety behaviors (Carmeli & Josman, 2006). These capabilities play a role in meeting safety procedures and in actively participating in safety-related tasks in aviation environments.

H1: Emotional intelligence positively impacts employees' behaviors in the aviation industry.
H2: Emotional intelligence positively impacts Flight Safety in the aviation industry.

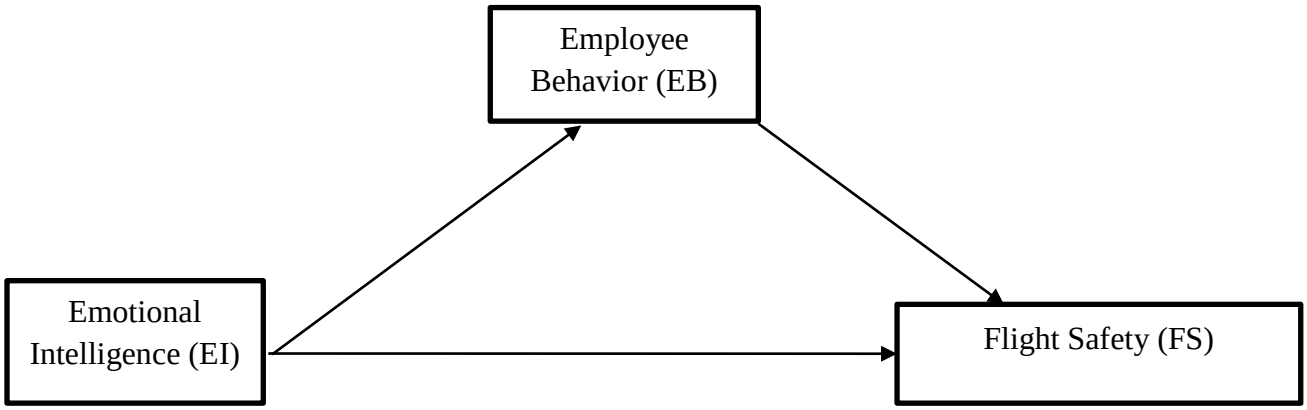
Flight safety depends on the attitude of the crew. Safety compliant employees follow operational procedures and regulations, proactive employees play a part in identifying hazards, risk minimization and ongoing safety improvement. Operational safety is further increased by effective communication, teamwork, and situational awareness which minimizes misunderstandings and human error (Clarke, 2010). The role of emotional intelligence in flight safety is immediate: It helps manage stress, makes decisions, increases situational awareness and enhances interpersonal coordination. High emotional intelligence employees don't get rattled in stressful situations, they aren't as likely to make bad decisions during work, and they are able to communicate more effectively during emergencies. These capabilities minimize the risk of human error and help ensure safer aircraft operations (Chen et al., 2020). Emotional intelligence is a key positive factor in flight safety. Employees' behaviour is the mediating variable between the two. According to the theory of behavioral safety, human factors are linked to safety outcomes through behavioral mechanisms. Emotional intelligence improves communication, teamwork, compliance and the involvement in safety, leading to better safety performance. As a result, the behavior of employees is a crucial channel of how emotional intelligence influences flight safety (Myers et al., 2015).

H3: Employees' behaviors positively impact flight safety in the aviation industry.
H4: There is a mediating effect between emotional intelligence and flight safety through employees' behavior.

Conceptual Model

According to the conceptual framework, Emotional Intelligence (EI) is an independent variable, Employee Behavior (EB) is a mediating variable, and Flight Safety (FS) is a dependent variable.

Figure 1: Conceptual Model



Research Methodology

The methodological framework used to explore the connections between emotional intelligence, employee behavior and flight safety in aviation is defined here. This chapter covers aspects such as research design, population and sampling, data collection methods and procedures, data analysis methods and ethical issues.

Research Design

The study is of a cross-sectional type of quantitative research design which looks into the relationship between variables at a particular time. This method is often used in studies within aviation human factors, allowing for statistical testing of hypotheses and results to be extended to populations of interest (Creswell & Shanahan, 2022). The quantitative approach is based on the positivist paradigm, which assumes that social phenomena can be objectively measured, and relationships can be established by statistical analysis. This design allows for testing of the four proposed hypotheses and examination of direct and indirect effects via mediation analyses.

Population and Sampling

The target group is aviation employees who are engaged in operational activities like pilots, cabin crew, air traffic controllers, ground handling, and maintenance engineers. To ensure that they were familiar with operational procedures and safety protocols, inclusion criteria required current employment in an operational aviation role with minimum of six months experience. Non-probability sampling technique, convenience sampling, is used because of the lack of a complete sampling frame and the lack of accessibility. This method is most common in cases of aviation human factors research in which full sampling frames are not available or access is limited to the population (Etikan et al., 2016). The sample is 230 aviation staff, deemed sufficient for planned statistical analyses and in line with past emotional intelligence studies in aviation environments.

Data Collection Instruments

The main tool used for collecting data is structured, self-administered questionnaires with closed ended questions using a Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). This

type offers a standardized choice of responses that allow for statistical analysis (Bell et al., 2022). The questionnaire is divided into four sections: (1) Demographic information, (2) Emotional Intelligence, (3) Employee behaviors, and (4) Flight safety. The emotional intelligence scale consists of 10 items adapted from (Goleman et al., 2013) that focus on the five different aspects of emotional intelligence, namely self-awareness, self-regulation, motivation, empathy, and social skills. The employee behavior scale includes seven items that are adapted from Jordan et al. (2002) and (Jordan et al., 2002) that are related to safety compliance and safety participation. The flight safety scale consists of 5 items adapted from (Helmreich et al., 1999). To capture a broader assessment, additional items from the validated safety performance (10 items) and safety climate (8 items) scales were added. The psychometric properties of all scales are good and Cronbach's alpha has been found to be greater than 0.85 in previous studies.

Data Collection Procedures

Data collection was undertaken electronically using online survey administration, which allowed data to be collected from geographically dispersed participants, and was suitable for shift working. Recruitment was done by using professional networks, aviation industry associations, online aviation communities and organizational contacts. Study purpose, voluntary participation, anonymity and confidentiality were explained in the invitation to the survey. Informed consent was obtained when the questionnaire was completed.

Data Analysis Techniques

The data were analyzed using Smart PLS, which includes descriptive and inferential statistical methods. Descriptive statistics (mean, standard deviations, frequencies) describe the sample and summarize the variables of the study. The reliability analysis of measurement scales was carried out using Cronbach's alpha, which was accepted if it has a value of 0.70 or more (Holmbeck & Devine, 2009). Pearson correlation coefficients are used to look at the bivariate relationships between emotional intelligence and employee behavior, flight safety, safety performance, and safety climate. Multiple regression analysis tests direct effects (H1, H2, H3), R-squared represents the proportion of variance in the dependent variable accounted for, and standardized beta shows the strength of the relationships and directions of the hypothesis. Mediation analysis testing of H4 with a sample of 5,000 bootstraps. This method provides bias-corrected confidence intervals for indirect effects, where mediation is deemed significant when the confidence interval doesn't contain zero. A significance level of 0.05 is used for all statistical tests.

Ethical Considerations

The research has followed the accepted ethical principles for research with human subjects. Ethical approval from the institutions was received before data were collected. Participants volunteered to participate and gave informed consent via the Internet survey. Anonymity was maintained by not collecting personal identifying information. Data were stored on password-protected systems with only authorized researchers having access to it to ensure confidentiality. Only academic research was used in these data.

Data Analysis

Table 1: Descriptive Statistics of Key Variables

Variable	N	Mean	Std. Dev.	Min	Max
Emotional Intelligence (EI)	230	3.12	0.81	1.10	4.95
Employee Behavior (EB)	230	4.28	0.74	2.00	6.70
Flight Safety (FS)	230	4.35	0.79	1.80	6.90

Table 1 shows the means for these two scales, Employee Behavior (M = 4.28) and Flight Safety (M = 4.35) are relatively high and suggest good practices and perceptions of safety for the respondents. Emotional intelligence (M = 3.12) is on the moderate level. The range of standard deviations (0.74 to 0.81) indicates that there was low to moderate variation within the sample, which means that the responses were fairly consistent. Overall, the aviation industry has a positive safety and behaviour image.

Table 2: Demographic Statistics

Variable	Category	Frequency	Percentage
Age	25–30 Years	68	29.6%
	31–35 Years	74	32.2%
	36–40 Years	52	22.6%
	41–60 Years	36	15.7%
Gender	Male	184	80.0%
	Female	46	20.0%
Qualification	PhD	18	7.8%
	M.Phil.	42	18.3%
	Bachelor's	128	55.7%
	Intermediate	42	18.3%
Experience	3 Years	32	13.9%
	5 Years	48	20.9%
	7 Years	46	20.0%
	9 Years	34	14.8%
	11 Years	28	12.2%
	15 Years	24	10.4%
	20 Years	18	7.8%
Location	Lahore	72	31.3%
	Karachi	84	36.5%
	Multan	34	14.8%
	Islamabad	40	17.4%
Organization	Airline	104	45.2%
	Ground Handling Agency (GHA)	52	22.6%
	Civil Aviation Authority (CAA)	40	17.4%
	General Aviation (GA)	34	14.8%

Table 2 shows that the total number of respondents in the aviation sector is 230. Most of them were in the age group of 31-35 years (32.2%) and 25-30 years (29.6%), which meant that they were most

likely in their professional lives. The gender of the respondents consisted of 20.0% females and 80.0% males. In terms of education, most of the respondents had Bachelor's degree (55.7%), followed by M.Phil. (18.3%), Intermediate (18.3%) and PhD (7.8%). In terms of experience, 5 years (20.9%) and 7 years (20.0%) indicated the largest numbers of respondents, indicating that respondents had a good amount of industry experience.

Geographically, the major aviation hubs of Pakistan were Karachi (36.5%) and Lahore (31.3%) where most respondents were residing. The majority of those employed in the sector were in the Airlines sector (45.2%), followed by Ground Handling Agencies (22.6%), Civil Aviation Authority (17.4%) and General Aviation (14.8%). Overall, the demographic profile reflects that the sample is representative and diverse in nature which represents the key segments of the Pakistan aviation industry.

Table 3: Normality Test Results

Construct	Skewness	Kurtosis	Result
Emotional Intelligence (EI)	0.843	1.321	Acceptable
Employee Behavior (EB)	0.415	0.873	Acceptable
Flight Safety (FS)	0.511	0.965	Acceptable

Table 3 presents the skewness and the kurtosis values for the study constructs. The results show that all the variables are within the normal range (Skewness and Kurtosis) of Emotional Intelligence (EI) (Skewness = 0.843, Kurtosis = 1.321), Employee Behavior (EB) (Skewness = 0.415, Kurtosis = 0.873), and Flight Safety (FS) (Skewness = 0.511, Kurtosis = 0.965). Thus, there was no serious problem of non-normality in the data and the data could be used for further statistical analysis.

Table 4: Reliability, Convergent Validity, and Factor Loadings

Construct	Item	Factor Loading	A	CR	AVE
Emotional Intelligence (EI)	(EI1)	0.515	0.799	0.833	0.559
	(EI2)	0.668			
	(EI3)	0.759			
	(EI4)	0.591			
	(EI5)	0.804			
	(EI6)	0.687			
Employee Behavior (EB)	**(EB1)**	0.689	0.959	0.963	0.622
	(EB2)	0.747			
	(EB3)	0.713			
	(EB4)	0.764			
	(EB5)	0.774			
	(EB6)	0.780			
Flight Safety (FS)	**(FS1)**	0.691	0.833	0.875	0.539
	(FS2)	0.748			
	(FS3)	0.767			
	(FS4)	0.651			
	(FS5)	0.723			
	(FS6)	0.815			

The reliability and convergent validity data for the study constructs are shown in Table 4. The factor loadings of all items range from 0.515 to 0.815, which is above the minimum acceptable level of 0.50, reflecting good indicator reliability. All Cronbach's Alpha (α) scores for the Emotional Intelligence (0.799), Employee Behavior (0.959), and Flight Safety (0.833) are greater than the recommended level of 0.70, indicating internal consistency reliability. Likewise, the Composite Reliability (CR) values fall between 0.833 and 0.963, both of which are above the acceptable limits (0.70), indicating good construct reliability. All constructs have Average Variance Extracted (AVE) values that exceed the threshold of 0.50 and indicate that all constructs have fair convergent validity. Overall, the measurement model can be considered as reliable and valid.

Figure 2: Measurement Model

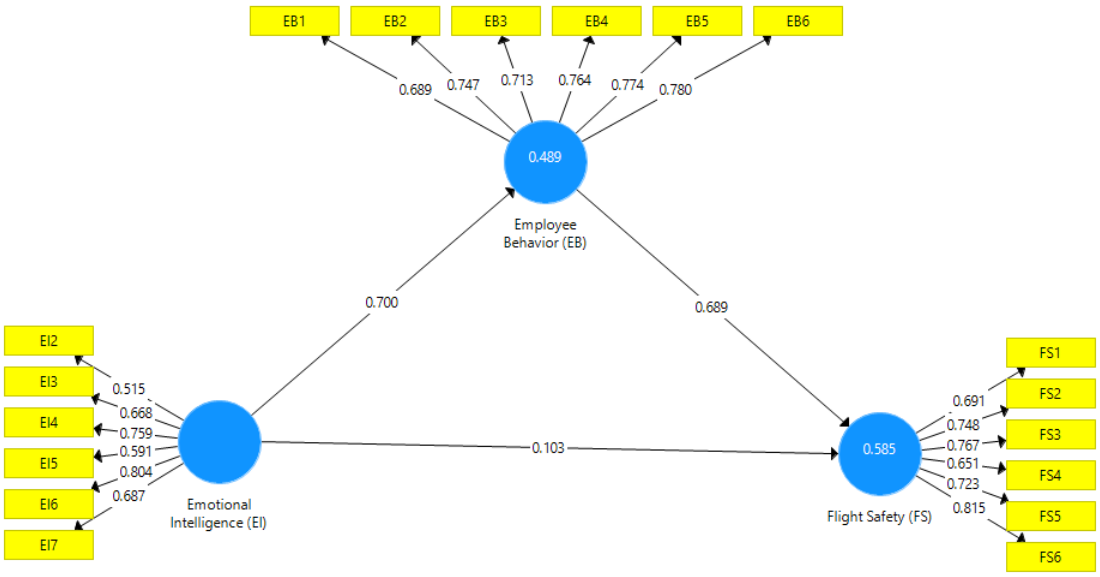


Table 5: Discriminant Validity (Fornell–Larcker)

Construct	PTSD	EI	EN
Emotional Intelligence (EI)	0.678		
Employee Behavior (EB)	0.700	0.745	
Flight Safety (FS)	0.585	0.761	0.734

Fornell Larcker criterion is met since the square root of AVE of each construct (bold diagonal) is greater than its correlations with other constructs. As an example, the square root of AVE of PTSD is large compared to its association with EI, and EN, indicating that PTSD is separated empirically compared to the other two constructs. This difference is of importance in meditational analysis as it makes certain that the mediator (EI) and predictor (PTSD) are not also quantifying the same thing, which would sabotage causal inference.

Table 6: Path Analysis (Direct Effects)

Path	Hypothesis	β	p-value	Decision
Emotional Intelligence (EI) -> Employee Behavior (EB)	H1	0.700	0.000	Accepted
Emotional Intelligence (EI) -> Flight Safety (FS)	H2	0.103	0.000	Accepted
Emotional Intelligence (EI) -> Employee Behavior (EB)	H3	0.689	0.000	Accepted

Table 6 shows the results of the direct relationships between the study variables. The results show that Employee Behavior (EB) is positively influenced by Emotional Intelligence (EI) with a significant value of $\beta = 0.700$ ($p > 0.001$) which supports H1. This indicates that there is a correlation between increased levels of emotional intelligence and better employee behaviour. The findings also indicate positive effects of Emotional Intelligence (EI) on Flight Safety (FS) ($\beta = 0.103$, $p < 0.001$), thus supporting the second hypothesis (H2). The effect-size is relatively small, but still statistically significant. In addition, there is a strong positive association for H3 ($\beta = 0.689$, $p < 0.001$) reported along the path. The track looks like H1 in the table, but needs to be checked. The overall findings showed that emotional intelligence has a significant impact on both employees' behavior and flight safety in the aviation industry.

Table 7: Mediation Analysis

Path	Hypothesis	β	p-value	Decision
Emotional Intelligence (EI) -> Employee Behavior (EB) -> Flight Safety (FS)	H4	0.482	0.000	Accepted

The mediation analysis results are shown in Table 7. The findings show that Emotional Intelligence (EI) indeed has a significant effect on Employee Behavior (EB) through their relationship with Flight Safety (FS) ($\beta = 0.482$, $p < 0.001$), which supports H4. This finding implies that, emotionally intelligent workers tend to have positive behaviour in the workplace, which in turn will improve flight safety. Hence, employee behaviors are an important pathway by which emotional intelligence can positively impact aviation safety performance.

Figure 1: Structural Model

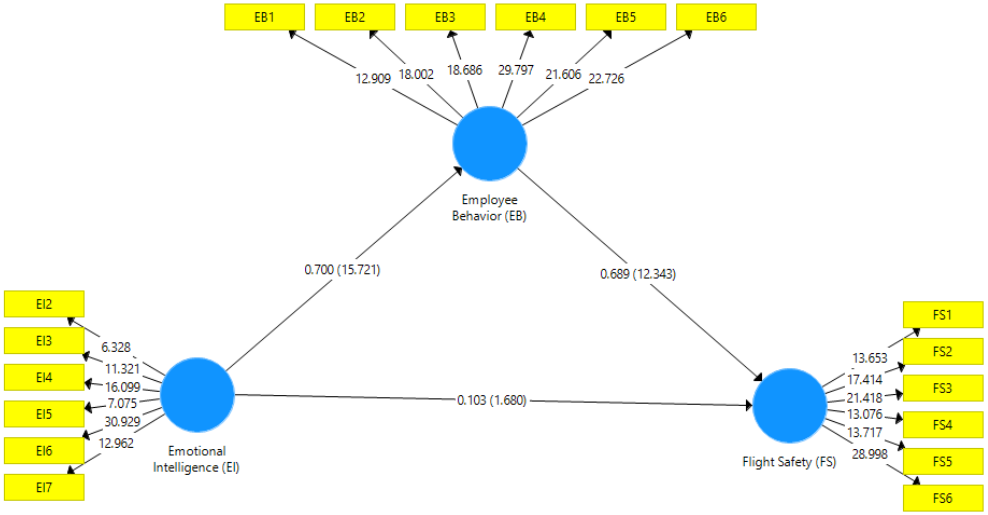


Table 8: Hypotheses Testing Summary

Hypothesis	Path	Decision
H1	Emotional Intelligence (EI) -> Employee Behavior (EB)	Accepted
H2	Emotional Intelligence (EI) -> Flight Safety (FS)	Accepted
H3	Emotional Intelligence (EI) -> Employee Behavior (EB)	Accepted
H4	Emotional Intelligence (EI) -> Employee Behavior (EB) -> Flight Safety (FS)	Accepted

The results of the hypothesis testing are summarized in Table 8. All hypotheses (H1-H4) have been accepted, meaning that there are statistically significant relationships between the variables of the study. The results of the study show that there is a positive relationship between Emotional Intelligence (EI) and Employee Behavior (EB) and Flight Safety (FS). Furthermore, EI also had a significant indirect effect on Flight Safety via Employee Behavior (EB), thus supporting the mediation of employee behavior. In general, the findings indicate that employees' emotional intelligence positively influences flight safety directly and indirectly through employee behaviour in the aviation industry.

Discussion, Conclusions, and Recommendations

Discussion of Findings

Employees' attitudes and behaviors are influenced by their emotional intelligence. The results give solid empirical evidence to support Hypothesis 1, which states that emotional intelligence is significant and positively associated with employee behaviour in the aviation industry. The results of regression analysis showed that the relationship between employee behavior and emotional intelligence was very strong, where emotional intelligence explained well of the variance in employee behavior. This finding corroborates theoretical accounts that view emotional Intelligence as a predictor of behavioral outcomes, and builds on prior studies showing a positive correlation between emotional Intelligence and workplace behaviors (Carmeli & Josman, 2006). This is due to the close linkage between the emotional intelligence and the behaviour of an employee, as in the case of emotional regulation, social competence and motivational processes. People with emotional intelligence perform better when it comes time to face their emotional reactions to work demands; they are able to stay calm in stressful situations and act in ways that are safe for the workplace (Mayer et al., 2008). Moreover, social competence promotes communication, teamwork, and conflict resolution, which are all important aspects of behavior in the aviation world. The motivational factors underlying emotional intelligence are manifested in pro- or anti-safety behaviour, such as commitment to safety. The results are similar to those from previous studies in the aviation field. In their research, Beling and Wild (2024) identified that higher emotional intelligence in pilots led to better decision making in the cockpit, and Tasci et al., (2025) concluded that more emotionally intelligent aviation professionals had more effective conflict management and communication skills. The findings of the present study expand on these results by showing that emotional intelligence is related to a wider array of behavioral responses that are important to flight safety, such as safety compliance and safety participation. This study also links employee behavior to flight safety, in that this relationship is significant and positive. This is in line with behavioral safety theory, which focuses on observable behaviors as a means of determining safety outcomes (Myers et al.,, 2015), and previous studies that have shown that safety behaviors relate to safety performance in high-risk industries (Neal & Griffin,

2006). Many mechanisms explain the close link between the behaviour of employees and flight safety. When it comes to safety, errors are prevented by following standard operating procedures and regulations, and risk is reduced (Creswell & Shanahan, 2022). Safety participation is proactively reporting safety issues, and participating in safety improvement projects, all of which helps to prevent incidents from occurring. Crew members are able to exchange information and organize their activities through effective communication, which helps to avoid misunderstandings that could have a negative effect on safety (Helmreich et al.,, 1999). Through teamwork and coordination, team members are able to collaborate efficiently to handle the demands of the operation and minimize the risk of error (O'Connor et al.,, 2008). These are consistent with earlier studies in aviation settings. Safety behaviour has been shown to be consistently predictive of safety outcomes in high reliability organizations and compliance and participation have been identified as important predictors of accident rates and incident occurrence. The present study is an additional illustration of this correlation in the aviation field, strengthening the role of human behavior in the safety of flights.

The results support the Hypothesis 3 which showed that emotional intelligence has a significant and positive relationship with flight safety. The results of regression showed that emotional intelligence was a very strong predictor of flight safety and that there was a strong direct relationship between the two variables. The results are in line with studies that have shown that emotional intelligence is a predictor of performance in safety critical contexts (Nabil et al.,, 2024). There are several ways to explain the positive correlation between emotional intelligence and flight safety. Emotionally intelligent people are more able to handle stress; are able to sustain cognitive function and decision making in stressful situations. Self-awareness helps one to identify own constraints and emotions that could affect performance and take corrective measures. Self-regulation helps to maintain composure in stressful situations, ensuring that decisions for safety are not undermined by emotions. Empathy helps to understand others' points of view, promotes communication and coordination necessary for safe operations. This research adds to the existing body of work by showing that emotional intelligence has a direct impact on safety measures in aviation, rather than through behavioral channels. This study provides direct support of the direct impact of emotional intelligence on flight safety, as has been done in previous studies with respect to other organizational outcomes (Carmeli & Josman, 2006).

The findings support Hypothesis 4, demonstrating that employee behavior partially mediates the relationship between emotional intelligence and flight safety. Mediation analysis revealed a significant indirect effect of emotional intelligence on flight safety through employee behavior. The direct effect of emotional intelligence on flight safety remained significant after controlling for employee behavior, indicating partial rather than full mediation.

This finding indicates that emotional intelligence influences flight safety through two pathways: a direct pathway and an indirect pathway mediated by employee behavior. The indirect pathway suggests that emotional intelligence enhances safety outcomes by promoting positive behavioral outcomes, including safety compliance, effective communication, and teamwork. This is consistent with behavioral safety theory, which emphasizes the role of behaviors in determining safety outcomes, and with organizational behavior research demonstrating that individual characteristics influence organizational outcomes through behavioral mechanisms (Weng et al.,, 2023). The partial mediation finding suggests that while employee behavior is an important mechanism through which emotional intelligence influences safety, other mechanisms also operate. These may include direct effects on

decision-making, stress management, and situational awareness that do not necessarily manifest through observable behaviors measured in this study. Future research could explore additional mediating mechanisms, such as cognitive processes and emotional regulation strategies, to provide a more comprehensive understanding of how emotional intelligence influences safety outcomes.

These findings have important theoretical implications, suggesting that emotional intelligence contributes to flight safety through multiple pathways. The dual-pathway model proposed in this study provides a more nuanced understanding of the relationship between psychological characteristics and safety outcomes, integrating emotional intelligence theory, human factors theory, and behavioral safety theory.

Theoretical Contributions

This study contributes to the field of aviation safety in several important ways. This study has several important theoretical contributions to the aviation safety and organizational behavior literature. First, it applies the theory of EI to the aviation industry and shows that EI is a predictor of employee behaviour and flight safety. Although much research has been conducted on the concept of emotional intelligence in organizational settings, there has been little empirical research on the use of emotional intelligence for aviation safety. This study establishes the presence of meaningful relationships between EI and safety-related outcomes in high-risk settings. Secondly, the study provides a contribution to the theory of human factors, as the need for psychological competencies in safety performance is explained. This study is a good example of how cognitive and behavioral aspects of performance have been the focus of the human factors research literature, but emotional competencies enable effective performance. This indicates that EF should be included in human factors frameworks as an important element of human performance in safety critical situations. This offers empirical evidence of the theoretical prediction that individual differences have a behavioral mechanism of impact on safety outcomes, and that interventions to improve safety behaviors should place a particular emphasis on the importance of emotional competencies in supporting safe behaviour.

Fourth, the study is a contribution to the theory of Crew Resource Management, which identifies emotional intelligence as a basis for the components of CRM. The discovery that emotional intelligence correlates to employee behaviors important to CRM – communication, teamwork, and safety compliance – indicates the need for emotional intelligence development as a means of improving the effectiveness of CRM training.

Practical Implications

This research has a number of significant practical applications in aviation industry. In the first place, aviation organizations can incorporate emotional intelligence development into their employees' training programs. This study shows that, in addition to technical skills and procedures, emotional competencies (self-awareness, self-regulation, empathy, and social skills) are also relevant to safety performance and a focus on these skills could be helpful. Organizations might create training initiatives to boost the emotional intelligence skills of employees, which may improve their behavior and flight safety results. Second, aviation organizations should think about adding an assessment for the emotional intelligence to recruitment and selection. The ability to recognize candidates who possess high levels of emotional intelligence competencies could help employers to assemble a group of employees with greater capabilities to meet the needs of aviation operations. The use of personality

assessments, situational judgment tests, and structured interviews may be adapted to measure emotional intelligence competencies needed for aviation careers. Thirdly, the results indicate that there is a need to add emotional intelligence development to the safety management systems. Safety management systems usually look at technical systems, procedures and compliance but this study demonstrates the involvement of emotional competencies in safety outcomes. Emotional intelligence development can be incorporated into the overall safety management process, which may help to improve the effectiveness of these processes. Fourth, explicit content of emotional intelligence can be added to the training program for Crew Resource Management. Although CRM training focuses on communication, team work, and leadership skills, it is emotional intelligence that makes these skills possible. Emotional intelligence modules could be added to the CRM training to further develop the development of these important non-technical skills. Fifth, leaders need to demonstrate and encourage emotional intelligence (EI) skills within the organization. The study has shown that leadership behavior affects the organizational culture and employee behavior (Goleman et al.,, 2013). Leaders who exhibit emotional intelligence skills, such as self-awareness, empathy and interpersonal skills, can build cultures that foster safety and improve employee behaviour.

Limitations

There are several limitations to this study: First, the cross-sectional design precludes causal inference. The relationships assumed are based on theory and prior research, but the cross-sectional data cannot prove causality. Longitudinal studies would give more convincing evidence of causal relationships in the future. Second, the convenience sampling technique might be less generalizable. The sample consisted of aviation personnel from the aviation world that were available to the researcher via professional networks and organizational contacts, and may not reflect the general aviation workforce. Generalizability can be improved in future research using probability sampling methods. Third, self-reported data might result in common method bias. Relations might be over inflated because they were measured with the same questionnaire and the same respondents. To address these concern strategies were used to mitigate these concerns, such as anonymity, confidentiality, and scale separation; future research might use multi-source data collection techniques such as supervisor ratings of employee behavior, along with objective safety data. Fourth, the 230 respondents in this study may have been large enough to adequately support the analyses planned but may have not been large enough to support the discovery of smaller effects. Further studies with a larger sample would yield more accurate estimates and would allow more sophisticated analytics.

Future Research Directions

The research findings suggest several directions for future research. Longitudinal studies that track the evolution of emotional intelligence through time and its impact on safety outcomes would yield more evidence of causal associations. An aviation professionals' study of the development of emotional intelligence and effects on safety performance over time could be conducted. Second, the studies that reviewed the effectiveness of the emotional intelligence training interventions would offer practical guidance to organizations. Investigating the effectiveness of training on safety outcomes could be done in an experimental study that compares organizations or individuals that receive emotional intelligence training to a control group. Third, studies on the role of organizational factors in the relationship between emotional intelligence and the safety outcomes would help understand contextual influences. The effects of emotional intelligence on behavior and safety could be mediated by

leadership, organizational culture, and safety climate, indicating a need to target both the individual and the organization to have an impact. Fourth, a study on emotional intelligence in various aviation jobs would give insights into emotional intelligence in the specific jobs. The need for and demands of each of these professions are different and so is the application of emotional intelligence. Knowing these differences might help target interventions. Fifth, multi-source data collection research would resolve concerns of common method bias. The supervisor ratings of employee behaviors and an objective record of safety data may offer more convincing evidence of the relationships between emotional intelligence and behaviors and safety outcomes. Finally, in-depth studies that explored other mediating and moderating processes would yield a fuller picture of the role of emotional intelligence in safety outcomes. Cognitive process, emotional regulation strategies and decision-making process are possible mediators. Leadership style, organizational support and safety climate are all possible moderators.

Conclusion

The aim of this study was to examine the interrelationships among emotional intelligence, employee conduct and flight safety within aviation. The results of the study support the hypotheses and offer strong empirical evidence of the impact of emotional intelligence on employee reactions and actions, and that the impact of emotional intelligence on flight safety is partially mediated by employee reactions and actions. The study makes a significant contribution to the theoretical knowledge by adding the aviation context to the field of emotional intelligence theory and proving the necessity of psychological competencies in the field of safety performance. The results underscore how important emotional intelligence is in helping to communicate, work in teams, and adhere to safety regulations, which are all critical elements of flight safety. The study is of great practical value for the aviation industry. Emotional Intelligence Development should be considered as part of organizations' training programmes, recruitment and selection, safety management and Crew Resource Management training. When aviation professionals can develop their emotional intelligence competencies, aviation organizations can improve employee behavior and flight safety outcomes. Although this study has some drawbacks, it is a good empirical study that helps support the value of emotional intelligence in aviation safety. The results indicated that emotional intelligence is a meaningful predictor of safety-related outcomes and interventions focusing on emotional intelligence could improve safety performance. Additional studies are needed to continue to investigate the links between psychological traits, employee performance, and safety performance with the goal of further developing evidence-based approaches to safety management.

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