Restorative Benefits of Paediatric Ward as Play Milieu in Nigerian Hospital

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12 October 2015
Thesis Overview

**PURPOSE**
- Introduction
- Statement of problem
- Research Gap
- Aim and Objectives
- Research Underpinning
- Variables of Study
- Children Wards

**PROCESS**
- Research
- Methodology
- Strategy and Implications

**OUTCOMES**
- Research Findings
- Contribution and Recommendation
Introduction

Caged:
- Aggression
- Withdrawal

Unstructured stimulation:
Regressive behaviour

Habitat:
- Playfulness
- Interact

Structured stimulation:
Progressive behaviours
The play behaviours of the polar bear cubs are similar to that of the children.

Because of mismatch between the ward conditions and the children, such as:
- Separation from peers and love ones
- Staying with strangers
- Experiencing different routines
- Loss of privacy, and control.

In addition to:
- Confined space
- Strange medical apparatus, and
- Over crowdedness.

This causes regressive behaviour;
- Restlessness
- Crying
- Withdrawal and
- Reduced functioning.
Children Ward (Before)
Abubakar Tafawa Balewa University Teaching Hospital, Bauchi

SELECTION CRITERIA:
- One of the 18th Teaching Hospitals of the Federal Government;
- It has 700-bed capacity with different generation of infrastructure from 1981;
- The hospital offers full services involving healthcare services, training and research;
- An average of 3400 patients are seen for different diagnosis per week

<table>
<thead>
<tr>
<th>Children Ward</th>
<th>Cubicle</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Area (m²)</td>
</tr>
<tr>
<td>Number of Beds</td>
<td>6 or more</td>
</tr>
<tr>
<td>Cubicles</td>
<td>378.0</td>
</tr>
<tr>
<td>Aisle</td>
<td>99.0</td>
</tr>
<tr>
<td>offices/courtyard</td>
<td>203.0</td>
</tr>
<tr>
<td>TOTAL AREA</td>
<td>680.0</td>
</tr>
</tbody>
</table>

6 Bedded typical ward cubicle used as control ward
This study tends to fill the identified gaps through using architectural space and elements to explores children activities and behaviours during their hospitalization.

- Space for senses and body, space for cure and functioning and space with primitive preference
## Research Aim and Objectives

**Aim:** To determine the restorative effect of a hospital ward space as a play milieu on stress reduction and functioning of hospitalized children

<table>
<thead>
<tr>
<th>Main RQ</th>
<th>ASSUMPTION</th>
<th>RQs</th>
<th>ROs</th>
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</thead>
<tbody>
<tr>
<td>How can a hospital ward space cum play influences children behaviour and functioning in Nigerian healthcare setting</td>
<td>To compensate for the features and situation, children ward transformed to a play milieu with loose items may encourages exploration and play behaviours.</td>
<td>What are the challenges faced by hospitalized children in the ward?</td>
<td>To explore the behavioural responses of children in hospital wards without intervention to sustain their interest;</td>
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<td>How can the ward as a play milieu influences children functioning and restoration?</td>
<td>To identify the shift in children's behaviour after experiencing the hospital ward as a play milieu; and</td>
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<tr>
<td></td>
<td></td>
<td>What are the perception and preference of children, their caregivers on the use of loose play items?</td>
<td>To examine the perception of children and their caregivers on the use of the hospital ward as play milieu.</td>
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</tbody>
</table>
In architectures space is a 3-dimensional setting, but to children space is a social setting: Pragmatist phenomenology serve as the underpinning, theoretical framework and methodological rubric.

**Research Underpinnings**

**Stress Coping Reduction Theory**
- Sense of Security
- Sense of Control
- Social Support
- Physical Movement and Exercise

**Supportive Design**
- Sense of control
- Positive distraction
- Social Support

**PE-Fit**
- Individual preference
- Coping style
- Environmental potential
- Constraints

**Affordances**
- Action
- Perception

**Attention Restorative Theory**
- Being away
- Extent
- Fascination
- Compatibility


Variables of the Study

Variables lead towards understanding the path in achieving Research Aim and Objectives (Simo-Pinatella et al., 2013).

- **Independent Variables**
  - Loose Play Items

- **Dependent Variables**
  - Psychological stress and wellbeing

- **Controlled Variables**
  - Situations, norms and protocols

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**Regressive Behaviour**
- Being fearful, discomfort, anxiety, being bored, crying, not interacting, and clinging to their parents

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**Progressive Behaviour**
- Being cheerful, more relax, less worried, cooperating, active in play, interacting, and being happy
Research Methodology

**Research Design**
- Exploratory Research
- Social Ecological Transaction; A Pragmatist Phenomenology Approach
- Mixed methods design (Concurrent nested strategy) (Concurrent triangulation strategy)

**Measurement Strategies**

<table>
<thead>
<tr>
<th>STRATEGY</th>
<th>RESPONDENT</th>
<th>OBJECTIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Video recording</td>
<td>Children (n=17)</td>
<td>1</td>
</tr>
<tr>
<td>2. Photography</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>3. Drawing</td>
<td>Children (n=04)</td>
<td>2</td>
</tr>
<tr>
<td>4. AHP Questionnaire</td>
<td>Caregivers (n=25)</td>
<td>2</td>
</tr>
<tr>
<td>5. Interview</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

**Qualitative** (Main method)
- Children and Caregivers (Research protocol and ethical clearance)

**Quantitative** (Supportive method)
- Data analysis and triangulation

**Findings**
Children Ward (After)

Abubakar Tafawa Balewa University Teaching Hospital, Bauchi

- Natural and man-made features; sandbox, water, stones, wooden and plastic blocks, writing, colouring and cutting materials and so forth.
Analysis, Parameters and Implication

**RO #1**
Children behaviour and functioning without intervention

**Condition, features and situation**
Functioning and behavioural pattern of children

- Video recording (n=17)
- Photographs (n=17)
- Questionnaire (n=25)
- Drawings (n=04)
- Interview (n=12)
- Interpretive content analysis
- Expert Choice II

**RO #2**
Children behaviour and functioning in a ward as play milieu

**Conditions, situation and play**
Benefits of interaction with features, attributes and peers

**RO #3**
Children and caregivers perception, needs, and demands

**Features preference**
Potentials of features, attributes and design preference

**CONCURRENT TRIANGULATION**

- Ward space and children relationship (“ACTUAL” setting)
- Physical, Social, Cognitive
- Perception and conception (“IDEAL” setting)

Theoretical and design implication in enhancing children hospital ward settings
### Research Findings

#### Regressive Behaviours
- Thumb sucking
- Open mouth and nodding
- Frowning and avoiding eye contact

#### Progressive Behaviours
- Group dynamism
- Assimilation and accommodation
- Interpersonal relationship

#### PLAY SPACE

**INTERCEDES**
- Hospital norms, protocol, and situation

**SHIFT**

**FUNCTIONING AND RESTORATION**
- Reduced length of hospital stay

#### CAUSES

- Confinement
- Crowdedness
- Unfamiliar setting
- Staying with strangers
- Noise

- Play milieu
- Adequate space
- Sense of familiarity
- Situated freedom
Conclusion and Implications

The ward is a play space to the children, a setting that gives them a place of their own.

Theoretical Implication
Appearance:
Setting should consist of fit and affordance

Arrangement:
Practical clarity for stream of play activities

Usage:
Level of affordances

Design Implication
Space definition
Order
Aesthetic
Features
Contributions of Research

The research has expanded our understanding regarding:

- The *transactional relationship* between children and their hospital setting.
- The importance of the *play milieu* on children’s functioning and restoration.
- Recognising and valuing *children’s preference* about their settings.

- Finally, the finding is consistent with the general comment number 17 (2013) of the United Nation Convention on the Right of Child to rest, leisure, play, recreation, cultural life and the arts.
Recommendations

- Future research may look at the potentials of using the loose play items for children of different age group in palliative and hospice care.

- An experimental study is needed for future research to investigate children ward setting as a play milieu using same play items, features and attributes to understand hospitalized children physiological indices that involves measuring their blood pressure, pulse rate, and respiratory rate (control and experiment group).

- Future research can test the model of children’s everyday functioning in an outdoor hospital setting using the four aspect of the practical and designing characteristics in determining the level of child functioning and stress reduction.
Publications

INDEXED JOURNALS

CONFERENCE PROCEEDINGS

PUBLICATIONS IN VIEW (Journal of Paediatric Nursing)