

The evolving nature of work in the Digital Age:

Exploring construction workers' occupational adaptation to technological transformation

- The changing landscape of workplace technology warrants the need to expand the knowledge of work occupations.
 - *When work occupations changes dramatically, what happens to workers? How do they adapt?*
 - *Does adaptation automatically lead to better health and well-being?*
- Focusing on the construction worker population, we used the framework to **Occupational Adaptation** (OA) to examine changes in various health and well-being domains due to technological advancements.
- OA in this study is rooted within *Dewey's notion of transactionalism*, emphasizing that adaptation is a socially shaped occupational response to the evolving transactions of the person-environment continuum.

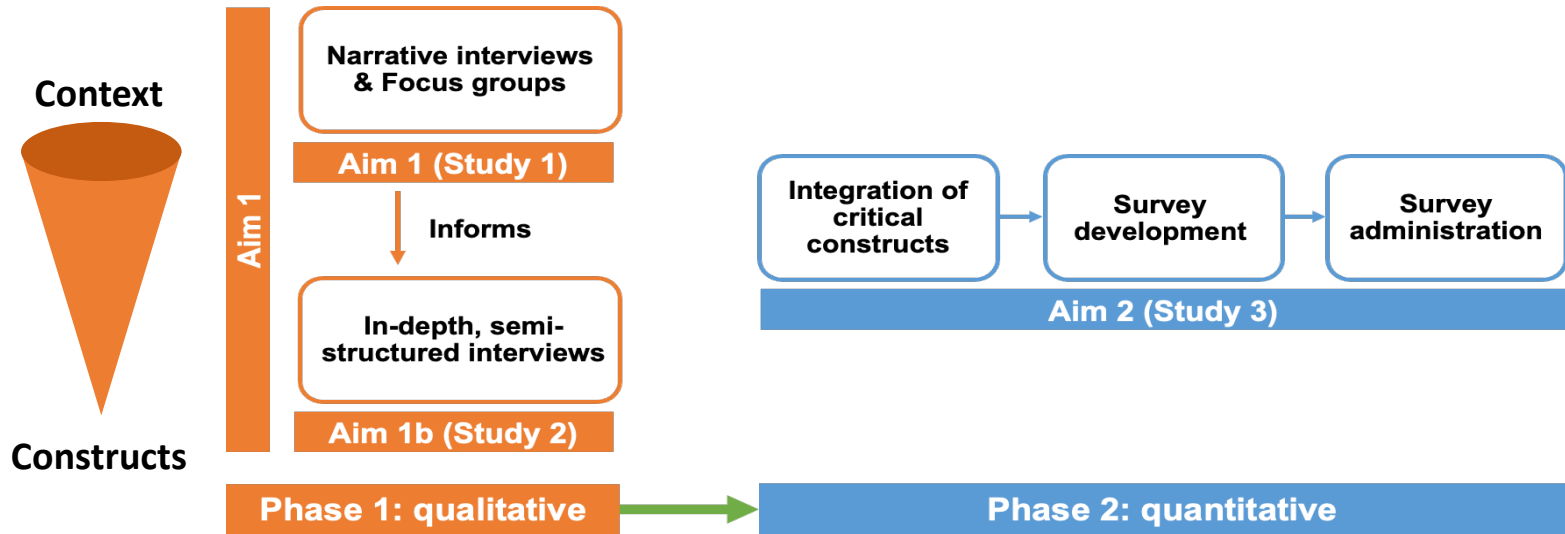


Dissertation Aims: Exploratory Mixed-Method Design

Aim 1: Identify critical constructs of occupational adaptation and health and well-being.

- Aim 1a: Describe contexts of technology transformations of demolition work.
- Aim 1b: Explore the constructs of occupational adaptation and worker health and well-being.

Aim 2: Characterize the relationship between occupational adaptation and worker health and well-being in the context of concurrent technological advancements in construction.

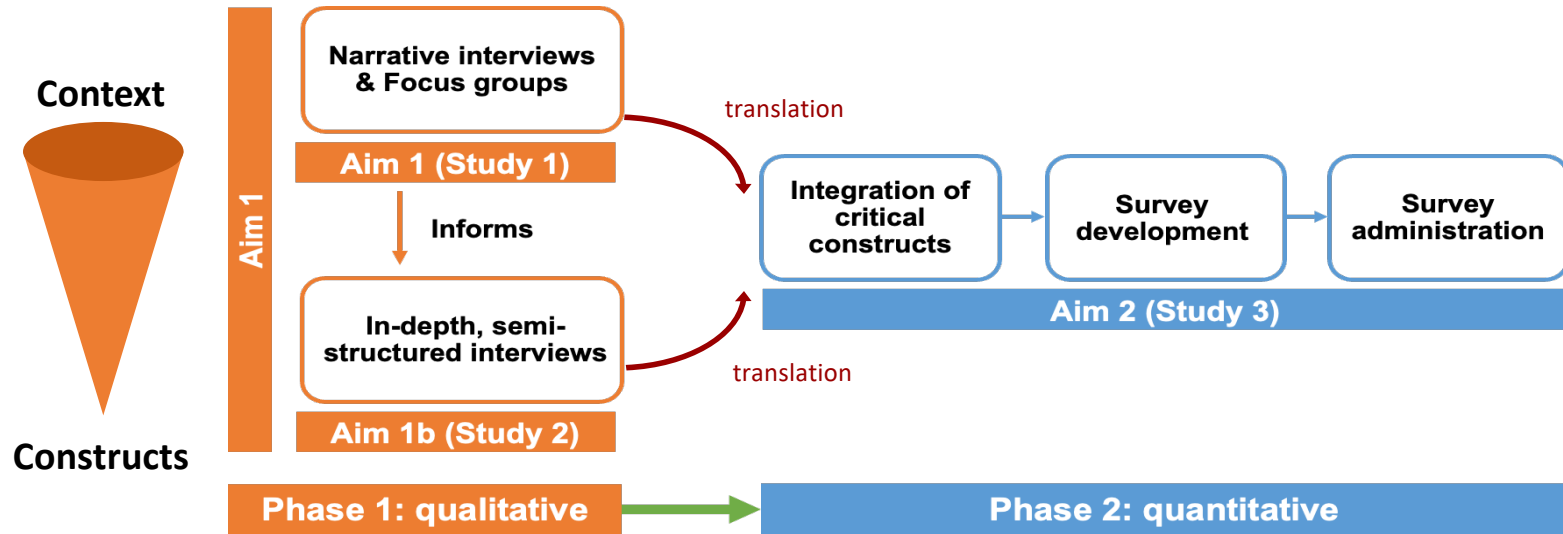


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Findings Synthesis

Study 1

- **Four contextual themes** emerged, illustrating that **demolition work is hazardous, uncertain, and highly collaborative**.

- Concerning the unique characteristics of demolition work, the advisory panel expressed **both optimism and skepticism toward new technologies**, noting benefits for safety/efficiency alongside concerns about feasibility, cost, and workforce readiness.

Study 2

- Adaptation to technological changes emerges as a **three-layer process**: (1) worker trust, (2) organizational support & individual responses, and (3) outcomes for work performance and health.

- Findings highlights **adaptation as an ongoing, dynamic process**, in which workers and organizations co-construct ways of engaging with work practices in the face of technological change.

Study 3

- **Workers reported positive changes across work and health outcomes**, with the strongest links between workload changes and health; individual factor (e.g., union status, race) were significant predictors of health and well-being outcomes.

- **Trust in technology was high**, driven mainly by performance rather than reputation or prior experience.



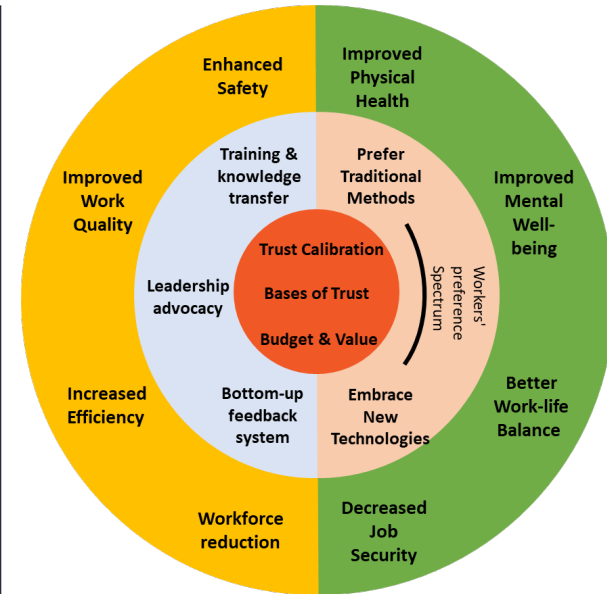
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Physical Health ↑

Work-Life Balance ↑

Mental Well-being ↑

Job Security ↓

Worksite Safety ↑

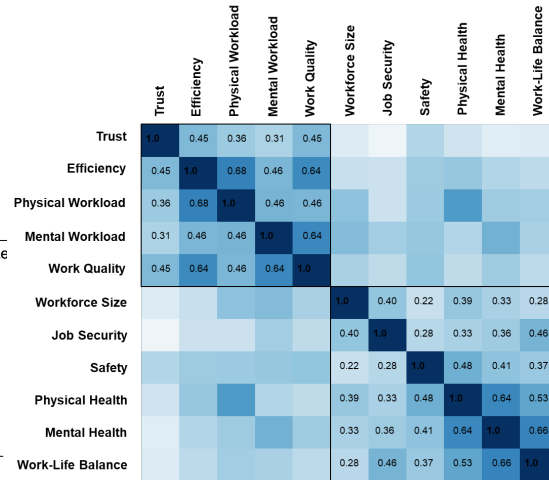
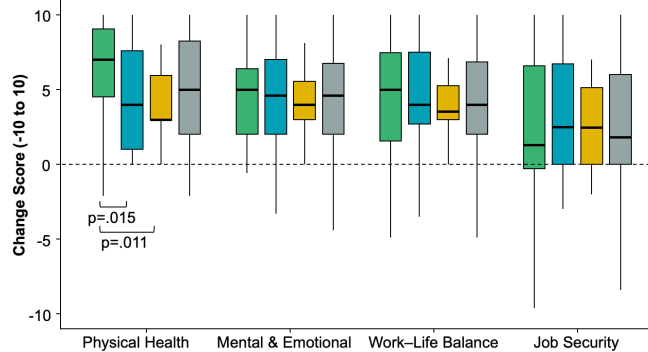
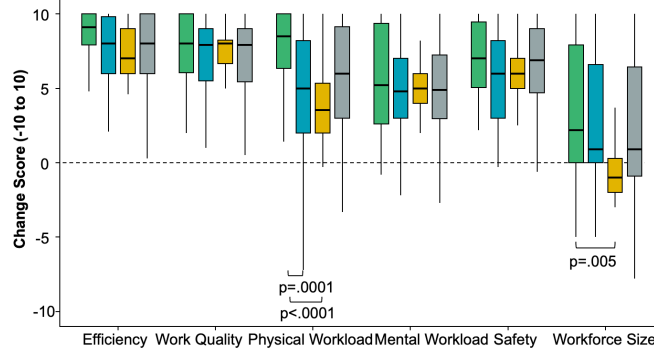
Work Quality ↑

Efficiency ↑

Workforce Size ↓



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