

Anticipatory Anxiety and Psychological Well-Being in Middle-Aged Adults with Claustrophobia

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Abstract: *Claustrophobia can produce anxiety before exposure to confined environments, but its relationship with psychological well-being remains insufficiently explored. This study examined anticipatory anxiety and psychological well-being among middle-aged Indian adults with claustrophobia and compared individuals with predominant fears of restriction and suffocation. A cross-sectional survey included 12 adults aged 40 to 60 years who reported a diagnosis of claustrophobia. Participants completed the Claustrophobia Questionnaire and Ryff's 42-item Scales of Psychological Well-Being. Moderate anticipatory anxiety was reported by 58.3% of participants, while 83.3% demonstrated moderate psychological well-being. Fear of restriction predominated in 66.7% of participants. Anticipatory anxiety was not significantly associated with overall psychological well-being but showed significant negative correlations with self-acceptance ($r_s = -.79$) and personal growth ($r_s = -.67$). Differences between predominant fear groups were not statistically significant. These preliminary findings suggest that anticipatory anxiety may be associated with selected dimensions of psychological well-being. Larger studies using dedicated measures of anticipatory anxiety are needed to confirm these relationships and examine their clinical implications.*

Keywords: Claustrophobia; Anticipatory Anxiety; Psychological Well-Being; Fear of Restriction; Fear of Suffocation; Middle-Aged Adults

1. Introduction

Claustrophobia is an excessive and persistent fear of closed or confined places, such as lifts, small rooms, tunnels, aeroplanes, and medical scanners. It is classified as a specific phobia of the situational type, in which the fear is out of proportion to the actual danger and leads to avoidance or marked distress (American Psychiatric Association, 2013). Specific phobias are common. Across 22 countries, their lifetime prevalence was 7.4%, about twice as high in women as in men, and most affected people had never received treatment (Wardenaar et al., 2017).

Claustrophobia has two related components: a fear of restriction, centred on being unable to move or escape, and a fear of suffocation, centred on not having enough air (Rachman & Taylor, 1993). The Claustrophobia Questionnaire was built around this distinction (Radomsky et al., 2001), and the two components can respond differently to the same experience. In MRI outpatients, confinement in the scanner reduced fear of restriction but left fear of suffocation unchanged (Harris et al., 1999).

Much of the distress in claustrophobia comes before the feared situation. Anticipatory anxiety is a future-oriented state of worry and dread about a possible threat, and it is heightened by uncertainty (Grupe & Nitschke, 2013). Anxious individuals often rehearse feared situations in advance (Clark & Wells, 1995), and worry about future threats can itself serve as a form of avoidance (Borkovec, 1994). In people with claustrophobic fears, expected anxiety and expected danger helped to predict whether they would approach a small enclosed chamber (Valentiner et al., 1993, 1996). Medical imaging shows the practical cost of these processes. About one MRI scan in a hundred is stopped early because of claustrophobia (Munn et al., 2015), women and middle-aged patients are more likely to react (Dewey et al., 2007), and the anxiety that patients report centres on

suffocation, harm from the machine, and loss of control (Thorpe et al., 2008).

Anxiety also affects positive functioning. Quality of life is poorer across the anxiety disorders (Olatunji et al., 2007), and optimal well-being becomes less likely as neuroticism rises (Keyes et al., 2002). Ryff (1989) described psychological well-being in terms of six dimensions: self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth. A persistent fear of confinement could plausibly limit several of these. The question is especially relevant in midlife, when adults carry many roles and face frequent travel and medical procedures (Lachman, 2004), and in India, where most mental health conditions remain untreated (Gautham et al., 2020).

Research that connects claustrophobia, anticipatory anxiety, and the dimensions of psychological well-being is scarce, particularly for middle-aged Indian adults. The present study therefore aimed to (a) describe the level of anticipatory anxiety and psychological well-being in this group, (b) examine the relationship between anticipatory anxiety and each dimension of well-being, and (c) compare individuals with a predominant fear of restriction and those with a predominant fear of suffocation. It was hypothesised that the two fear groups would differ in anticipatory anxiety (H1) and well-being (H2), that anticipatory anxiety would be negatively related to well-being in each group (H3 and H4), and that the type of fear would moderate this relationship (H5).

2. Method

2.1 Design and Participants

A quantitative, cross-sectional design with correlational and comparative components was used. The sample comprised 12 adults aged 40 to 60 years living in India who reported that they had been diagnosed with claustrophobia, selected

through purposive sampling. The diagnosis was self-reported and was not independently verified through clinical assessment. The mean age was 46.0 years ($SD = 7.1$). Women and men were equally represented (50.0% each), 83.3% of the participants were married, and 41.7% held a postgraduate degree.

2.2 Measures

Claustrophobia Questionnaire (CLQ). The CLQ (Radomsky et al., 2001) asks respondents how anxious they would feel in a series of confined situations, rated from 0 (not at all anxious) to 4 (extremely anxious). A 24-item version was used, divided equally between a restriction subscale and a suffocation subscale. Because the CLQ measures the anxiety respondents expect to feel in specific situations, the total score was used as a proxy for anticipatory anxiety, and the subscale with the higher score identified each participant's predominant fear. Cronbach's alpha was .92 for the total scale and .87 for each subscale.

Ryff's Scales of Psychological Well-Being. The 42-item version measures six dimensions with seven items each, rated from 1 (strongly disagree) to 6 (strongly agree), with negatively worded items reverse scored (Ryff, 1989). Cronbach's alpha was .89 for the total scale.

Anxiety Sensitivity Index (ASI). The ASI (Reiss et al., 1986) was included to assess anxiety sensitivity, particularly the tendency to fear anxiety-related sensations because of their perceived consequences. In the present study, it was intended to provide supplementary information about anxiety-related vulnerability relevant to anticipatory anxiety. ASI responses were collected, but ASI scores were not included in the analyses reported in this paper.

2.3 Procedure

The questionnaires were administered through Google Forms between August and September 2026. Formal institutional ethical approval was not required, and the study was exempt from ethical committee review, as it was an anonymous, voluntary online survey of consenting adults that involved minimal risk and collected no personally identifying information. Participants confirmed consent statements on the age criterion, the diagnosis, the right to withdraw, and confidentiality before any questionnaire items were shown. No names or contact details were collected. Only responses submitted directly through the form were analysed. The form also included the Anxiety Sensitivity Index (Reiss et al., 1986).

2.4 Data Analysis

Scores were expressed as percentages of the maximum possible score (POMP; Cohen et al., 1999). Levels were classified as low, moderate, or high by dividing each possible score range into three equal parts. Because the ratings are ordinal and the groups were small, non-parametric tests were used: the Wilcoxon signed-rank test for the two fear subscales, Spearman's rank-order correlation, and the Mann-Whitney U test for group comparisons. Analyses were run with SciPy (Virtanen et al., 2020), with $p < .05$ taken as significant. The total CLQ score served as a proxy for

anticipatory anxiety, as described above, and ASI scores were not analysed.

3. Results

3.1 Anticipatory Anxiety and Well-Being

Table 1 presents the mean scores and reliability of each measure, and Figure 1 shows the distribution of levels. Anticipatory anxiety was moderate for 58.3% of the participants, high for 16.7%, and low for 25.0%, with a mean of 49.6% of the maximum score. Psychological well-being was moderate for 83.3% and high for 16.7%, and no participant scored in the low range. Positive relations with others (64.8%) and personal growth (63.8%) were the dimensions with the highest mean scores, and autonomy (51.0%) was the weakest. Internal consistency was high for both total scales ($\alpha = .92$ and $.89$) but low for some well-being subscales, particularly positive relations with others ($\alpha = .39$), environmental mastery ($\alpha = .59$), and purpose in life ($\alpha = .59$); findings for these subscales should therefore be interpreted with caution.

Table 1: Mean Scores and Internal Consistency of the Measures

Measure	Mean (%)	SD	α
Anticipatory anxiety (CLQ)	49.6	17.5	0.92
Fear of restriction	53.8	19.5	0.87
Fear of suffocation	45.3	18.3	0.87
Psychological well-being	58.4	12.1	0.89
Autonomy	51	19	0.76
Environmental mastery	55.7	14.5	0.59
Personal growth	63.8	15.5	0.75
Positive relations with others	64.8	12.5	0.39
Purpose in life	58.8	15.9	0.59
Self-acceptance	56.4	17.8	0.71

Note. Means and SDs are percentages of the maximum possible score. CLQ = Claustrophobia Questionnaire.

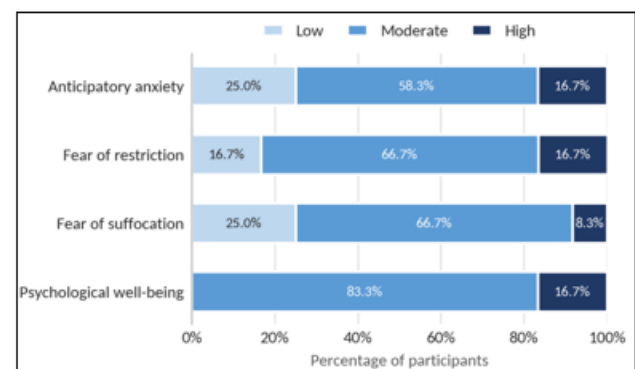


Figure 1: Levels of Anticipatory Anxiety, Claustrophobic Fear and Psychological Well-Being

3.2 Situations and Type of Fear

The situations most often expected to cause very or extreme anxiety were being deep inside an underground mine (83.3%), being locked in a small, dark room (75.0%), and lying in a narrow sleeping bag without being able to get out (66.7%) (Figure 2). Darkness made a marked difference: the same locked room produced very or extreme anxiety in 75.0% of the participants when dark, but in 41.7% when well lit. Seven of the ten most feared situations involved restriction.

Fear of restriction was the predominant fear for 66.7% of the participants, fear of suffocation for 25.0%, and 8.3% had both fears equally. Fear of restriction (53.8%) was higher on average than fear of suffocation (45.3%), but the difference was not significant ($W = 17.0, p = .163$), and the two subscale scores were closely related ($r_s = .85, p < .001$). All the women had restriction as their predominant fear, whereas half of the men had suffocation as theirs.

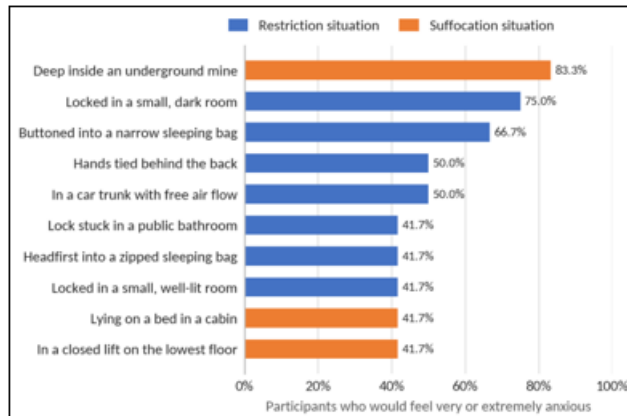


Figure 2: Situations Rated as Producing Very or Extreme Anticipatory Anxiety

3.3 Anticipatory Anxiety and Psychological Well-Being

Anticipatory anxiety was negatively but not significantly related to overall well-being ($r_s = -.37, p = .241$). It was strongly and significantly related to lower self-acceptance ($r_s = -.79, p = .002$) and lower personal growth ($r_s = -.67, p = .018$), and it was essentially unrelated to autonomy, positive relations with others, and purpose in life (Table 2). The restriction and suffocation subscale scores showed a similar pattern.

Table 2: Spearman Correlations of Anticipatory Anxiety and Claustrophobic Fear with Well-Being

Well-being	AA	FR	FS
Overall well-being	-.37	-.49	-.32
Autonomy	-.01	-.06	-.09
Environmental mastery	-.33	-.52	-.28
Personal growth	-.67*	-.71**	-.61*
Positive relations with others	-.07	-.09	-.03
Purpose in life	0	-.10	0.06
Self-acceptance	-.79**	-.79**	-.77**

Note. AA = anticipatory anxiety; FR = fear of restriction; FS = fear of suffocation. $p < .05$. $p^* < .01$.

When participants were divided at the median anticipatory anxiety score, the higher anticipatory anxiety group scored lower on every dimension (Figure 3). The differences were significant for self-acceptance (69.5% compared with 43.3%; $U = 36.0, p = .002$) and personal growth (74.8% compared with 52.9%; $U = 34.5, p = .009$), but not for overall well-being (65.2% compared with 51.7%; $U = 29.5, p = .093$). One-third (33.3%) of the lower anticipatory anxiety group had high well-being, compared with none of the higher group.

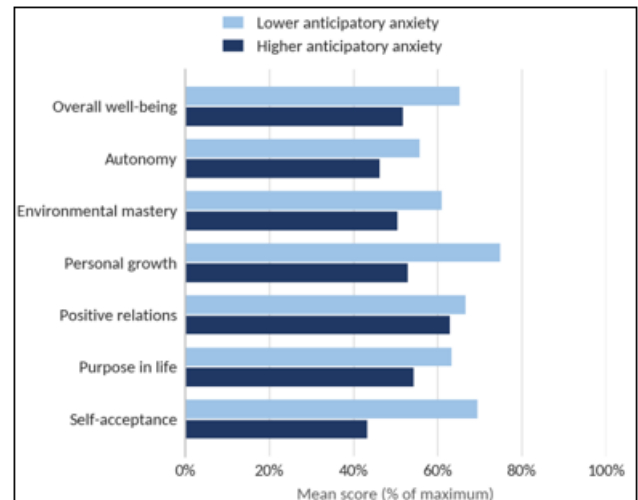


Figure 3: Psychological Well-Being of Participants with Lower and Higher Anticipatory Anxiety

3.4 Comparison of the Two Fear Types

Participants with a predominant fear of restriction reported higher anticipatory anxiety than those with a predominant fear of suffocation (53.1% compared with 38.5%), and slightly lower well-being (57.9% compared with 62.1%), but neither difference was significant (Table 3). H1 and H2 were therefore not supported. Within the restriction group, anticipatory anxiety was strongly and negatively related to personal growth ($r_s = -.87, p = .005$) and self-acceptance ($r_s = -.73, p = .040$), but not significantly to overall well-being ($r_s = -.43, p = .289$), so H3 was partially supported. The suffocation group was too small for H4 and H5 to be tested.

Table 3: Comparison of Participants with a Predominant Fear of Restriction and of Suffocation

Measure	Restriction (%)	Suffocation (%)	U	p
Anticipatory anxiety	53.1	38.5	16.5	0.497
Overall well-being	57.9	62.1	6	0.279
Autonomy	50	55.2	10	0.776
Environmental mastery	54.6	59	6.5	0.376
Personal growth	62.5	69.5	8	0.497
Positive relations with others	67.5	61.9	15.5	0.63
Purpose in life	59.3	62.9	10.5	0.921
Self-acceptance	53.6	63.8	7.5	0.497

Note. Values are mean percentages of the maximum possible score. Participants with both fears equally were excluded. U = Mann-Whitney U .

4. Discussion

Most participants expected at least moderate anxiety in everyday confined situations. The situations that caused the most anxiety involved being far from an exit, shut in the dark, or unable to move, which is consistent with the view that claustrophobic fear centres on entrapment and the loss of control over escape (Rachman & Taylor, 1993; Thorpe et al., 2008). The strong effect of darkness fits the uncertainty and anticipation model, since light makes the boundaries of a space and the way out visible and so reduces uncertainty (Grube & Nitschke, 2013). This has a practical implication:

simple features of an enclosed space, such as lighting, may change how much anxiety people expect to feel, just as shorter MRI scanners reduce claustrophobic reactions (Dewey et al., 2007).

Fear of restriction predominated, and it did so for every woman in the sample. This fits the two-component view of claustrophobia (Harris et al., 1999), although the two subscale scores were closely related ($r_s = .85$), and the fear groups did not differ significantly in anticipatory anxiety or well-being. The differences between the groups are therefore best described as descriptive trends rather than as evidence of meaningful differences between fear types. With a small suffocation group, these comparisons had limited power, and the direction of the differences may warrant further investigation in a larger sample.

The central finding is that anticipatory anxiety was most closely linked with specific dimensions of well-being. Higher anticipatory anxiety went with lower self-acceptance and weaker personal growth, while its correlations with relationships, purpose, and autonomy were close to zero and the overall relationship was not significant. Personal growth depends on openness to new experiences (Ryff, 1989). A person who expects intense anxiety in lifts, aeroplanes, crowded halls, or scanners is likely to avoid new places and activities, and each act of avoidance brings relief that strengthens the habit (Mowrer, 1960). Self-acceptance may suffer because adults judge themselves for a fear they know to be excessive, and anticipatory rehearsal of failure (Clark & Wells, 1995) may deepen this self-criticism. These results agree with evidence that anxiety lowers optimal well-being and quality of life (Keyes et al., 2002; Olatunji et al., 2007), and suggest that in claustrophobia the association centres on a person's view of the self and sense of growth. Middle-aged adults may keep close relationships and a clear purpose through their work and family roles (Lachman, 2004) even while their fear limits their personal development. Findings for positive relations with others should be interpreted cautiously, however, given the low internal consistency of that subscale ($\alpha = .39$).

Clinically, assessment should include anticipatory anxiety about confinement and not only the fear experienced inside it. Exposure-based treatment remains the most effective approach for specific phobias (Wolitzky-Taylor et al., 2008), and exposure designed to test the person's expectations (Craske et al., 2014) may be especially useful for anticipatory anxiety. Treatment may also need to target self-acceptance and personal growth directly, for example through well-being therapy combined with cognitive behavioural methods (Fava et al., 2005). Hospitals can reduce anticipatory anxiety before scans through clear preparation, good lighting, and continued contact with the patient.

5. Limitations and Future Directions

The sample was small and purposive, the diagnosis was self-reported, and the suffocation group was too small to test H4 and H5. Anticipatory anxiety was measured through ratings of imagined situations on the same questionnaire that defined the fear type, and some well-being subscales had low internal consistency, particularly positive relations with others (.39).

The cross-sectional design rules out causal conclusions, and the online English form may have excluded some adults. Future studies should use larger and more varied samples, a dedicated measure of anticipatory anxiety, clinically confirmed diagnoses, longitudinal designs, and regional languages, and should test interventions that target anticipatory anxiety, self-acceptance, and personal growth.

6. Conclusion

The study provides preliminary evidence concerning anticipatory anxiety and psychological well-being among middle-aged adults with claustrophobia. Most participants reported moderate anticipatory anxiety, and fear of restriction was more common than fear of suffocation. Although anticipatory anxiety was not significantly associated with overall psychological well-being, significant negative relationships were observed with self-acceptance and personal growth. These findings suggest that selected dimensions of psychological well-being may be particularly relevant when examining claustrophobic anxiety. Given the small sample and cross-sectional design, the findings should be interpreted cautiously. Further research involving larger and more diverse samples is needed to confirm these associations and examine their potential clinical relevance.

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