GARDEN AS RESTORATIVE ENVIRONMENT FOR CHILDREN IN MALAYSIAN HOSPITAL SETTING

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2006
Problem Statement

I am bored, not free to move around, I feel restless, and I hate this place (ward)

Zainul, aged 10, nephritic syndrome

I hate taking medicine and injection

Adibah, aged 12, blood complexion

Paediatric patients experienced stress in ward.
What are the properties and attributes of the ward affording stress to the hospitalised children?
Garden as Restorative Environment

- Restoration is reduction from stress and health recovery.
- Restoration is the positive shift of three areas of functioning: cognitive, physical and social.
  - Cognitive: from boredom to fascination; from anxiety to relax and feeling calm and comfort; from fearful to cheerful and forgetting worries.
  - Physical: from passive to active in play; from sedentary to lots of movement
  - Social: from being alone and recluse to playing with peers and caregivers.
Garden as Restorative Environment

- Psycho-physiological stress reduction framework: Attention Restorative Theory (ART) and Stress Coping Restoration Theory (SCRT)
- ART: Involuntary attention such as viewing natural environment is an effortless functioning that allows a depleted attention capacity to recover and thus reduced mental fatigue.
- Four qualities of recovery from mental fatigue:
  a. Being away
  b. Extent
  c. Fascination
  d. Compatibility
- SCRT: Stress is reduced when the environment affords:
  a. Sense of security
  b. Sense of control
  c. Social support
  d. Physical movement and exercise
  e. Access to nature and other positive distractions
Children’s Functioning: Play

- Play is **sensual and motoric** activities that is gathering and processing information through direct perception while moving in the landscape space.
- It involves **physical and perceptual contacts** with the elements of the environment affording the children to sense of control and to explore and manipulate the environment.
- Play involves interaction of a child with **peers** that leads to establishment of friendship and acquaintanceship.
- Play generates children to develop **emotional values** to a place such as like versus dislike, attraction against aversion, wonder versus indifference, joy in place o sorrow, curiosity instead of boredom, courage versus fear and fascination versus anxiety.
Theory of Affordance

- Children value a place is not determined by its appearance but by its potential for affording play activities. That is, the perception and movement of children are influenced by the functional properties (affordances) of the garden.
- Affordances of garden as play space: (1) unending diversity, (2) feeling of timelessness, and (3) home of animals.
- Affordances of the garden: positive versus negative.
- Affordances can be categorised into: perceived, utilised and shaped.
- Utilised affordances permit performatory and exploratory activities, and shaped affordances allow productive activities.
The Aim of the Research

- To determine the properties and attributes of garden which enhances the restorative process of middle childhood paediatric patients (aged 6-12) that improves the children’s functioning: physical, cognitive and social.
Methodology

Garden at paediatric ward of Batu Pahat Hospital
Master Plan of Paediatric Ward’s Garden, Batu Pahat Hospital

- Isolation Ward
- Main Entrance
- Main Street
- Six Bed Ward
- Paediatric Ward 2
- Wash Area
- Bath
- Toilet
- Toilet
- Wash Area
- Lab
- Six Bed Ward
- Four Bed Ward
- Store
- Bath
- Toilet
- Toilet
- Bath
- Play Area
- Oasis
- TRIANGULAR ROPE PLAY
- ALPHABETICAL WALKS
- PAINTED WATERFALLS
- PAVILION & SPRINGRIDER
- FISHPOND & PERGOLA
- PAVILION & SWING
- OVETURNED URN
- PATIO
Methodology: Measuring Patients’ Behaviours

- Observational study with paired data on 31 middle childhood patients
- Phenomenological model
- Multi-source and multi-method data eliciting movement and perceptual judgments of patients
  - (A) Behavioural mapping
  - (B) Patient open-ended interview
  - (C) Mother structured interview
  - (D) Ward staff survey questionnaire
  - (E) Focus-group interview on nurses
Findings

- Externalising Behaviours (Overt) in Ward and Garden

Master Plan of Paediatric Ward’s Garden, Batu Pahat Hospital
What are the properties and attributes of the garden affording stress reduction to the hospitalised children?
Perception of Patient towards the Garden: Pattern of Regularity

1. The garden is a playground; as physiographic and social place for play.

2. The garden composed of several play areas equipped with play equipments, garden structures, vegetation and animals.
Perception of Patient towards the Garden: Pattern of Regularity

3. Play areas with more features were preferred than those with few.
4. Play equipments were preferred more than garden features.
5. Manipulating equipments were preferred more than non-manipulating ones.
6. Play equipments were more important than vegetation.
7. Without vegetation the garden was not a complete for play.
8. Vegetations provided shade, fruits for eating and habitat for small animals.
9. Animals were pleasant to watch, hear, and can be used as play tool.
10. Tropical climate was favourable for outdoor play.
The Assessment Model of Restorative Experience in a Hospital Garden

Play: Direct experience with garden features, climatic factors and people

Stage IV

GARDEN

WARD

High Functioning

Low to Moderate Functioning

Access to garden

Viewing the garden

Starting

Returning to ward

Observing in garden

Observing garden from walkway

Viewing the garden

START

I

II

III

END

VI

V

I

II

III

END

START

Resting and Observing in garden

Return to ward

Viewing the garden

Access to garden

Observing garden from walkway

Viewing the garden

START

I

II

III

END

START
It simply best playing here.

I would like to call this garden Taman Seri Indah

I can play with my brother.

Look at the maggot.