

A Mixed Methodology Study: The Comparison between Competence & Psychological Resilience between New & Experienced Healthcare Workers



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Research Objectives

Research Aim

- Understanding the relationship between competence (H-PEPSS) and resilience (CD-RISC 10).
- Identify key factors that contribute to resilience, competence and how they change across experience levels.
- To document coping mechanisms employed by healthcare workers (Brief COPE).

Definitions

- **CD-RISC 10** – Connor–Davidson Resilience Scale.
- Comprises 10 items assessing adaptability, stress coping and resilience.
- **H-PEPSS** – Health Professional Education in Patient Safety Survey.
- Measures self–reported competence in patient safety, including teamwork, communication, conflict, safety.

Study Design & Demographics

- Study Design: Mixed Method Observational Study.
- Study Period: 8 weeks.
- Place of Study: Tertiary Healthcare Setting
- Sampling Technique: Convenient Sampling.

Sample Size Justification

$$n = (Z_{1-\alpha/2}^2 * p(1-p)) / d^2$$

where,

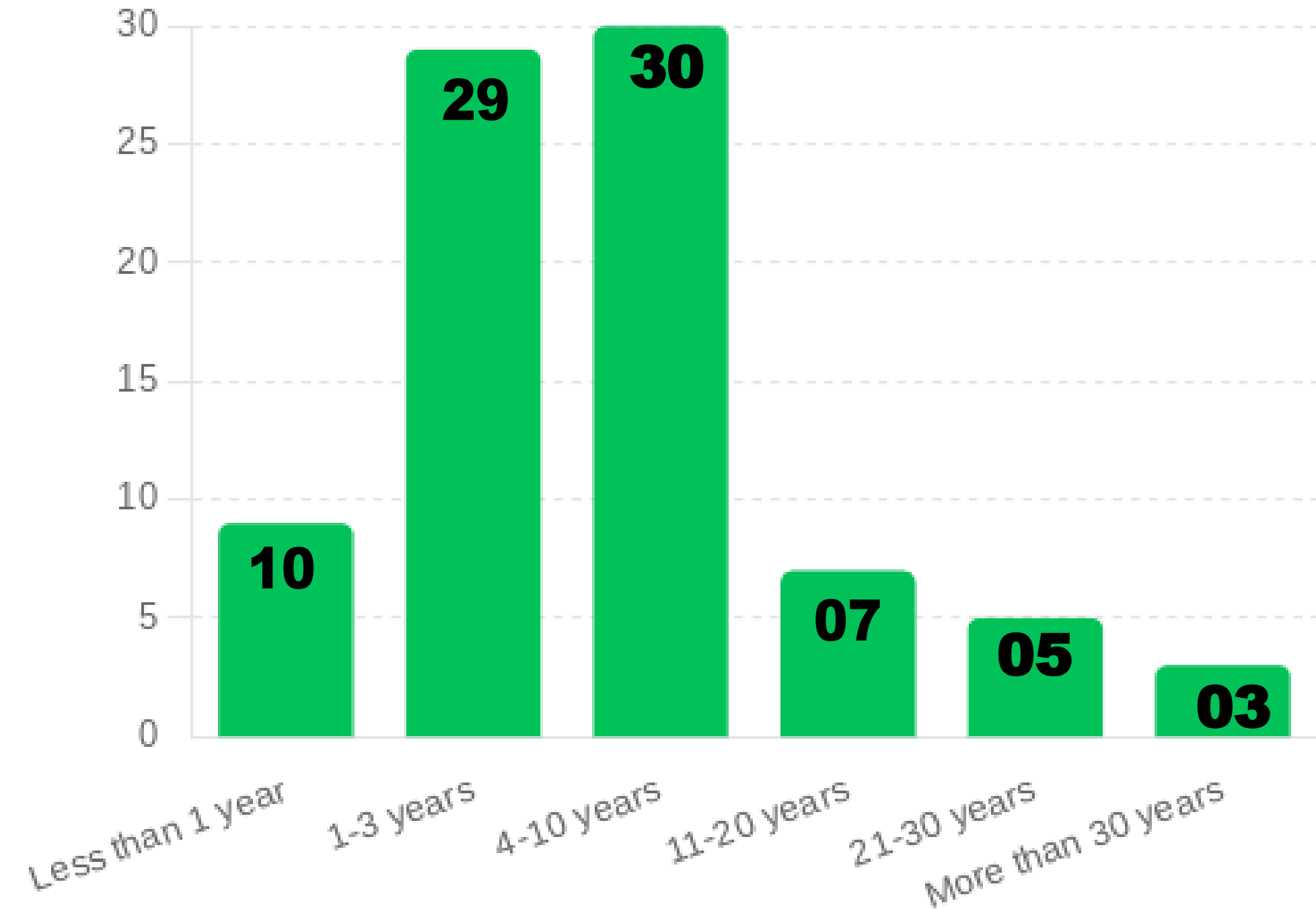
Standard Deviation of competence is found to be 63.7 & 13.7 based on study

conducted by Ritta Meretego & et al, respectively;

And $(Z_{1-\alpha/2}) = 1.96$; at 95% Confidence Interval with Precision of 10% estimated sample size is 71.

Which is approximated to 75 by adding 5% non responsive rate to sample size.

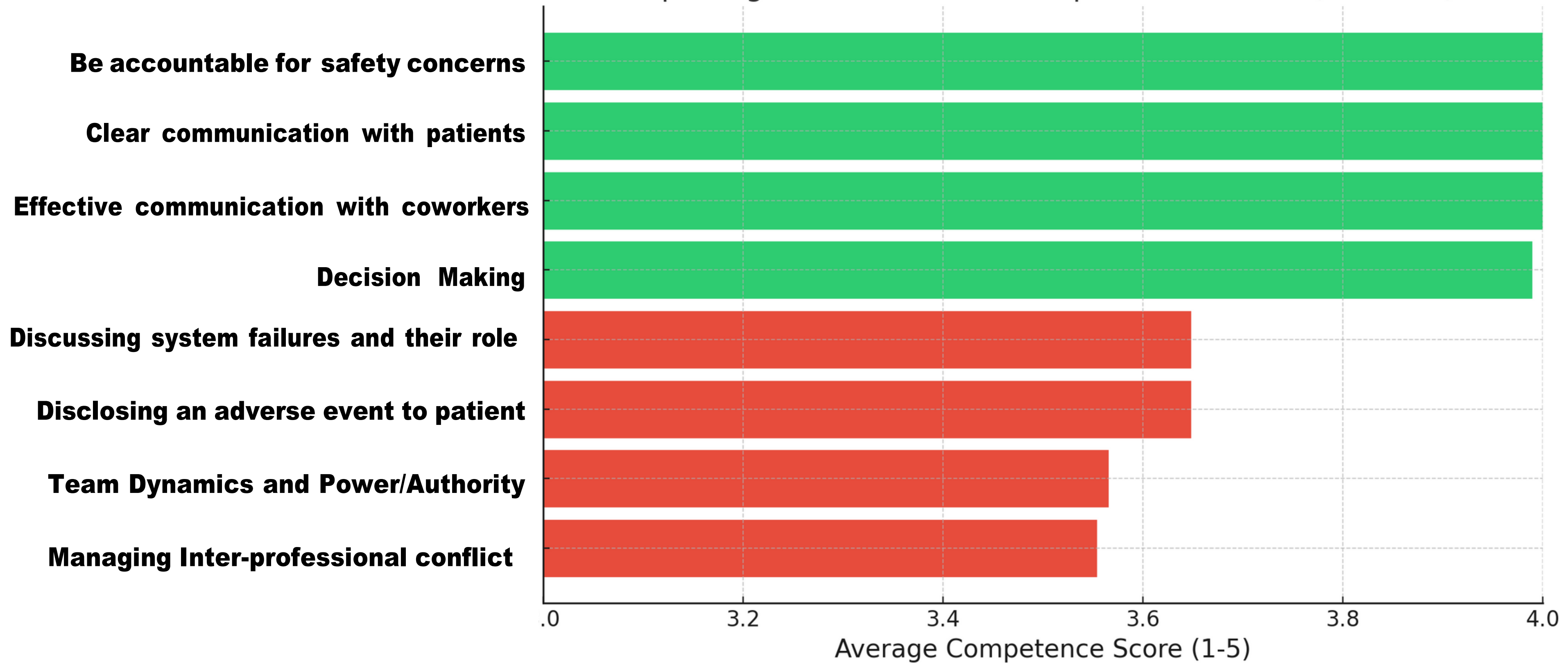
- Actual Sample: consists of 84 consenting healthcare workers.



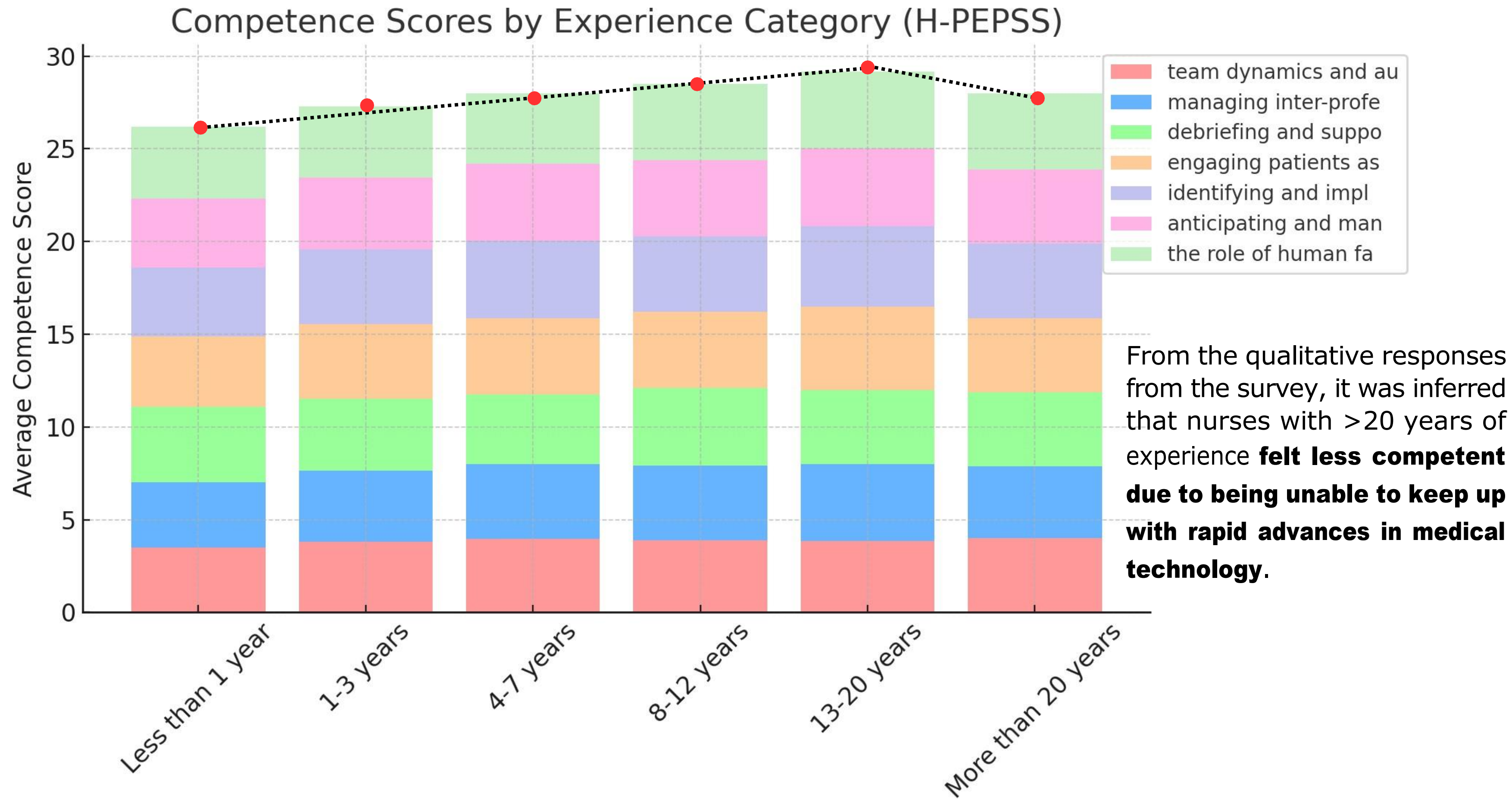
Data collected via digital and physical forms in English, Kannada and Malayalam.

Competency: Key Areas

Top 4 Highest and Lowest Competence Metrics (H-PEPSS)



Competency versus Years of Experience



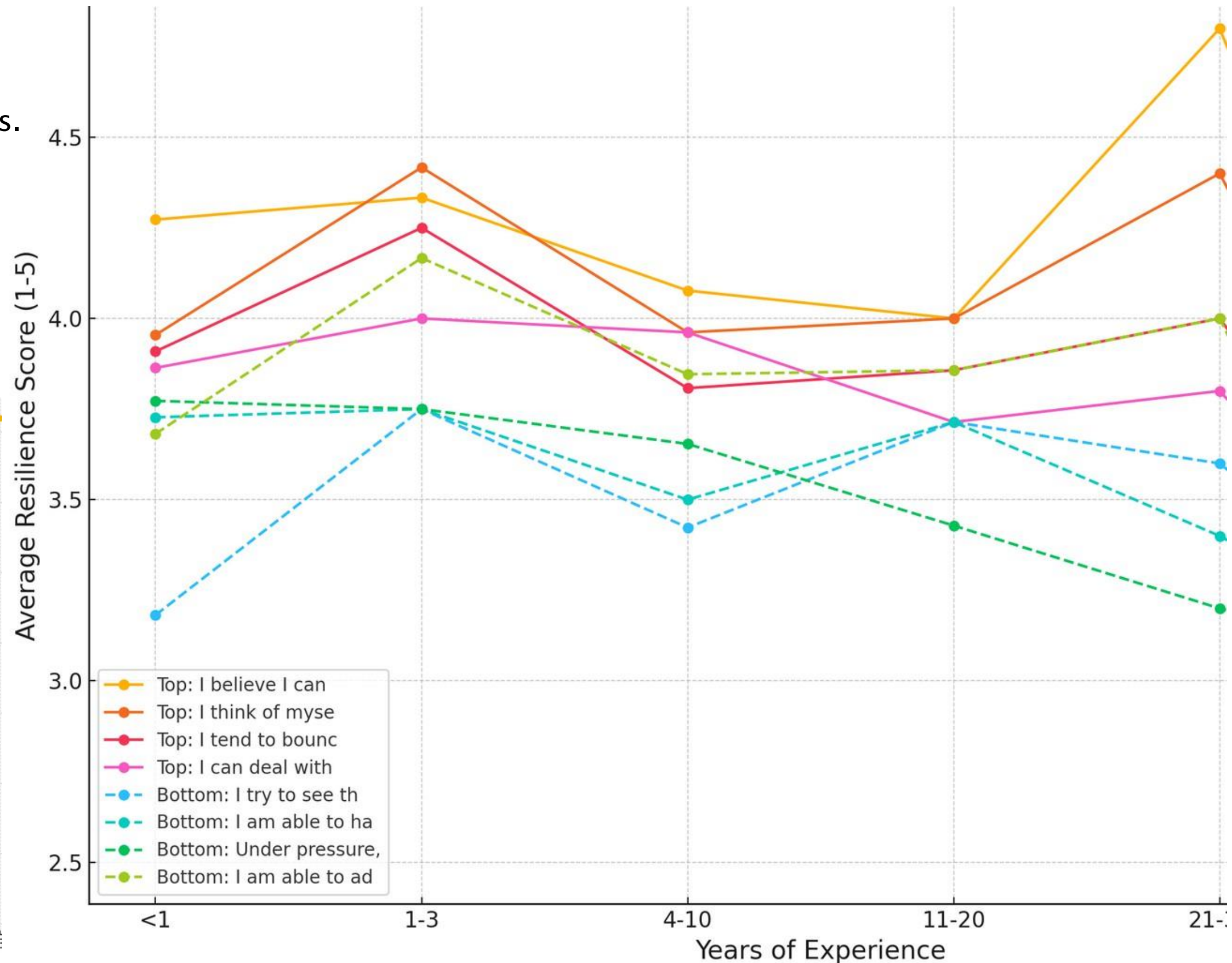
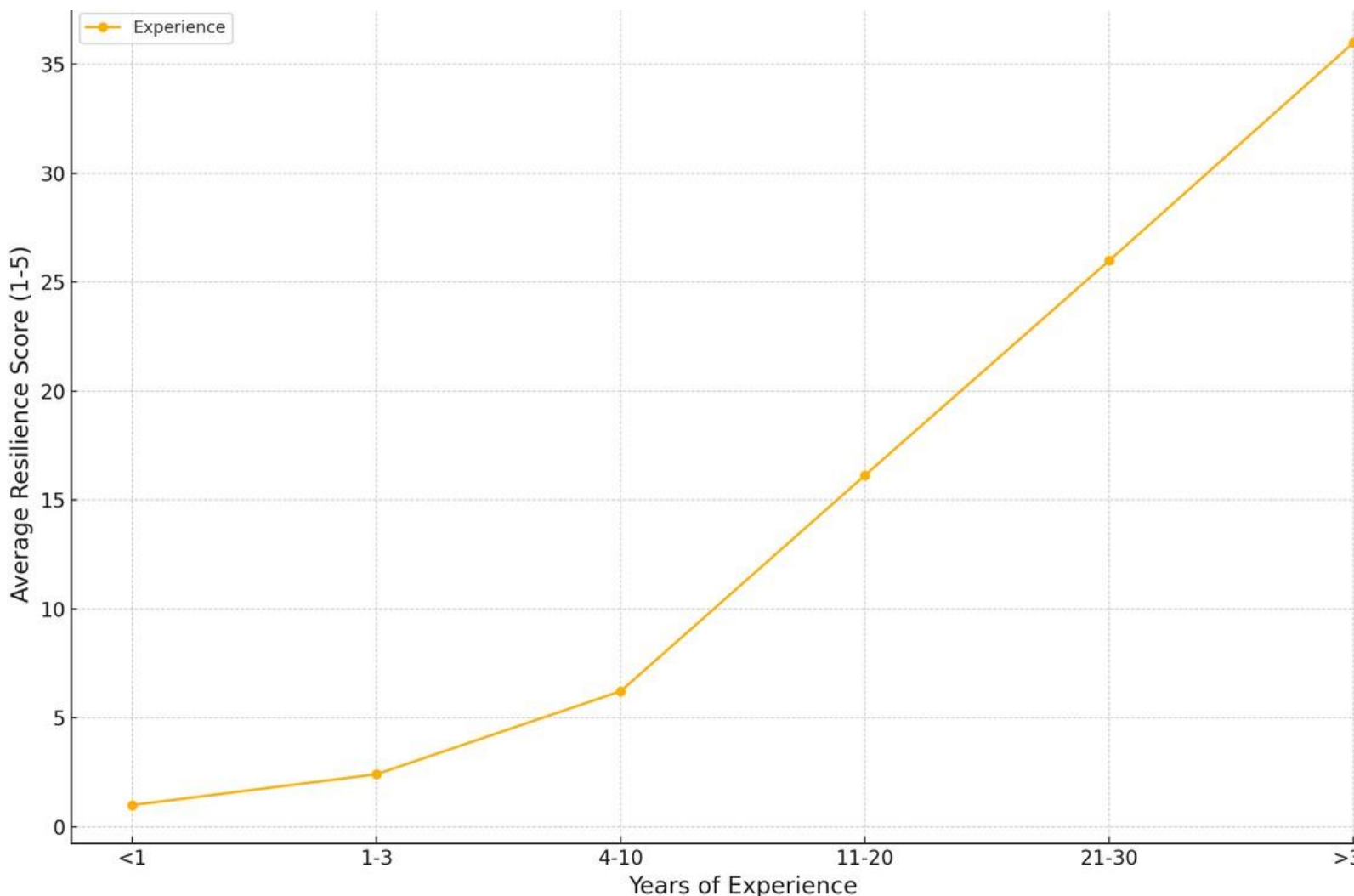
Resilience versus Years of Experience

Top 4 Resilience Metrics:

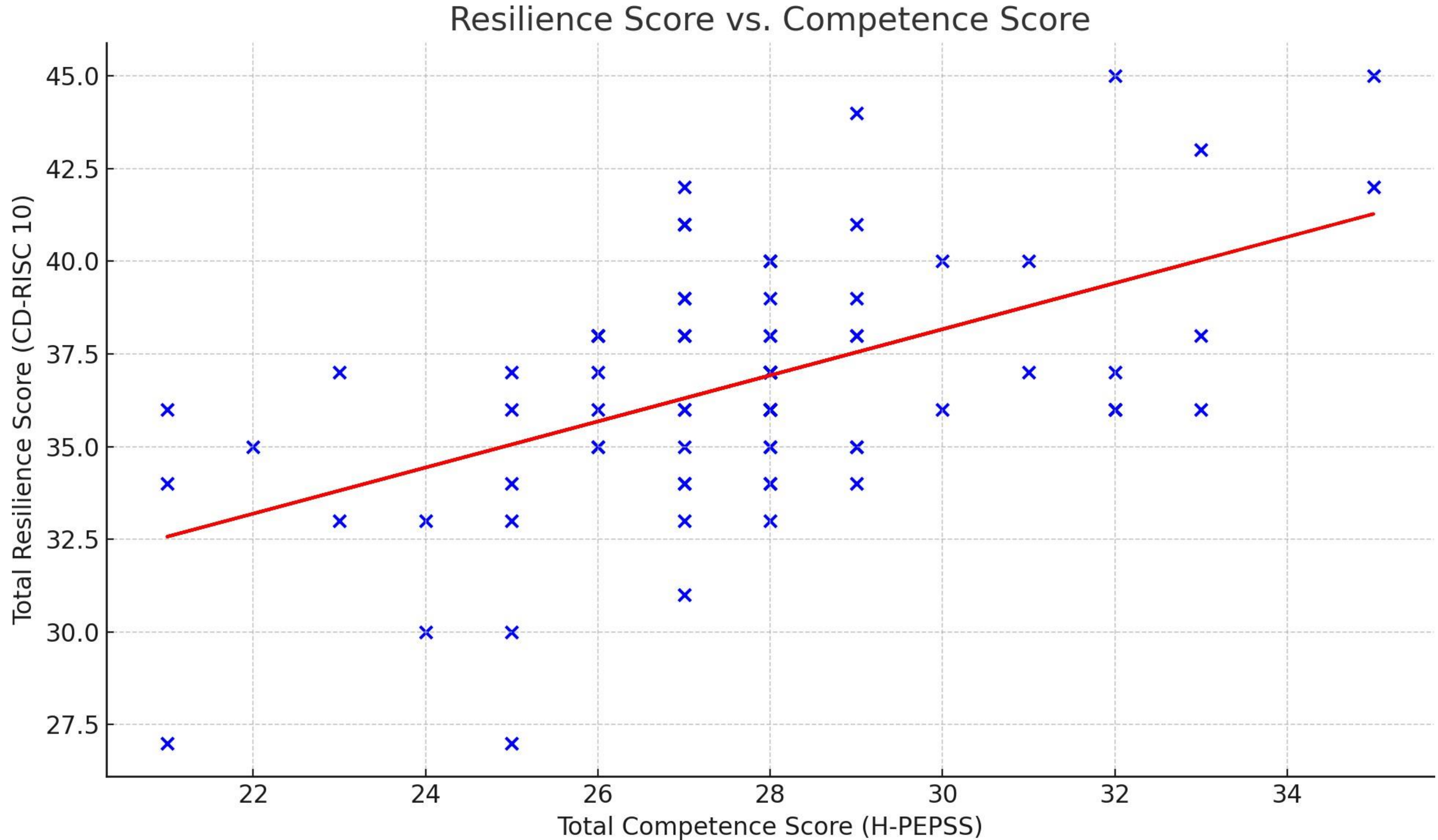
- I can deal with whatever comes my way.
- I think of myself as a strong person.
- I can bounce back after illness, injury, or other hardships.
- I believe I can achieve my goals, even if there are obstacles.

Bottom 4 Resilience Metrics:

- I try to see the humorous side of things.
- I am not easily discouraged by failure.
- I am able to handle unpleasant or painful feelings like sadness, fear, and anger.
- Coping with stress can make me stronger.



Resilience versus Competence



Qualitative Brief COPE Responses



Key Findings from Qualitative Analysis

- **Common Coping Strategies:** Words like "calming," "meditation," "spirituality," and "humor" suggest that participants often rely on relaxation techniques, humor, and faith to manage stress.
- **Dealing with Negative Emotions:** Terms like "guilt," "self-blame," and "criticism" indicate that some respondents experience significant self-directed negative feelings during stressful times.
- **Problem Solving:** Words such as "plan," "resolve," and "action" reflect proactive approaches to dealing with stress.

Conclusions: Key Takeaways

Resilience and Competence Correlation: The study shows a positive correlation between resilience and competence. Healthcare workers with higher perceived competence tend to exhibit stronger resilience, suggesting that these attributes reinforce each other.

Experience Matters: Resilience and competence both increase with years of experience. Workers with more than 10 years of experience demonstrate significantly higher levels of resilience and competence compared to early-career professionals.

Early-Career Challenges: Early-career healthcare workers (<3 years) exhibit lower resilience, particularly in metrics related to emotional control and coping with failure.

Positive Resilience Metrics: Experienced professionals perform particularly well in resilience metrics such as dealing with adversity and staying focused under pressure. However, certain areas like handling negative emotions improve more slowly over time.

Conclusions

Mentorship and Support Programs: We propose implementing structured mentorship programs for early-career healthcare workers to help them develop resilience through guidance from experienced professionals.

Resilience Training: Incorporate resilience-building workshops and stress management training to help healthcare workers, especially novices, cope with high-pressure situations more effectively.

Workplace Interventions: Create a supportive work environment that fosters growth in both competence and resilience, with regular feedback, psychological support, and career development opportunities.

Regular Monitoring: Establish systems for regular monitoring of resilience and competence levels to ensure timely interventions and support for healthcare staff facing challenges.

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