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“Capturing the changes in the work environment of nurses: using photographic research methods from the field of ecological restoration”

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Introduction

Adverse Events in ICUs

High number of diagnostic and therapeutic interventions

Mortality in
USA ICUs - 8% to
10%

Prevalence: 10.5
errors per 100
patients/day

Health care environments as risk
factors for adverse events

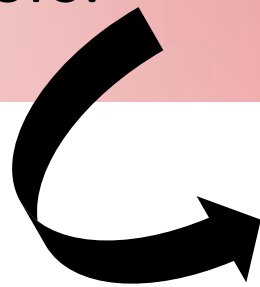
- Physical resources
- Technological resources
- Material resources
- Human resources

Introduction

Medication Errors



- Result of multiple system failures;
- Common errors: prescription (30%), dispensing (24%) and administration (41%);
- Risk factors:



- Work environment
- Fatigue
- Work load
- Communication failures
- Lack of information
- Problems in materials and equipment

PURPOSE

To examine whether the photographic research methods from the field of ecological restoration help nursing practitioners of a Brazilian ICU to strengthen the safety of their work environment.

Theoretical and Methodological Approach

Restaurative Research in Health Care

**Ecological
restoration**

(Higgs 2003)

**Ecosystem
management**

(Gunderson et al. 1995)

**Health care
ethics**

(Marck 2004)

Nursing

(Marck et al. 2006)

**Place
Ethics**

**Citizen
Science**

**Engaged
Practice**

**Adaptive
Learning**

**These principles guide the ethics, science, and practice
of our research relationships and our scientific work**

(Backman et al. 2012; Marck 2012)

METHODS

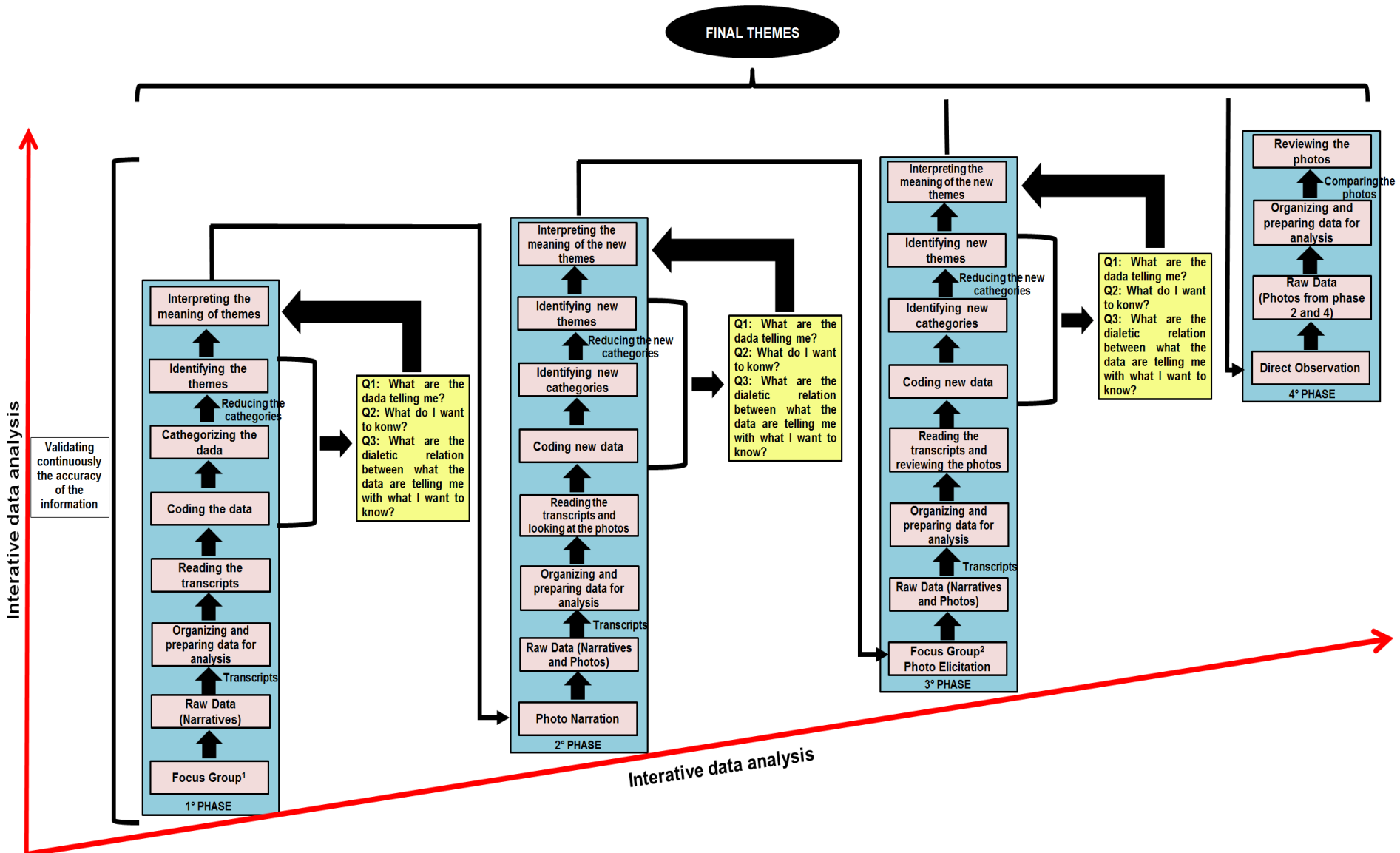
Type of Study: qualitative approach;

Local of Study: Brazilian ICU of a medium size general hospital in São Paulo state;

Participants: 23 nurses;

Ethical Issues: approved by the appropriate ethics committee. Participants signed a consent form voluntarily.

Data Collection and Management



RESULTS AND DISCUSSION

Theme 1 - Visible changes in the work environment of nurses



The medication preparation counter before and after the redesign

RESULTS AND DISCUSSION

Theme 1 - Visible changes in the work environment of nurses



Easily cleaned tiles on the backsplash of the medication preparation counter before and after the redesign

RESULTS AND DISCUSSION

Theme 1 - Visible changes in the work environment of nurses



The positioning of the sharps collector before and after the redesign

RESULTS AND DISCUSSION

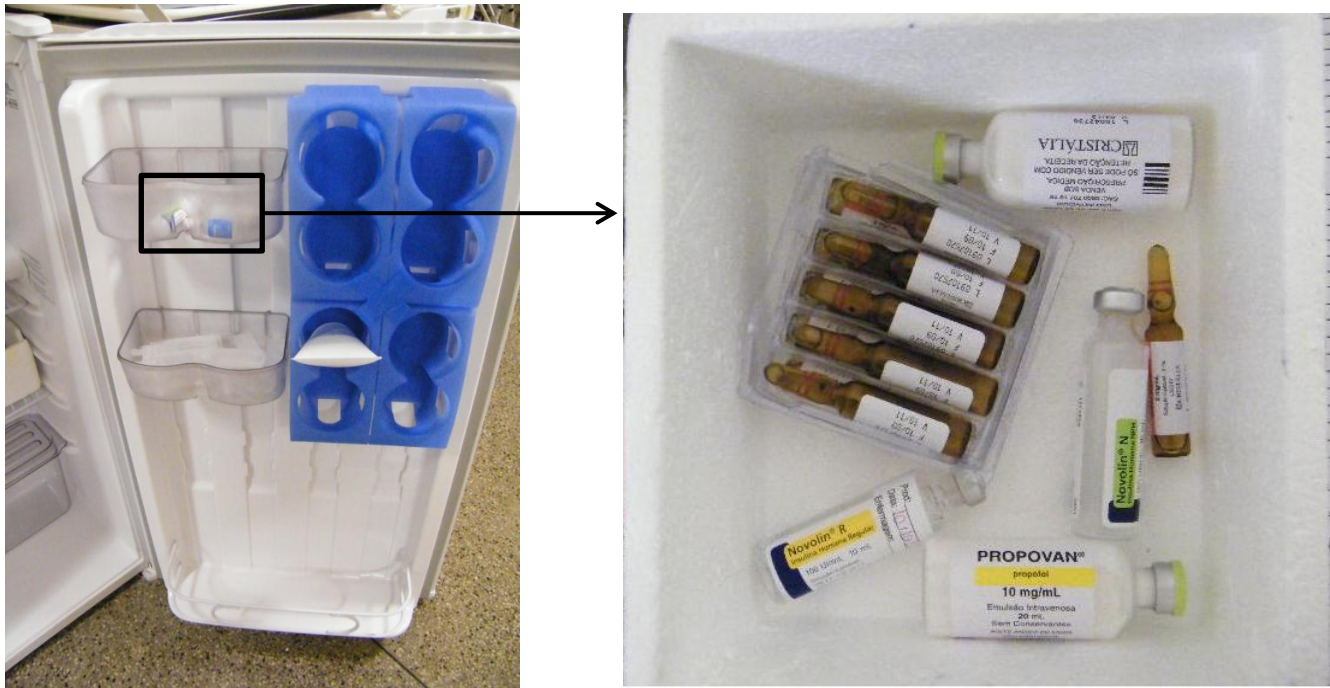
Theme 1 - Visible changes in the work environment of nurses



Ampoules different in size, color, label, and appearance before and after the redesign

RESULTS AND DISCUSSION

Theme 1 - Visible changes in the work environment of nurses



The storage of insulin inside the refrigerator before and after the redesign

RESULTS AND DISCUSSION

Theme 2 - Visible changes in the culture of safety



The Risk Management box after the redesign

CONCLUSION

- ✓ Photographic research methods from the field of ecological restoration helped participants to (re)think and to redesign their work environment towards a safer place for medication management;
- ✓ Some changes may contribute to other risks for patient safety.

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