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# GAMIFIED BREATHS: MAPPING THE EVIDENCE THROUGH A SCOPING REVIEW.

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**Background:** Respiratory therapy plays a vital role in improving pulmonary function and maintaining respiratory health. Gamified breathing interventions integrate therapeutic breathing exercises with interactive digital or game-based platforms to enhance motivation and user engagement. These approaches are increasingly being explored across various clinical populations, including pediatric, neurological, and pulmonary rehabilitation settings, where adherence to conventional therapy is often challenging.

**Purpose:** This scoping review aimed to map the existing evidence on gamified breathing interventions and evaluate their potential role in improving patient engagement, adherence, and respiratory outcomes in rehabilitation settings.

**Methods & Materials:** A scoping review methodology was used to identify and synthesize relevant literature. Database searches and additional sources yielded 114 records, of which 64 duplicates were removed. The remaining 50 records underwent title and abstract screening, resulting in the exclusion of 18 studies. Thirty-two articles were assessed for eligibility, and 17 were excluded based on predefined criteria. Finally, 15 studies were included for qualitative synthesis to analyze intervention characteristics, target populations, and clinical outcomes, following established methodological frameworks.

**Results:** The included studies consistently demonstrated that gamified breathing interventions, including digital breathing games and biofeedback-based tools, improved patient engagement. These interventions were associated with improvements in breath control, lung capacity, motivation, and overall compliance with therapeutic programs. Some studies also reported enhanced user satisfaction and reduced dropout rates compared to conventional therapy.

**Conclusion:** Gamified breathing techniques show promising potential as cost-effective adjuncts to conventional respiratory therapy, enhancing engagement and adherence. Their integration into clinical practice may improve rehabilitation outcomes, particularly in populations with low motivation, although further high-quality studies are needed to establish standardized protocols and long-term effectiveness.

**Keywords:** Gamified breathing, Respiratory Rehabilitation, Patient engagement, Digital health, Pulmonary function.