

**GENDER-BASED ISSUES IN AVIATION,
ATTITUDES TOWARDS FEMALE PILOTS:
A CROSS-CULTURAL ANALYSIS**

by

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SOLI DEO GLORIA

SUMMARY
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Aviation is a global industry. Many professional pilots follow a career path that takes them into employment crossing national and international boundaries. They take with them their training, qualifications and experiences, and then build on these in diverse organisational and national cultural environments. They also carry with them their personal and professional attitudes, which then influence their behaviour. Professional pilots still often display a historically masculine attitude, which affects the relationship on the flight deck, particularly when one of the pilots is female.

Because perceptions based on gender differences (real or alleged) have a pervasive and powerful influence on behaviour, it is important to manage gender diversity properly to meet the demands of a two-gender workplace. This has important implications for flight crew effectiveness and aviation safety.

The study started with an overview of the literature, historical data on female aviators, selected relevant legislation and current world trends in aviation.

A survey was then designed as the basis for a cross-cultural study of attitudes towards female pilots. The primary objective of this study was to develop a instrument to assess female and male aviators' perceptions regarding gender-

related pilot behaviour across cultures and to determine the main and interaction effects of biographical variables on the perceptions held by professional pilots.

The research group consisted of two non-probability samples: 183 pilots from the United States of America and 530 pilots from South Africa. An Aviation Gender Attitude Questionnaire (AGAQ) was devised to provide valid and reliable measurements of attitudes with regard to female pilots' Flying Proficiency and Safety Orientation.

To determine the similarity or difference in the response patterns of the two samples, factor analysis, Tucker's coefficient of agreement and analysis of item bias were used. Univariate and multivariate analysis of variance were applied to uncover any possible main and interaction effects of the biographical characteristics on the respondents' perceptions of gender-related pilot behaviour.

The results of the Principal Axis Factor Analysis performed on the AGAQ indicated little difference in the factor structures for the United States and South African groups. Tucker's phi-coefficient of congruence indicated factorial agreement (Tucker's $\phi \geq 0.95$) between the United States and South African respondents with regard to both factors of the AGAQ. The items of the two factors showed no uniform or non-uniform bias for pilots from the different culture groups. The results of the n-way ANOVAs and MANOVAs indicated that gender is the primary independent variable that has a significant effect ($p < 0.001$) on pilots' perceptions and attitudes towards female pilots. The mean scores for the female pilots were significantly higher than their male counterparts for both Flying Proficiency and Safety Orientation.

The research findings are of particular interest in the field of Crew Resources Management (CRM) and 'Hazardous Attitudes' training. Topics such as gender issues and diversity management should be addressed to improve and advance gender-sensitive CRM training. Managing gender issues is critical to sustain and improve aviation safety and effective performance in mixed gender multi-crew environments.

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