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Theories and Models to Understand Individual Behavior

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Section A

Introduction: Types of Models
Local Explanatory Models
Types of Models and Theories

- Different types for different use, often most valuable in combination
  - Explanatory models
  - Theory-based models
  - Process models
  - Planning models
Explanatory Models

The insiders’ view of the world

- Can be individual or collective
- Consists of what people in a given setting or culture believe about the nature, cause, prevention, and response to an event
Explanatory Models

- The explanatory model is not simply a discrete set of ideas about a disease.
- Cognizance of the broader beliefs about how the body works and general factors that influence a person’s fate in life.
Theoretical Constructs

Behavioral Determinants

- The simple approach is force field theory, assumes a goal and factors that are both driving and restraining.
- Next step is to propose specific concepts that may influence behavior such as self-efficacy, locus of control, outcome expectations, and intentions.

Continued
These concepts are used in various combinations but ultimately take the form of hypotheses that A (Antecedent) is associated with B (Behavior) or A influences B
Processes and Stages

- Behavior is not a monolithic construct that can be turned off and on at will
- A “single” behavior is usually a combination of steps
- The concept of readiness enters
  - A person must be aware, have considered, given the behavior a trial, and then incorporated the behavior into repertoire
Processes and Stages

- Process or “transtheoretical” models tract this process and help determine what a person may need to go to the next stage.
Planning Models

- Planning frameworks view the foregoing models as “diagnosis” preceding the selection of appropriate strategies for behavioral intervention.

- Such models have been developed to prevent the common practice in health education of using one strategy to solve all problems.
Planning Models

- These guide the planner to match strategies with behavioral determinants and the stages of change in a culturally acceptable context.
Gathering Information to Develop the Models

- Surveys, questionnaires
- In-depth, key informant interviews
- Focus group discussions
- Pile sorts
- Participant observation
- Review of ‘texts’ including local songs and poetry
Section B

Explanatory Models: Learning from Local Perspectives
Explanatory Models
Define “Reality”

- Reality is socially and culturally constructed from experiences interpreted within a certain environment
- Subjective experiences are validated over time
- Objectivity does not exist, cannot step outside
Inter-Subjectivity, not Objectivity

- Individuals in social relations share their subjective interpretations and together come up with an inter-subjective definition of reality on which most agree for a time
In the Eyes of the Beholder

This tree is good for shade

This tree should be worshipped for the goddess of fertility

The fruit of this tree is very tasty

This tree has good bark for medicine
Inter-Subjectivity, not Objectivity

- The blind men and the elephant?

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An Explanatory Model of Guinea Worm

- **Systemic illness**
  - *Sobia awoka, egbesin sobia*

- **Localized, pre-swelling**
  - *Akukudidi*

- **Local swelling**
  - *Sobia, sobia eleta, wiwu, koko ara*
An Explanatory Model of Guinea Worm

- **Emergent**
  - Sobia

- **Post-emergent**
  - Sobia Awoka

- See contrast—“Scientific Model” in slide
An orthodox medical explanation of the life cycle of guinea worm

Source: CDC
Local Beliefs Revealed in Surveys

- When asked whether anyone had guineaworm in the past year
  - 18% said moving pains—*awoka*
  - 13% said swelling—*wiwu*
  - 4% had *egbesin*—rashes
  - 65% had emergent worms

- Overall 35% gave false positive responses, as seen in the next slide
Epidemiology of a Cultural Illness

Types of cases reported

- Wiwu: 13%
- Egbesin: 4%
- Sobia / emergent: 65%
- Awoka: 18%
Meanings and Interpretations

Illness and technologies—Are there connections?
  - What do people think about guinea worm?
    • Various presentations
    • Part of body
    • Can’t be prevented

Continued
Meanings and Interpretations

- What do people think about control measures?
  - Dressing angers the worm
  - Filters strain what one can see, dirt not g.w. which is already in body
  - Wells are useful and convenient regardless of beliefs about g.w.
Interpreting Condoms
Analyze Three Issues

1. **Condoms themselves**
   - Unnatural
   - Might tear, get stuck inside
   - Cause conflict in relationship

2. **STDs**
   - AIDS is a foreigner’s disease
   - Can’t get from younger people
Interpreting Condoms

Analyze Three Issues

3. Pregnancy
   - Need to demonstrate fertility
   - Can’t happen first time
Section C

Types of Malaria and their Meanings and Interpretations
Types of Malaria in Nsukka, Nigeria

Ordinary Malaria

- Fever, pain, weakness, dizziness, tiredness, chills, and headache
- Caused by too much sun, too much work, and mosquito bites
Types of Malaria in Nsukka, Nigeria

❖ Yellow/colored malaria
  – Yellow eyes, yellow urine, headache, and fever
  – Caused by too much sun/heat, too much oil, dirty water, over-work, and mosquito

Continued
Types of Malaria in Nsukka, Nigeria

- **Dry malaria**
  - Slim, shrink, dry-up, lose weight, and become emaciated
  - Caused by too much work, exposure to sun, and poor feeding
More Types of Malaria

- **Wet malaria**
  - Swelling, weight gain, dull feeling, weakness, and cold
  - Caused by cold/rain and poor feeding

- **Heavy/strong malaria**
  - Senseless talking, madness, very high fever, serious headache, and quick onset
More Types of Malaria

- **Shaking malaria**
  - Abnormal talking and behavior, headache, restlessness, and tremors
  - Caused by too much thinking, charms, alcohol, and drugs (hemp)
Pile Sorts of Symptoms

- Convulsions
- Hot body
- Dizziness
- Headache
- Vomiting
- Cold/chills
- Loss of appetite
- Sleepiness
- Lack of blood
- Yellow urine
- Yellow eyes
- Weakness
- Body aches
When Mapped Together

Clusters of common responses define local illnesses

- **Oyii**
  - Dizziness and lack of blood

- **Iba**
  - Cold/chills and hot body
When Mapped Together

- *Iba Ponju*
  - Yellow eyes, headache, yellow urine

- *Ako Iba*
  - Body aches, weakness
<table>
<thead>
<tr>
<th></th>
<th><em>Iba</em></th>
<th><em>Ile tutu (giri)</em></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hot body, aches, yellow eyes</td>
<td>Cold, shivering, gasping, convulsions, fainting</td>
</tr>
<tr>
<td></td>
<td>Hot, dry season</td>
<td>Cold, wet season</td>
</tr>
<tr>
<td></td>
<td>Not serious</td>
<td>Very serious</td>
</tr>
<tr>
<td></td>
<td>Caused by sun, heat, dust</td>
<td>Exposure to cold, leaving child on cold earth, child</td>
</tr>
<tr>
<td></td>
<td></td>
<td>too “heavy”</td>
</tr>
</tbody>
</table>
Interpretations

- Malaria control technologies
  - Malaria medicines
    - Herbal medicines make one sweat out illness
    - CQ does not cause sweat and may even cause itching
Interpretations

Malaria control technologies

+ Bed nets beautify home, may keep warm in rainy season
+ Prevent insect nuisances, allow better sleep
  – But hot in dry season
  – Since malaria caused by sun, people ask how can nets prevent?
High school kids doing a drama about a sick child with malaria

Herbs and modern medicine for malaria
Sleeping under bed nets is a control method for malaria.
In “Praise” of Onchocerciasis: 

Local Poetry Gives Explanatory Model

- Nárun àjàká òkò
  - Onchocerciasis, with spots all over the body
- “Ta ñ wolé”
  - “Who is entering?”
- “Mátè mi mólè”
  - “Please don’t step on me!”

Continued
In “Praise” of Onchocerciasis: Local Poetry Gives Explanatory Model

- **Asimo lówó oko riro**
  - That stops a child from hoeing
- **Apani lókó**
  - That kills the penis
- **Bani lárajé sákasàka**
  - That spoils the body with rashes
- **Fowó tálè**
  - Groping about with hands on the ground
Eating During Pregnancy

- Green vegetables cause stomachache (with implications of miscarriage)
- “Bush meat” (e.g., monkey, snake) could affect appearance of the child
- Casava fufu is heavy, causes stomachache (or “hot stomach”) and leads to miscarriage
Eating During Pregnancy

- Plantain could cause *oka ori* (sunken fontanelle) later in the child
- Eating snails will cause child to salivate too much
- Eating eggs may lead to difficult delivery
Perception of Illness Influences Treatment Behavior

- USE or Oral Rehydration Therapy

![Bar chart showing the percentage of people using ORT for different types of diarrhoeal illness.](chart)

- Percent using ORT:
  - Dysentery: 23.1%
  - Watery: 43.1%
  - Overall: 35.3%

Type of Diarrhoeal Illness:
- Dysentery
- Watery
- Overall
Interpretations and Meanings

- *Jedi jedi* literally means something eating at rear end/lower back
- Feared because it might impair sexual functioning
Interpretations and Meanings

- Dysentery (*jedi jedi*) is caused by too much sugar and sweet things.
- ORT with salt sugar solution is dangerous—could make *jedi jedi* type of illness worse.
- Might even make diarrhea turn into *jedi jedi*. 
Health Belief Synthesis

- Communication between scientific and indigenous world views: creating new inter-subjectivities
<table>
<thead>
<tr>
<th>Indigenous</th>
<th>Synthesis</th>
<th>Scientific</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teething causes diarrhea</td>
<td><em>During teething, children put fingers and objects from the ground into their mouths</em></td>
<td>A variety of micro-organisms cause diarrhea</td>
</tr>
<tr>
<td>Dirty stomach causes diarrhea: The diarrhea washed out the stomach</td>
<td><em>These objects are “dirty” and bring about diarrhea</em></td>
<td>These organisms are usually spread through the fecal-oral root, e.g. in food and water</td>
</tr>
<tr>
<td>A “heavy” infant has diarrhea to shed weight and thus be able to walk</td>
<td><em>One way these objects become dirty is from feces on the ground around the home</em></td>
<td>Certain foods may irritate and cause diarrhea</td>
</tr>
<tr>
<td>Too much beans causes diarrhea</td>
<td></td>
<td>Diarrhea may be a symptom of other diseases such as malaria</td>
</tr>
</tbody>
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