Local Influence In The Dimensions Of Designing Birthing Spaces For The Malay-Muslim Malaysians

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Outline of the paper

- Definition
- Research Aim
- Research Objectives
- Methodology of Approach
- Summary
Definitions

Birthing
Local influence
Dimension in designing
Birthing spaces
**Birthing**

Clinically, birthing means the mother will undergo three processes in a certain span of time. These processes i.e. 1st stage labour, 2nd stage for delivery and 3rd & 4th stage – removal of the placenta (afterbirth). Depending upon the state of the mother, an average delivery may take between 1 to over 24 hours to deliver.
Understanding the Maternity Healthcare Process for Pregnant Women

Area of study

Before Birth

Ante Natal Care visits

Clinics/ Healthcare Centres/GPs

Alternative Birthing Centres (Rural), Low risk centres (Urban ABC), Maternity/Delivery Suite of Hospitals, Maternity Hospital

LABOUR DELIVERY UNITS

Birthing

Perinatal care / High Dependency/ labour 1st stage

Delivery / ‘Birthing’, 2nd Stage

‘Removal of placenta (afterbirth)’ 3rd & 4th Stages

Emergency / Elective Caesarean Section

After birth

Postpartum/ Postnatal care

CLINICS

WARDS
Birthing is a natural phenomena in the continuum of life for mankind. Traditional birth for the Malays had always occurred at home followed by a celebration for thanks giving on the baby’s arrival. Like clinical, it is the stage of the onset of labour that continues to proceed to a stage of ‘birth’ of the child and ends with the output of the placenta or after birth.
Birthing

While clinical birth ends on the 4\textsuperscript{th} stage of labour, traditional birth continues on with the caring of both mother and child through massage, sauna treatment, choice of food and other well being such as natural family planning.

Unlike clinical setting, where the staff may be strangers, traditional birth is private and involved family members as the participants in the process apart from the traditional midwife.
Local Influence

Means an environment that provide or influence a sense of belonging to the location as a site or people context.

For this research, it provide the meaning of culture and belief system of the people in that area of study that may have the influence on the spatial and environmental requirements of the space, activities in the space that gives sense of familiarity, comfort, calmness and trust.

Here the stress is on the culture of the Malay ethnic group and the Islamic faith.
Dimensions in Designing

In designing space, place or things, there are many dimensions to be considered; tangible and the intangible; seen and the unseen; as well as felt and the not felt.

Dimension in this context meant criteria for designing spaces that can be transform into formed to be constructed for containment of the environment that would ease, facilitate, support the activities or functions it serves.
Dimensions in Designing

- Physically, the dimension in design are denoted by tangible dimension of length, breath, height; as well as the intangible environment of spaces for circulation, ventilation, light, personal space, privacy, storage, equipment, furniture, smell, touch, hear and others.

- For this study, the dimension for design involved what can deduce from the preferred environment of care.
Birthing Spaces

- To a clinical setting, Birthing Space is the space where labour sets and delivery occur within the labour room.

- In the traditional setting, birthing space occurs at home within the confinement of a room.
Research Aims and Objectives
Research Aims

to uncover the myth and realities of cultural and belief influences in the design of preferred birthing spaces for the selected Malay-Muslim population of Malaysia and assimilate them to the clinical settings of existing community based maternity units
Research Objectives

To dispel the notion of universal birthing space for all localities

To produce designs that are supportive for mother and child health outcome

To encourage designers/architects to include cultural and spiritual dimension in their design
Methodology of Approach

- Literature Review
- Pilot study – interview and questionnaire
- Analysis
- Onward Research
  - Further Analysis
Literature Review

Worldview to birthing and birth environment
LookSmart's FindArticles - Mothering Homebirth for high-risk mothers.htm
LookSmart's FindArticles - British Medical Journal Place of birth.htm
Ruth DeSouza » Culture and health.htm
Malaysian viewpoint
Malaysiacasestudy.ppt
Safe Motherhood Program Examples.htm
Pilot Study

- literature review, site visits, observations and *purposive survey* via interviews on selected category of respondents (i.e. the traditional birth attendant (tba)-*bidans*, the mothers, relatives and government midwives) of the selected sites (of the East Coast Peninsular Malaysia).
THE BACKGROUND STUDIES

Malaysia the country
Ministry of Health Malaysia

“Malaysia is to be a nation of healthy individual, families, and communities, through a health system that is equitable, affordable, efficient, technological appropriate, environmentally adaptable and consumer friendly, with emphasis on quality, innovation, health promotion and respect for human dignity, and which promotes individual responsibility and community participation towards an enhanced quality of life”
Context and Background

Literature

The Government of Malaysia, in the quest for a healthy nation is continuously providing Women and Child Healthcare centres throughout Malaysia at the hospitals, health clinics and rural clinics of the country for 100% access to healthcare whilst improving of existing ones.
Context and Background

Literature of facilities provision

Then in the early 60s we did not have many professionals as human resource.

We had to use existing norms and standards alien to our culture in planning and design as we have no time to do research on our own population.
Context and Background

Literature of facilities provision

The POE carried out on existing facilities always indicates customisation being carried out on spaces and facilities we had designed by the on-site end-users to meet their immediate needs and the change in the operation
The question posed to the architects now: “Are we willing to go on designing facilities based on alien culture and standards?”

Shouldn’t we explore the real needs of our people to provide them potential space to grow?”
Where are the mismatched in requirements?

**The similar**
- Human
- Procedures
- Standards
- Anthropometric
- Macro climate
- Building material
- Construction and procurement method

**Different**

**Micro Climatic Culture and Belief System**
- Exposure
- values
- Familiarity, etc
Why birthing? Why Birthing space?

- Birth is natural
- It occurs naturally and unending, thus there is always a need
- It is a common denominator in healthcare facilities
- Among the spaces in healthcare, birthing space i.e. normal birthing space, not high risk labour rooms, as it is where culture can intervene with medicine for better health and psychological outcome..as it was then in the history of mankind.
Literature Review

- In Malaysia, although home is best, home is still not the safest place to give birth if complication arise.
- The alternative is still to give birth at the assigned clinic close to home or at the hospital.
....but how prepared are these facilities to provide the environment mothers need for a normal birth?
Research approach

TRADITIONAL BIRTH

CLINIC BIRTH

HOSPITAL NORMAL BIRTH

Purposive survey
Using snowball questionnaire through face to face interview
Noted by observation
Space, expression, way things are laid, Flow charts, staffing, Scheduling, Visitors, Mannerism, priorities

Different environmental setting
Deductive result
Deductive result
Deductive result

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Research Scope and Limitation

Limited time (April-June 06) and non readily available information on the subject had reduce the scope of the study to:

– Data from Health District of Pasir Mas, Kelantan to detect babies born outside the hospital and Alternative Birthing Centres and their condition, as well as registration of traditional midwives

– Interviews on selected/available respondents i.e. old mothers, and traditional midwives

Later will cover Terengganu and Pahang for East Coast with similar approach
Main Research

The findings from this research will be fed to the main stream research thesis:

TOWARDS FORMULATING APPROPRIATE CRITERIA FOR THE CULTURALLY INFLUENCED BIRTHING SPACES OF THE MALAYSIAN MATERNITY PUBLIC HEALTHCARE FACILITIES.
Significance of the research

- Contributing in demystifying the social and cultural myth surrounding the requirements for traditional birthing in the Malay Malaysian society, and
- indirectly could lead to the enhancement of the current and future Malaysian hospital birthing spaces and environment for the better.
Introduction and Background Studies

Birthing in Malaysian societies
Malaysian healthcare and risk approach tagging
Birthing is a natural phenomena, a procreation, a lineage for the continuum of any society. Pregnancy and birth is not a disease or sickness. The mother must be well to be able to conceive and later to give birth.
For the Malaysian’s (i.e. the Malays, the Chinese, the Indians, the Indigenous people and others) the birth of a child has always been an awaited moment for the family, the clan and the society. No matter what ethnic group or religion, traditional birth had always occurred at the home followed by a celebration for thanks giving.
Malaysian Maternal Care

- **Ministry of Health Malaysia for overall population**
- Ministry of Women and Family Development for family planning
- Ministry of Housing and Local Government for Municipality Health Centres and Sanitary Boards
- Ministry of Defence for the Defence Community
- Ministry of Higher Education for Teaching
Until late (1970s), due to high mortality rate of both mother and child, the Malaysian government had encouraged all mothers to have their antenatal and post-natal check-ups in government clinics as well as to deliver (give birth) their babies in hospitals through evaluation of Risk Approach Strategy ….
I.e. Through colour coded tags identifying mothers attending antenatal clinic of their likely status:

- white: low risk- cases for home delivery
- **Green**: low risk-refer cases to public health sister or nurse
- **Yellow**: high risk- refer to doctor at Health Centre or Hospital
- **Red**: immediate hospital admission
Govt Vs Traditional Midwives or Traditional Birth Attendant (TBA)

- All traditional midwives were to be registered
- They were not allowed to conduct birth unless emergency
- Thus, training were conducted for the TBA for eventualities during birth
- They are merely assisting the Govt Midwife and act as the massager or after birth attendants to the mother.
Studies and statistics captured by the Ministry of Health Malaysia shows there are evidence of babies born outside the hospital due to many reasons.

Statistics are only shown as

– BBA-Babies Born before Arrival
– Numbers coming for immunisation
– [Safe Motherhood Program Examples](http://example.com).htm
Govt Facilities for Birthing

- Maternity Unit in General Hospitals
- Labour Rooms in District Hospitals
- Alternative Birthing Centres in selected areas (as part of Health Centre / Klinik Kesihatan)

Penang Maternity hospital
Patient flow in Labour Unit

Observation Area
- Not in labour
  - Home

In labour

Assessment & Examination Room

In labour

LABOUR UNIT
- Antenatal ward
- Postnatal ward

Entrance

Not in labour
- But with specific problems

Patient flow in Labour Unit
Basis for the selected sites

Number of deliveries outside hospital occurs most in the state of

Kelantan
Trengganu and
Pahang

Where ministry of health had provided the alternative birthing centres near to their homes
Peninsular Malaysia

The East Coast states of Kelantan, Terengganu and Pahang

THAILAND

SUMATRA

INDONESIA

SINGAPORE
Pasir Mas health district

- Hospital Pasir Mas
- Pasir District Health Office
- Pasir Mas Rural Health Clinic
- Cekok Health Clinic
- Cetok Rural Health Clinic
- Home of Traditional Birth Attendant/midwife
In the early 1990’s the Government introduces Alternative Birthing Centres (ABC) at urban and rural areas

**Urban ABCs** caters for low risk delivery (birth) of the hospital. High risk cases are managed in the Labour Delivery Rooms of the maternity department. Here, babies are delivered by Govt Midwifes.

**Rural ABCs** caters for Green and White cases at the district. Here, the babies are delivered by Public Health Nurse.

Homecare nursing are provided within 10km radius of each hospital in the urban areas while Community Nurses of the Rural Health Clinic or Klinik Desa will cover 2km radius of their area.
Health Clinic Chekok. Pasir Mas, Kelantan
Pasir Mas Hospital – Assembly line curtained cubicle labour delivery room
Pilot Study Findings

On role of mothers in traditional birth at home Vs in hospital

Based on literature review and interview with mothers, nurses

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Face to face interviews

With mothers – old and young with varied experiences of
- Home birth by traditional birth attendant
- Home birth by government trained midwife
- Hospital birth

Traditional birth attendants

Mothers in hospitals
On role of mothers in traditional birth at home (a summary)

- Queen of the house, i.e. able to demand and command comfort level
- Able to choose space and position of birth
- Able to continue taking care of other children before and after birth
- No need to be moved from one place to another
- Able to immediately continue the tradition of massage and heat
- Baby are taken care of in between feedings
- Able to take up traditional medicine and appropriate food
- Able to have close relatives in privacy of her own space
- Life risk if complications
On role of mothers in hospital birth

- No freedom for mothers to choose the position comfortable for birth
- Need to listen to those in authority - i.e. nurses, midwives, doctors what to do and what not to do
- Lost integrity….being just one of the many patients, not special anymore
- Relatives can only be around on visiting hours
- Need to take care of baby herself
- Safe and sterile
- Less pain due to available pain killers
Pilot Study Findings

On Spatial and Environment at home for Malay-Muslim Traditional Birth

Based on interview with elderly mothers
note

**Spatial and environmental** deduction from the interview requires a lot of imagination and knowledge on the architectural history of the locality. Terminology on the naming of built form, construction and material requires confirmation perhaps with other readings from social texts, travelogues and pictorial documentation (still searching)
Spatial and environmental needs

- Ergonomics space
- Process/sequence of activities space
- Number of humans/occupancy at peak period
- Equipment required
- Services required – water, light, etc
- Environmental requirements: Privacy-noise, visual
- Mother’s specific needs
- Culture and Beliefs requirement
  - Community needs
  - Family needs
At Home (history)

- Need special bed or mattress
- mackintosh and Chinese papers or old newspaper,
- 1 basin for bidan’s handwashing,
- 2 towels for baby and for TBA to wipe,
- 1 basin for baby,
- plenty of hot water,
- midwife kit in a box gained from govt training eg flavine,
- b4 use tumeric/kunyit to rub at the ambilical end.
At Home (history)-contd

- Sembilu/buluh to cut..later govt gave scissors and clamp to tie the ambilical cord.

- The patient sit with the leg lifted, a pillow is place under her head or her head is placed on the relatives lap.

- The patient’s tummy is tied above the navel about 5 fingers ‘ikat sende’ with ‘kain lepas’ as the mother pushed to facilitate birthing,
At Home (history)

Soap are used...used of thread to ‘lepas’. ........... after birth to avoid rigors / shivers, ‘tuku’ is heated. Laceration is checked before sanitary towel (modess) is placed using flavine or spirit as it dries quickly.

If patient past motion during birth..this is allowed hence the require lots of papers..this action will also facilitate easy birth.
At Home (history) and deduction

- Ventilation available at higher level to avoid peeping tom.

- In the 60s, 10’ x 10’ room. Bidan, patient, relatives—all female 4 all together except when ikat is req a man or the husband will be called.

- Bidan will request mother to be sent to hospital if the VE showed bloodstain denoting placenta bloodshow or if a hand is felt. breech/transverse..
At Home (history) and deduction

- The house in kampong was raised very high from the ground.
- The house single dwellings made from timber with steps at the kitchen and front.
- There is a well at the front of the house on the ground.
There are only 2 rooms in the house.

Door opening was from the guest/visitor’s area (ruang tamu /rumah ibu).

The floor use was timber except for the gap using Nibong (water resistant).

The room near the kitchen was chosen as the place for birth.

The room is empty and one lie on the floor with mat and pillow.
Preparation for birth and birthing

- Coconut husk were shredded (easily find, can absorb and light) and put into the fold of cloth (kain busuk) or in a casing (pillow like) and was used to put beneath the buttock (raised for about 50cm) for easy birth.
- Baby was delivered onto a torn cloth.
- After cutting the cord, the baby was passed to the father to be ‘iqamat’ for girl or azaan (for boy).
- After birth the mother get up immediately on sitting position to straightened one self and tie up the tummy.
At Home (history) and deduction

- The mother was not allowed to walk too fast. 40 days of confinement (pantang) was observed.
- Massage (urut) and heat treatment (bertungku) all done within the same room.
The mother in the same room to bathe with perfumed water of various herb by the bidan for 3 days in a row. The room has certain portion of the floor with a wide gap floor boards made from Nibong palm (water resistant).

The mother then get sauna (dian) for the whole body using rambutan wood. Heat is used to circulate blood after birth.
At Home (history)

From memory: The space of the room is about 10’ x 12’ with no windows as the wall was made from bamboo mesh (kelarai) with ventilated holes. If there windows it will be towards the kitchen. Entrance to the room was from the kitchen.
During birth the gapping floor is closed with mengkuang mat to place the mother.

After birth the mother moves to the upper portion of the floor (without the gap) to allow for washing. A water container or ‘tempayan’ is place for any hygiene. ....... The house was by the road side. An attap house.
Current Status

- Traditional birthing is a thing of a past even in Kelantan since.... 1957s.
- Patients are asked by doctor or midwife where they want to deliver.
- Then most births are delivered by traditional midwife first and subsequently clean and cut the umbillical cord by govt. midwifes.
Onward Further Research

More Case Studies to be done, based on the Pilot Study, in the Identified Area
Snow ball purposive interview onto selected respondents with guided questionnaire
  – Mothers
  – Relatives
  – Traditional midwives

For clinics and hospitals
  – Note observation on sites and procedures taken place

Contd Literature review on worldview, clinical viewpoint
Analysis of Data

Analyse the data using Qualitative tools:

For Traditional Birth methods:
Deduction from interviews and matching them to physical historical data backed by consistency of information

For Clinical Requirements at Health Centres and District Hospitals
On infection control and medical/clinical protocol
Then proceed to Triangulation technique to obtain outcome
Design Criteria for Birthing Space(s) in Hospital with Local Dimension.

- the clinical needs of the patient and the hospital environment...
- the physiological and psychological needs of mothers and their family...
- accepted traditional birthing...
Summary

- The literature review strongly believed that home birth or birth in the home-like environment support health outcome.
- The pilot study did provide an inclination that local influence do exist in the dimension for designing birthing spaces for normal birth.
- But how it will be assimilated into the requirements of design for different localities remain an instinctive tool on the part of designers to comprehend the extend design can help support the process of birthing for women and mothers everywhere.
Shukran Jazilan