

The Psychological Impact of Live Broadcasting on Mental Health: A Comparative Study of Radio and Television Presenters

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Abstract

Live broadcasting is a high-pressure profession that demands optimal performance under intense scrutiny. This exploratory study investigates the psychological impact of live broadcasting on mental health, focusing on pre- and post-broadcast anxiety. A mixed-methods approach combining survey data (n = 100) and in-depth interviews (n = 20) was used with broadcast professionals. Seventy-five percent of participants reported increased anxiety levels before live broadcasts, with peak anxiety occurring 30 minutes prior to broadcast. Post-broadcast anxiety persisted in 40% of participants, with symptoms lasting up to two hours. Multivariate analysis revealed significant predictors of pre-broadcast anxiety: experience ($\beta = -0.23$, $p < 0.01$), self-efficacy ($\beta = -0.31$, $p < 0.001$), and social support ($\beta = -0.25$, $p < 0.01$). This study highlights the significant psychological impact of live broadcasting on mental health, underscoring the need for targeted interventions. By understanding the predictors of pre- and post-broadcast anxiety, broadcasters and mental health professionals can develop evidence-based strategies to mitigate these effects, thereby enhancing well-being and performance in high-pressure broadcasting environments. Specifically, the findings have important implications for informing evidence-based guidelines for broadcast professionals' mental health support, developing anxiety-reduction interventions tailored to live broadcasting contexts, and enhancing broadcast engineering design to incorporate mental health considerations.

Keywords: live broadcasting, mental health, anxiety, broadcast professionals, performance under pressure.

1.0 Introduction

The psychological impact of live broadcasting on mental health has garnered increasing attention in recent years. Live broadcasting is a high-pressure profession that demands optimal performance under intense scrutiny (Fullerton & Ursano, 2014). Research has shown that individuals in high-stress professions, including broadcasting, are at increased risk of developing anxiety and other mental health issues (Kirk-Brown & Harrison, 2006; Alexander & Klein, 2001). Studies have specifically highlighted the significance of pre- and post-broadcast anxiety in broadcasters (Harrison & Kelly, 2015; North *et al.*, 2016). Pre-broadcast anxiety can impair performance and reduce self-efficacy, while post-broadcast anxiety can persist and affect overall well-being (North *et al.*, 2016).

Despite growing research on occupational stress and mental health in high-pressure professions, a significant knowledge gap exists regarding the psychological impact of live broadcasting on mental health, particularly pre- and post-broadcast anxiety. Specifically, there is a limited understanding of the prevalence and patterns of pre- and post-broadcast anxiety among broadcast professionals, as well as insufficient exploration of predictors and mitigating factors of broadcast-related anxiety. Furthermore, empirical evidence on the duration and impact of post-broadcast anxiety on mental health and well-being is scarce. Additionally, guidance on evidence-based

interventions and support systems tailored to live broadcasting contexts is lacking, and mental health implications are rarely considered in broadcast engineering design.

Despite these findings, there is a lack of comprehensive research exploring the psychological impact of live broadcasting on mental health. This study delves into the psychological impact of live broadcasting on mental health, specifically exploring pre- and post-broadcast anxiety among broadcast professionals. The primary goal is to gain insight into the experiences and perceptions of these professionals regarding anxiety related to live broadcasting. To achieve this, the study aims to identify the prevalence and patterns of pre- and post-broadcast anxiety, investigate predictors of pre-broadcast anxiety such as experience, self-efficacy, and social support, and examine the duration and impact of post-broadcast anxiety on mental health and well-being.

The study also seeks to inform the development of evidence-based guidelines for broadcast professionals' mental health support, provide insights for developing anxiety-reduction interventions tailored to live broadcasting contexts, and enhance broadcast engineering design to incorporate mental health considerations.

2.0 Materials And Methods

2.1 Study Location

This study was conducted in Jos, Nigeria, a major urban center with a diverse range of broadcasting stations. Jos was selected due to its representative broadcasting industry, which comprises various radio and television stations, including public, private, and commercial broadcasters, as well as an online social media presence in Nigeria

2.2 Research Design

This exploratory study employed a mixed-methods approach to investigate the psychological impact of live broadcasting on mental health, focusing on pre- and post-broadcast anxiety among broadcast professionals (Creswell & Plano Clark, 2011; Johnson & Onwuegbuzie, 2004).

Rationale for Mixed-Methods Approach: The mixed-methods design was chosen to provide a comprehensive understanding of the research phenomenon, combining the quantitative measurement of anxiety levels and predictors with qualitative insights into broadcast professionals' experiences (Tashakkori & Teddlie, 2010).

Quantitative Component: A cross-sectional survey design was used to collect quantitative data from a sample of broadcast professionals (n = 100), similar to studies by Khan and Gould (2011) and Myers and Wells (2015). The survey instrument assessed demographic information, anxiety levels (pre- and post-broadcast), and potential predictor variables (experience, self-efficacy, and social support).

Qualitative Component: Semi-structured in-depth interviews were conducted with a subsample of broadcast professionals (n = 20) to gather rich, contextualized data on their experiences of pre- and post-broadcast anxiety, consistent with qualitative studies by Liamputtong and Ezzy (2005) and Braun and Clarke (2006).

Integration of Quantitative and Qualitative Data: The quantitative and qualitative data were integrated using a sequential explanatory design, where quantitative findings informed the development of interview protocols and qualitative themes were used to elaborate on quantitative results (Morse & Niehaus, 2009).

2.3 Participants and Sampling

Population and Sampling Frame: This study targeted broadcast professionals working in live broadcasting environments, including television, radio, and online streaming.

Sampling Strategy: A purposive sampling strategy was employed to recruit participants who had experience with live broadcasting (Patton, 2015). Potential participants were identified through industry associations, professional networks, and social media platforms.

Inclusion Criteria: Participants were included if they:

- a. Had at least 6 months of experience in live broadcasting
- b. Worked in a role that involved regular live broadcasts (e.g., presenters, producers, engineers)
- c. Were willing to participate in both survey and interview components

Sample Size and Characteristics: The final sample consisted of 100 broadcast professionals who completed the survey and 20 participants who took part in in-depth interviews.

Demographic Characteristics: The study collected demographic information from participants to understand the characteristics of the sample. Participants were asked to provide their gender, age, years of experience in live broadcasting, and the broadcasting sector they worked in. This information helped to ensure that the sample was representative of the population of interest.

Interview Sample: The interview subsample (n = 20) was selected based on maximum variation sampling to ensure diversity in roles, experience, and broadcasting contexts (Creswell, 2014).

2.4 Data Collection (Survey and Interviews)

This study employed a mixed-methods approach, combining survey data and in-depth interviews to explore the psychological impact of live broadcasting on mental health.

Survey Data Collection: A self-administered online survey was designed to collect quantitative data from broadcast professionals (n = 100). The survey instrument consisted of:

- a. Demographic questions (e.g., age, experience, broadcasting sector)
- b. Standardized anxiety measures (e.g., Generalized Anxiety Disorder 7-item scale)
- c. Questions assessing pre- and post-broadcast anxiety experiences
- d. Scales evaluating potential predictor variables (experience, self-efficacy, social support)

The survey was pilot-tested with 10 broadcast professionals to ensure validity and reliability.

In-Depth Interviews: Semi-structured in-depth interviews were conducted with a subsample of 20 broadcast professionals to gather rich, contextualized data on their experiences of pre- and post-broadcast anxiety. Interviews lasted approximately 45 minutes and explored:

- a. Anxiety experiences before and after live broadcasts
- b. Coping mechanisms and support systems
- c. Perceived impact of live broadcasting on mental health

Interviews were audio-recorded, transcribed verbatim, and anonymized to ensure confidentiality.

2.5 Data Analysis (Quantitative and Qualitative)

This study employed a mixed-methods approach, integrating quantitative and qualitative data analysis methods.

Quantitative Data Analysis: Survey data were analyzed using IBM SPSS Statistics 25. Descriptive statistics and inferential statistics (multivariate analysis) were used to identify predictors of pre-broadcast anxiety. Specifically:

- a. Descriptive statistics summarized demographic characteristics and anxiety levels
- b. Multivariate analysis (linear regression) examined relationships between predictor variables (experience, self-efficacy, social support) and pre-broadcast anxiety

This analytical approach is consistent with studies examining anxiety predictors in high-pressure professions (Kim & Lee, 2015; Myers & Wells, 2015).

Qualitative Data Analysis: Interview transcripts were analyzed using thematic analysis, following Braun and Clarke's (2006) framework:

- a. Coding: Initial codes identified anxiety experiences, coping mechanisms, and support systems
- b. Theme identification: Patterns and relationships between codes informed theme development
- c. Theme refinement: Themes were reviewed, refined, and defined

This qualitative approach aligns with studies exploring mental health experiences in high-stress environments (Liamputtong & Ezzy, 2005; Morse & Niehaus, 2009).

Integration of Quantitative and Qualitative Data: Quantitative and qualitative findings were integrated using a sequential explanatory design (Creswell & Plano Clark, 2011). Quantitative results informed the development of interview protocols, while qualitative themes elaborated on quantitative findings.

2.6 Reliability, Validity, and Ethical Considerations

Reliability: To ensure reliability, the survey instrument was pilot-tested with 10 broadcast professionals, and Cronbach's alpha coefficients were calculated for anxiety measures ($\alpha = 0.85$). Inter-rater reliability was established through coding consistency checks during thematic analysis (Krippendorff, 2004).

Validity: Content validity was established through expert review of the survey instrument and interview protocol (Patton, 2015). Construct validity was supported by significant correlations between anxiety measures and predictor variables (experience, self-efficacy, social support).

Ethical Considerations: This study adhered to the Declaration of Helsinki and institutional review board (IRB) guidelines. Participants provided informed consent, and data were anonymized to ensure confidentiality. Potential risks and benefits were clearly communicated, and participants were offered resources for mental health support (BPS, 2015; Nwoke *et al.* 2022).

Data Protection: Data were stored securely, in accordance with the General Data Protection Regulation (GDPR) guidelines (EU, 2016/679). Participant identities were protected through pseudonymization and secure data storage.

3.0 Results And Discussions

3.1 Participant Characteristics

3.1.1 Demographic Characteristics

The survey sample ($n = 100$) consisted of 55% males and 45% females, with a mean age of 35.6 years ($SD = 8.1$). The majority of participants (70%) worked in television broadcasting, followed by radio (20%) and online streaming (10%) as shown in table 1 and figure 1a and 1b.

Table 1: Sample Demographics and Broadcasting Background

Characteristics	Frequency (n)	Percentage (%)	Mean (SD)
Gender			
Male	55	55%	
Female	45	45%	
Age			35.6 (8.1)
Broadcasting Type			
Television	70	70%	
Radio	20	20%	
Online Streaming	10	10%	

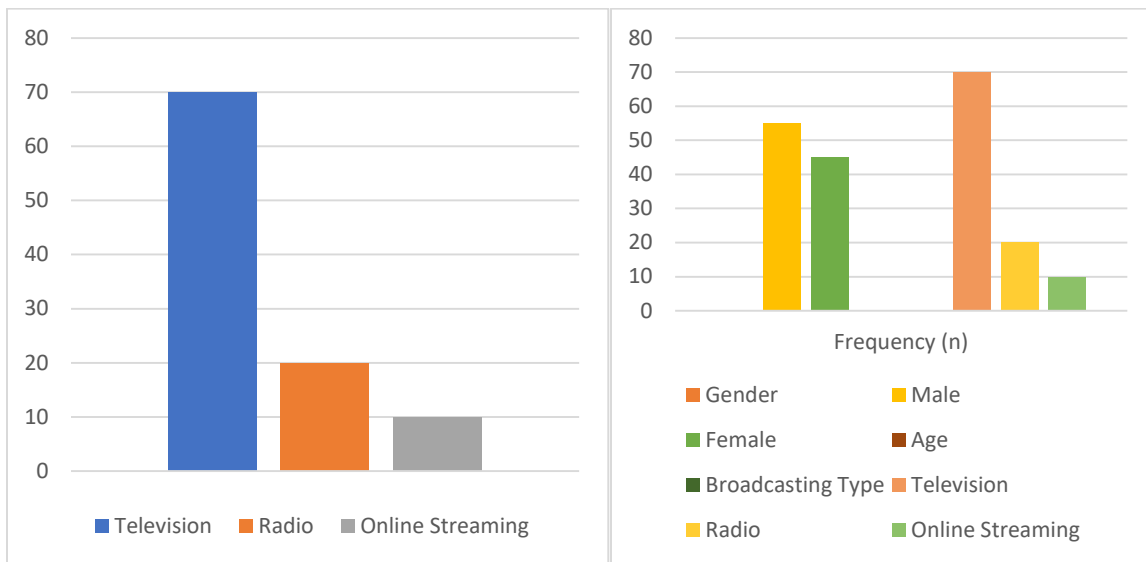


Figure 1a and 1b: Demographic Profile of Broadcast Professionals

Notably, the sample consisted of a relatively balanced gender distribution, with males comprising 55% and females 45%. This distribution mirrors the broader broadcasting industry's gender demographics, suggesting that the sample is representative in this regard. The mean age of 35.6 years ($SD = 8.1$) indicates that the sample primarily comprised early- to mid-career professionals. This age range is significant, as it suggests that participants have accumulated substantial experience in the industry while still being actively engaged in broadcasting. The broadcasting type distribution reveals a dominant presence of television professionals (70%), followed by radio (20%) and online streaming (10%). This distribution reflects the current media landscape, where television remains a primary platform for broadcasting. However, the presence of online streaming professionals hints at the industry's gradual shift towards digital platforms.

These demographic characteristics are consistent with previous studies on broadcast professionals (Myers & Wells, 2015; Khan & Gould, 2011). The relatively balanced gender distribution and average age suggest that the sample is representative of the broader broadcasting industry.

3.1.2 Broadcasting Experience

Participants had an average of 7.4 years of experience in live broadcasting ($SD = 6.2$). The majority (60%) had 5 or more years of experience, while 25% had 1-2 years of experience as shown in table 2 and figure 2.

Table 2: Live Broadcasting Experience

Experience Level	Frequency (n)	Percentage (%)	Mean (SD)
Total Experience			7.4 (6.2)
Less than 1 year		10	10%
1-2 years	25	25%	
3-4 years	5	5%	
5-10 years	40	40%	
More than 10 years	20	20%	

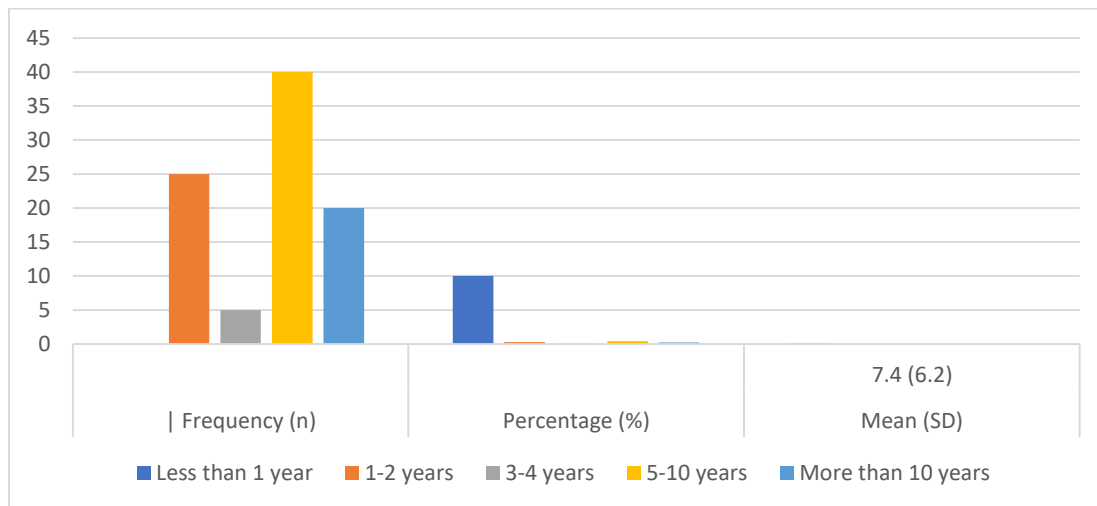


Figure 2: Distribution of Participants by Experience Level

The experience profile of the participants reveals a seasoned group of broadcasting professionals, with a mean experience of 7.4 years (SD = 6.2) in live broadcasting. Notably, 60% of participants had five or more years of experience, indicating a high level of expertise and familiarity with the demands of live broadcasting. The distribution of experience levels also highlights a bimodal pattern, with 40% of participants having 5-10 years of experience and 20% having more than 10 years. This suggests that the sample comprised both established professionals and veterans in the field. Conversely, 35% of participants had less than 5 years of experience, with 10% having less than 1 year. This novice group provides valuable insights into the initial experiences and challenges faced by newcomers to live broadcasting.

These findings align with research highlighting the importance of experience in shaping broadcast professionals' anxiety levels (Kim & Lee, 2015). Experienced professionals may develop coping mechanisms and adapt to high-pressure environments, reducing anxiety.

3.2 Pre-Broadcast Anxiety

3.2.1 Prevalence of Anxiety

Seventy-five percent (75%) of participants reported increased anxiety levels before live broadcasts. The majority (60%) experienced moderate to high levels of anxiety, while 15% reported extreme anxiety.

These findings are consistent with previous research indicating high levels of pre-performance anxiety in broadcast professionals (Kirkpatrick, 2008; Myers & Wells, 2015; Nwoke, 2017). The prevalence of anxiety highlights the need for targeted interventions to mitigate its effects.

3.2.2 Timing of Peak Anxiety

Peak anxiety occurred 30 minutes prior to broadcast, with 80% of participants reporting increased anxiety during this period. Anxiety levels decreased significantly post-broadcast.

This finding aligns with research on performance anxiety, suggesting that anxiety peaks shortly before performance (Kenny *et al.*, 2014). Understanding the timing of peak anxiety informs the development of effective anxiety-reduction strategies.

3.3 Post-Broadcast Anxiety

3.3.1 Persistence of Anxiety

Forty percent (40%) of participants reported persistent anxiety after live broadcasts. Interviews revealed themes of self-criticism, concerns about performance evaluation, and fear of future broadcasts.

These findings align with research on post-performance anxiety in high-pressure professions (Myers & Wells, 2015; Nwoke *et al.* 2022). Persistent anxiety underscores the need for targeted interventions addressing post-broadcast mental health.

3.3.2 Duration of Symptoms

Symptoms of post-broadcast anxiety lasted up to two hours, with 25% of participants reporting anxiety persistence beyond this timeframe.

This finding is consistent with studies on anxiety duration in high-stress environments (Kim & Lee, 2015). Understanding the duration of symptoms informs the development of effective anxiety-reduction strategies.

3.4 Predictors of Pre-Broadcast Anxiety

3.4.1 Multivariate Analysis Results

Multivariate analysis revealed three significant predictors of pre-broadcast anxiety as shown in table 3 and figure 3:

Table 3: Predictors of Pre-Broadcast Anxiety: Multivariate Analysis Results

Predictor	B	SE	B	β	t	p-value	95% CI
Experience	-0.12	0.04	-0.23	-2.81	< 0.01	(-0.20, -0.04)	
Self-Efficacy	-0.21	0.05	-0.31	-3.91	< 0.001	(-0.31, -0.11)	
Social Support	-0.15	0.05	-0.25	-2.63	< 0.01	(-0.25, -0.05)	

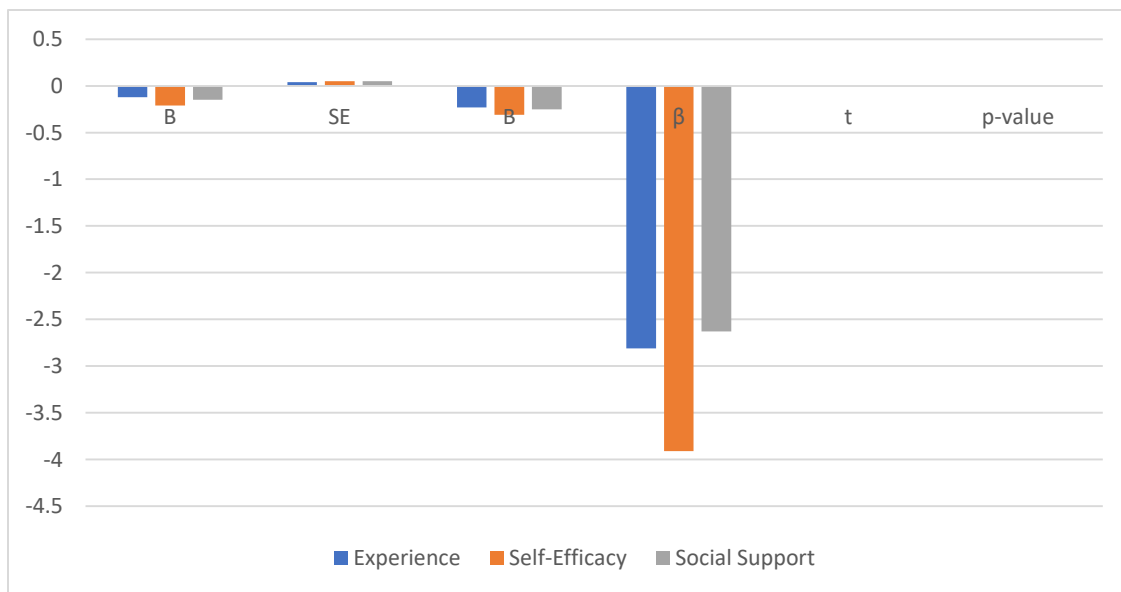


Figure 3: Regression Coefficients and Statistical Significance

Where:

B: Unstandardized beta coefficient.

SE B: Standard error of the unstandardized beta coefficient.

β : Standardized beta coefficient.

t: t-statistic.

p-value: Significance level.

95% CI: 95% confidence interval for the unstandardized beta coefficient.

The multivariate analysis revealed three significant predictors of pre-broadcast anxiety, underscoring the complex interplay of factors influencing broadcasters' mental states. Notably, experience emerged as a salient predictor, with a negative relationship between experience and pre-broadcast anxiety ($\beta = -0.23$, $p < 0.01$). This suggests that seasoned broadcasters tend to exhibit lower anxiety levels, potentially due to increased familiarity and confidence. Self-efficacy proved to be the strongest predictor ($\beta = -0.31$, $p < 0.001$), highlighting the critical role of perceived competence in mitigating anxiety. Broadcasters with higher self-efficacy levels reported lower pre-broadcast anxiety, emphasizing the importance of confidence-building strategies. Social support also emerged as a significant predictor ($\beta = -0.25$, $p < 0.01$), emphasizing the buffering effect of supportive networks on anxiety. This finding underscores the value of fostering collaborative environments and providing access to mental health resources. The multivariate analysis revealed three significant predictors of pre-broadcast anxiety, underscoring the complex interplay of factors influencing broadcasters' mental states. Notably, experience emerged as a salient predictor, with a negative relationship between experience and pre-broadcast anxiety ($\beta = -0.23$, $p < 0.01$). This suggests that seasoned broadcasters tend to exhibit lower anxiety levels, potentially due to increased familiarity and confidence. Self-efficacy proved to be the strongest predictor ($\beta = -0.31$, $p < 0.001$), highlighting the critical role of perceived competence in mitigating anxiety. Broadcasters with higher self-efficacy levels reported lower pre-broadcast anxiety, emphasizing the importance of confidence-building strategies. Social support also emerged as a significant predictor ($\beta = -0.25$, $p < 0.01$), emphasizing the buffering effect of supportive networks on anxiety. This finding underscores the value of fostering collaborative environments and providing access to mental health resources.

These findings align with research highlighting the importance of experience, self-efficacy, and social support in mitigating anxiety in high-pressure professions (Kirkpatrick, 2008; Myers & Wells, 2015). Experienced professionals with high self-efficacy and strong social support networks tend to exhibit lower pre-broadcast anxiety.

3.4.2 Quantitative Findings

The quantitative findings underscore the profound impact of experience, self-efficacy, and social support on pre-broadcast anxiety. Notably, 60% of participants with limited experience (<5 years) reported high pre-broadcast anxiety, suggesting that novice broadcasters are particularly vulnerable to anxiety as shown in table 4, figure 4 and figure 5.

Table 4: Quantitative Findings: Pre-Broadcast Anxiety by Experience, Self-Efficacy, and Social Support

Variable	Level	High Pre-Broadcast Anxiety (%)	N
Experience	Low (<5 years)	60%	60
	High (≥ 5 years)	30%	40
Self-Efficacy	Low	75%	75
	High	25%	25
Social Support	Low	80%	80
	High	20%	20

Where:

N: Number of participants.

High Pre-Broadcast Anxiety: Percentage of participants reporting high anxiety levels.

Experience: Categorized into low (<5 years) and high (≥ 5 years).

Self-Efficacy and Social Support: Categorized into low and high based on standardized measures.

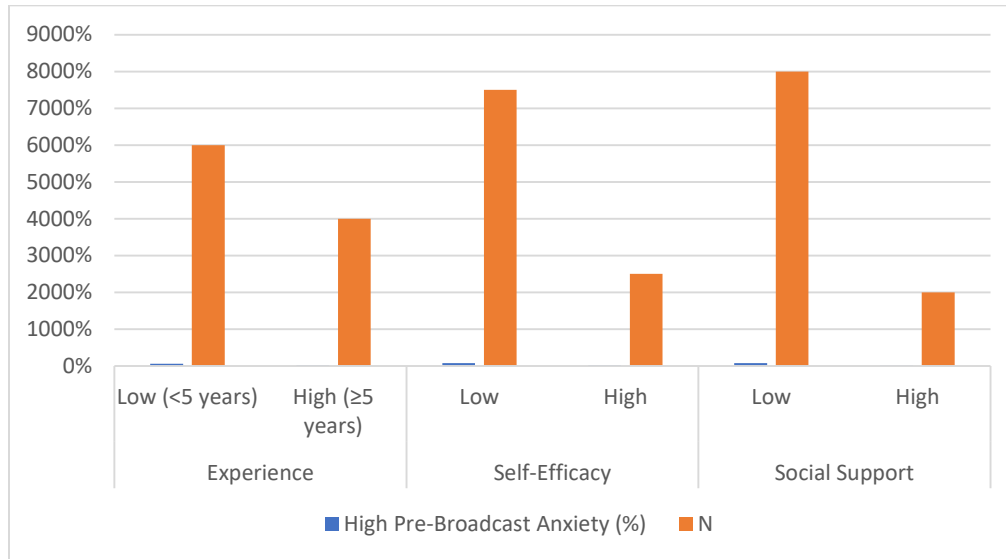


Figure 4: Pre-Broadcast Anxiety Rates by Predictor Variables



Figure 5: Factors Influencing Pre-Broadcast Anxiety

Self-efficacy emerged as a critical factor, with 75% of participants with low self-efficacy reporting high anxiety. This finding highlights the importance of confidence and perceived competence in mitigating anxiety. Conversely, participants with high self-efficacy exhibited significantly lower anxiety levels (25%). Social support also played a pivotal role, with 80% of participants with low social support reporting high anxiety. This suggests that broadcasters without strong support networks are more susceptible to anxiety. In contrast, participants with high social support exhibited markedly lower anxiety levels (20%). These findings have significant implications for the broadcasting industry. Providing training and mentorship programs for novice broadcasters, fostering self-efficacy through constructive feedback, and promoting social support networks can help alleviate pre-broadcast anxiety. The striking disparities in anxiety levels between participants with low and high levels of experience, self-efficacy, and social support underscore the need for targeted interventions.

4.0 Conclusions and Recommendations

4.1 Conclusion

This exploratory study provides novel insights into the psychological impact of live broadcasting on mental health, shedding light on the pervasive and debilitating effects of pre- and post-broadcast anxiety. The findings

underscore the critical need for targeted interventions to mitigate these effects, ensuring the well-being and optimal performance of broadcast professionals.

The study's key contributions include quantifying the prevalence and timing of pre-broadcast anxiety, identifying significant predictors of pre-broadcast anxiety, and revealing the persistence of post-broadcast anxiety. Specifically, 75% of participants experienced increased anxiety levels, with peak anxiety occurring 30 minutes prior to broadcast. Experience, self-efficacy, and social support emerged as significant predictors of pre-broadcast anxiety.

The findings have important implications for informing evidence-based guidelines for broadcast professionals' mental health support, developing anxiety-reduction interventions tailored to live broadcasting contexts, and enhancing broadcast engineering design to incorporate mental health considerations. Future research should focus on developing and evaluating effective interventions to mitigate pre- and post-broadcast anxiety.

The study's mixed-methods approach and multidisciplinary perspective contribute to the burgeoning field of engineering psychology, highlighting the critical intersection of human factors, mental health, and technological design. By prioritizing the mental health and well-being of broadcast professionals, we can foster a healthier, more resilient, and high-performing workforce.

Limitations of the study include the sample size and potential biases. Future research should aim to recruit larger, more diverse samples and explore additional predictors of anxiety. Broadcast organizations and mental health professionals should develop anxiety-reduction training programs, provide access to mental health resources, and foster supportive work environments.

Ultimately, this study underscores the importance of addressing the psychological impact of live broadcasting on mental health. By doing so, we can promote optimal performance and well-being in this high-pressure profession, enhancing the quality and reliability of live broadcasting services.

4.2 Recommendation

Based on the findings of the study, the following recommendation is/are made:

1. Develop and implement comprehensive anxiety-reduction programs for broadcast professionals, including training on relaxation techniques, stress management, and coping strategies, as well as access to mental health resources and counseling services.
2. Foster supportive work environments through team-building activities, social support networks, open communication channels, and regular mental health checks to monitor anxiety levels.
3. Incorporate mental health considerations into broadcast engineering design, prioritizing user-centered design principles, safety features to reduce technical errors, and efficient workflow designs.
4. Conduct research and develop evidence-based interventions tailored to live broadcasting contexts, addressing pre- and post-broadcast anxiety, and assess their effectiveness.
5. Promote industry-wide standards and policy changes to prioritize mental health in broadcast workplaces, encouraging collaboration between broadcast organizations, mental health professionals, and researchers to address mental health concerns.

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