

WORKING GROUPS REPORTS

WORKSHOP

GROUP 1: EDUCATION AND COMMUNICATION IN NUTRITION IN URBAN AREAS

(Intervention project)

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	Guido Arnal	Venezuela
	María Isabel Olimpia Carrión	Mexico
	Durán	Mexico
	Lilliana C. Guevara Cárdenas	Costa Rica
	Sandra Murillo	Costa Rica
	Consuelo Isabel Novello Brindis	Mexico
	Yvette Nuñez	Mexico
	Ernesto Padilla	Mexico
	Genoveva Pérez Bravo	Mexico
	Norma Ramos Ibañez	Mexico
	Lorena del Carmen Ruiz Jiménez	Mexico
	Yolanda Sandoval	Mexico
	Ma. Guadalupe Vega López	Mexico

INTRODUCTION

The subject "Education and communication in nutrition for families in urban areas", was the cause of great interest among participants at the Second Latin American Workshop on Nutrition and Health in Urban Areas, held from the second to the sixth of March 1992 in Mexico City. This was reflected in the number of participants in this working group as well as in the active discussion of the subject.

Undoubtedly, this reflects to a large degree, the interest of those attending the Workshop in increasing the quality and/or quantity of interventions in this area and motivates their professional activity. In general terms, the group worked following a similar methodology to that of the other groups, first defining the basic problem and then its causes, drawing up a causal tree.

However, it should be mentioned that the etiological factors have been studied and interact so the methodology was used, mainly, to emphasise or put the causes into an order of priority and, therefore, to later develop a general project studying this multicausality as completely as possible.

Once the causes and their determinants were defined, the interactions between the points were analysed. To do this, a general aim and other specific aims were identified, proposing indicators to evaluate compliance with the aims identified.

RESULTS OF THE DISCUSSION

As shown by the causal tree, the problem was examined from the viewpoint of "unsuitable food practices among urban families" and, in particular, those of low socioeconomic strata.

With family, social and institutional stratification, the direct causes of the problem are:

1. Unsuitable food habits and customs and taboos that, in turn, are negatively affected by transculturation, a lack of appreciation of need for adequate traditional knowledge and unsuitable food changes caused by imitation and social pressure and also by a lack of professional guidance in nutrition.
2. A lack of knowledge in nutrition thanks to a lack of information in the media, poor interpretation of messages received, errors in formal, and non-formal educational preparation of families and inadequate participation of professionals and the community itself.
3. The shortage of food in the urban family group.
4. The unsuitable handling of available family resources which is also influenced by educational and information factors.
The direct causes on an institutional level are:

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- a). Qualitative and quantitative unsuitabilities in nutritional intervention which need suitable rules and supervision.
- b). A lack or insufficiency of hygiene and health services in urban areas that often prevents the use of suitable food practices.

Also, industrial growth removed from nutritional reality, often with no competent professional participation, acts on different social and family levels.

The insufficient emphasis on food-nutritional training of health professionals and the lack of community leaders setting

up self-management food and nutrition systems is noted.

AIMS OF THE PROGRAM

The general and specific aims were established as well as the indicators that would allow their compliance to be evaluated. The latter only for 4 of the specific objectives and only generally.

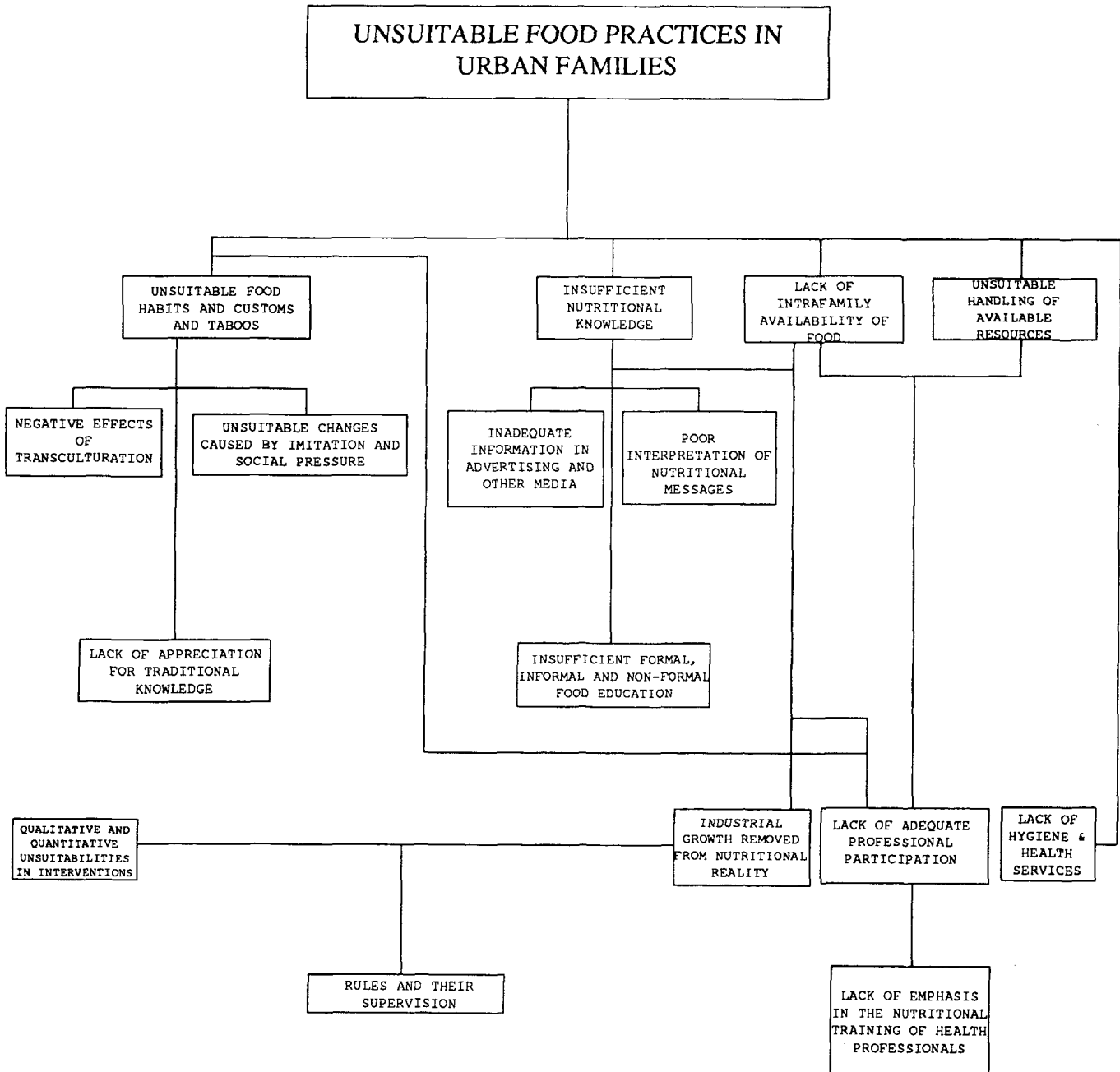
This is made fully clear in the Project Planning Matrix.

Project Planning Matrix

General aim	To improve food practices considering the biological, sociocultural, economic and ecological conditions of urban families					
Specific aims	To improve food habits and customs	To improve knowledge of nutrition in the urban family	To improve the intrafamily availability of food	To improve the handling of available resources	To improve hygiene and health infrastructure	To improve food and hygiene interventions
Proposed general indicators	<p>Nutritional value = $\frac{\text{consumption of high value foods}}{\text{consumption of low value foods}}$ of diet index</p> <p>Increase in availability of nutrients in diet</p> <p>Reduction in gastrointestinal infection</p>	<p>Percentage distribution of families aware of nutritional value of foods</p> <p>Percentage of families properly interpreting advertising</p> <p>Proportion of food advertising with true content</p> <p>Proportion of educational content on food and nutrition in school</p>	<p>Proportion of families with access to basic food basket</p> <p>Degree of satisfaction of basic basket for families</p> <p>Proportion of family economic income spent on food</p>	Efficient use of available resources		

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CAUSAL TREE



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GROUP 2: HEART DISEASE RISK FACTOR RATES IN URBAN AREAS

(Research Project)

Coordinator:	Eduardo Atalah	Chile
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	América de Fernández	Guatemala
	Susana Franco	Mexico
	Guillermo González	Mexico
	Enrique Jacoby	Peru
	Francisco Jiménez	Mexico
	Jorge Risquéz	Venezuela
	Adaluz Rivas	Mexico
	Mary Santos	Colombia
	Enrique Villalpando	Mexico

Project Planning Matrix

Factors	Indicators	Methodology
Heart disease	Heart attack mortality	Analysis of death certificates
Obesity	Anthropometry BMI-WT/HT	Standardised anthropometry studies
Hypertension	Systolic-diastolic pressure > 149/90 mmHg	Direct measurement according to WHO
Hyperlipidemia	Plasma-cholesterol and triglyceride fraction measurement	Biochemical analysis
Smoking	Average cigarette consumption	Survey
Hereditary factors	Family history	Survey
Stress	1-2-3 degrees stress levels	Freedom Scale Survey
Sedentary lifestyle	Light-moderate-heavy -very heavy activity	Record of daily activity
Consumption of unsuitable foods	% calories - % fats saturated-unsaturated fats	Semiquantified survey of previous 24 hrs and consumption frequency
Food knowledge	Bad, average, good	Structured questionnaire, knowledge, skills and practices
Socioeconomic factors	High, low social group	Socioeconomic survey

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GROUP 2

Design of the study:

Descriptive transversal study

Sample: >14 years of age belonging to high and low social strata in urban areas.

Statistical Analysis:

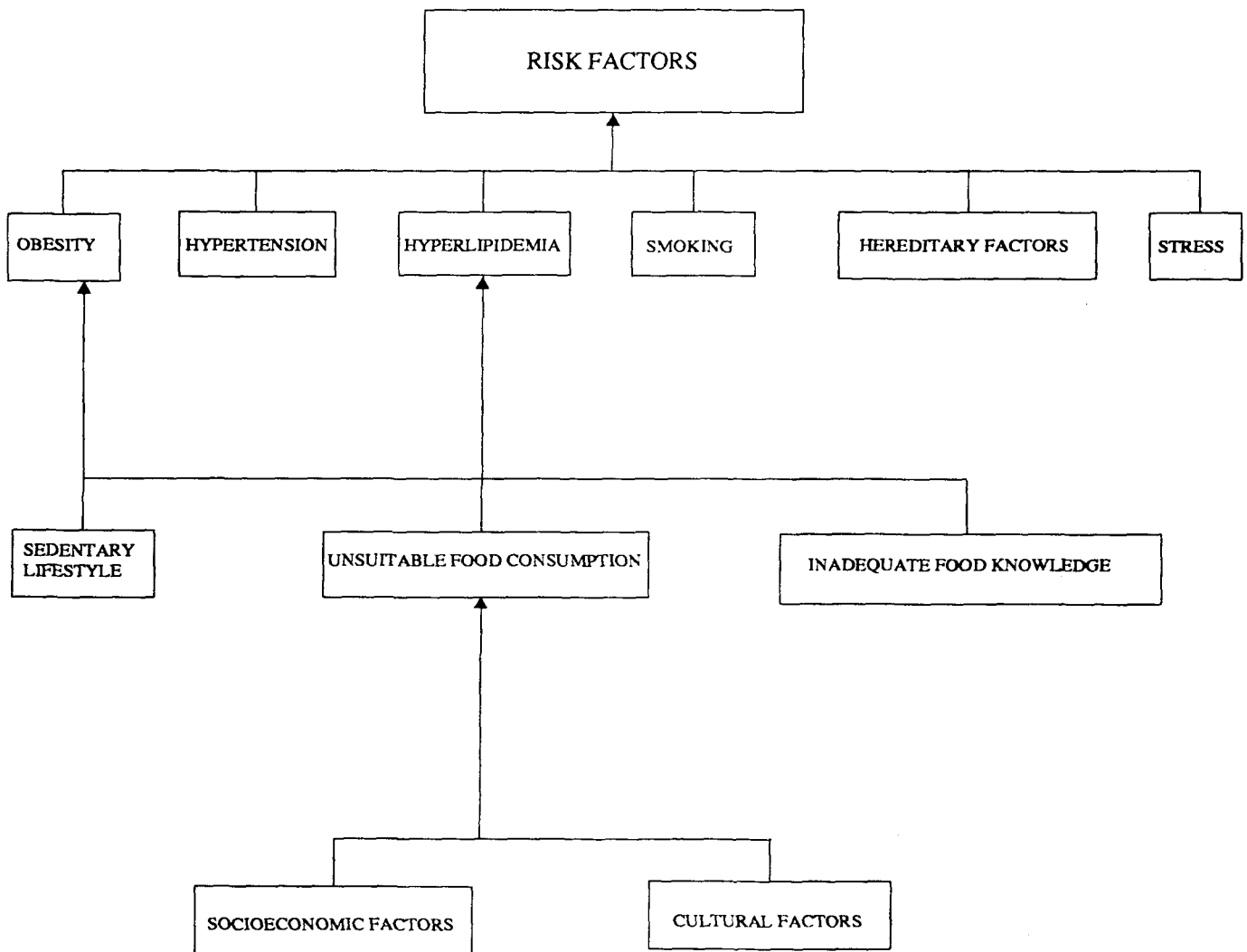
Descriptive, central dispersion trend measurement, rates. Stratifying sex-age and socioeconomic state of each variable.

Analytic: chi association test

Variables: Discrete and continuous

Suggestions: Carry out a multicentre study applied in different countries with the same methodology.

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GROUP 3: URBAN AGRICULTURE PROJECT

(Intervention Project)

Coordinator:	Florence Egal	France
Relator:	Sandra Murillo	Costa Rica
Participants:	Victoria Alvarado	Honduras
	María Elena Arita	Guatemala
	Marta Avilés	Mexico
	Graciela González	Chile
	Paul Lunven	France
	Thelma Mejía	Honduras
	Bety Roldan	Chile
	José Luis Zavala	Mexico

INTRODUCTION

One of the greatest problems faced by major cities is migration from rural areas, leading to settlements in marginal urban areas where improving accessibility to food is a priority due to the poverty in which people live. In addition, there is low availability and accessibility of suitable food making it necessary to find ways of improving this diet but also of increasing income, without neglecting duties nor leaving the home thus aiding in integrating women into an actively productive home economy. This leads us to believe that encouraging urban agriculture could be an alternative.

Integrating or strengthening the community is important to be able to obtain high production and commercialisation rates.

We are interested in the increase in the poverty of marginal urban areas. We are a group with no knowledge of the subject and its application but are interested in setting up a project.

Our aim is "to improve access to an appropriate diet" and we identified three main areas:

- To improve family income
- To encourage home-grown consumption
- Nutritional education

To do this the community where the feasibility study will be carried out must be identified. Here, basic infrastructure, available resources, land, water and legal land use aspects will all be considered. Once accepted, the project would proceed to train people in production, marketing and transformation. This will allow family income, home-grown consumption and nutritional knowledge levels to be improved. The matrix is drawn up explaining the results obtained, measurable or verifiable indicators, the source of information and the important assumptions.

Results:

There was much discussion as to which measurement to use and agreement was reached on establishing how income im-

proves by buying two basic food baskets, the basis for commercial activity, improving home-grown consumption through quantity.

Another result is the acquisition of diet and nutrition knowledge. Establishing indicators led to discussion in view of the number of variables, but it was defined as increasing the acquisition of food modifying diet.

Why urban agriculture?

We did not begin with a problem tree because a previous study was carried out.

The diet of poor people can be improved by increasing their income, homegrown consumption and nutritional education. We worked thinking of urban agriculture as a way of improving access to food and improving living standards.

Why is it necessary to define the indicators?

One of the reasons for formulating the indicators is to facilitate quantification, thereby allowing correct evaluation.

What does the diversification of food consumption patterns mean?

This is very vague and cannot be quantified.

Segal: What is evaluated depends on the food problem (by previously chosen production).

Lunven: Better access to urban diet can be measured by adding variety, consuming the food produced even if the product was not previously eaten but is now part of the diet.

Anachaga: Must the project be aimed at women?

Sandra: Yes, it is aimed basically at women.

There must be a knowledge of agriculture.

Does it need much space?

No. Hydroponics, organic agriculture can be used.

- Backyard agriculture survives in Mexico but it is small -and scorned by big business- but this is because there has been no technical assistance and the benefits have not been shown.

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- A project is being carried out in Mexico called the magic carpet in collaboration with the UNAM in semi-urban areas in spaces of 1m².
- Low purchasing power prevents proper access.

Conclusions

Urban agriculture in Latin America can have an attractive economic focus allowing for success and making home-grown consumption of secondary importance which is why the aim was to improve access to food and not the quantity, inasmuch as improving a group or family's income allows for the purchase of different goods and complements the diet. Thus the diversi-

fication of food consumption is achieved that would improve the quality of the diet while the program is aimed at mothers, bearing in mind that they are home more of the time, are not productive and this would integrate them into an active family economy without leaving the home allowing for another income in addition to the husband's. All this together would permit:

- 1) An improvement in a proper diet.
- 2) Increased family income.
- 3) An improved quality of life.

Urban Agruculture Project

Project aim	Verifiable indicator	Information source	Urban Agriculture Project Important assumption
Improve access to a proper diet in the project's urban marginal community	Frequency of consumption of food, evaluating the diversification of the community's food consumption patterns	Periodic survey of frequency of initial, intermediate and final consumption	Community accepting cost included in the project
Ability of the product to improve the income of the project community	-Increase of the incomes of the households of the project to enable the acquisition of two basic baskets	Periodic income survey Record of commercial activities	Use of methodology existing in the country to evaluate income
To encourage home-grown consumption	-Change in the frequency of consumption -Amount available for home-grown consumption	Periodic income survey Record of production	Use of methodology existing in the country
Food nutritional knowledge acquisition	Acquired knowledge incorporated into diet	Initial and final knowledge survey Frequency survey	
Production training	Quantity produced No. of workshops participating	Record of production Report of activities	Normal weather condition, land use, credit accessibility, instructor
Commercialisation training	Quantity sold	Sales record	Sales market
Training in post-harvest techniques	Quantity processed	Production record	
Strengthening of common activity	Existence of active groups Existence of coordination group activities	Report on project activities	

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Project Planning Matrix
**GROUP 4: DEVELOPMENT AND VALIDATION OF EDUCATIONAL
METHODS TO IMPROVE THE NUTRITIONAL CONDITION
OF URBAN POPULATIONS**

(Research Project)

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	Margarita Escobar Pérez	Mexico
	Laura Buen Abad de Zamora	Mexico
	Silvia Sandoval Rodríguez	Mexico
	E. Violeta Rivera Gallardo	Mexico
	Ma. Elsa López Reyes	Mexico
	William Atehortúa Puerta	Colombia

Mexico Boris Graizbord

PROBLEM

**OBESITY IN WOMEN OF FERTILE AGE (15-40) IN
MARGINAL URBAN AREAS**

GENERAL AIM:

To design an educational strategy to reduce the problem of obesity in women from 15 to 40 years of age in marginal urban areas.

SPECIFIC AIMS:

- To research the socioeconomic and cultural factors that

determine the food habits of the target population.

- To research their biological situation.
- To prepare a package of psychological and nutritional recommendations to be implemented.
- To design a social marketing strategy to launch experimental nutritional education campaigns through the mass media.
- To design parallel educational projects to be implemented in schools and kindergartens, as a pilot scheme.

TARGET POPULATION:

Obese women of fertile age (15 to 40) in marginal urban areas.

DESIGN:

- Size and selection of the sample.
- Statistical model.

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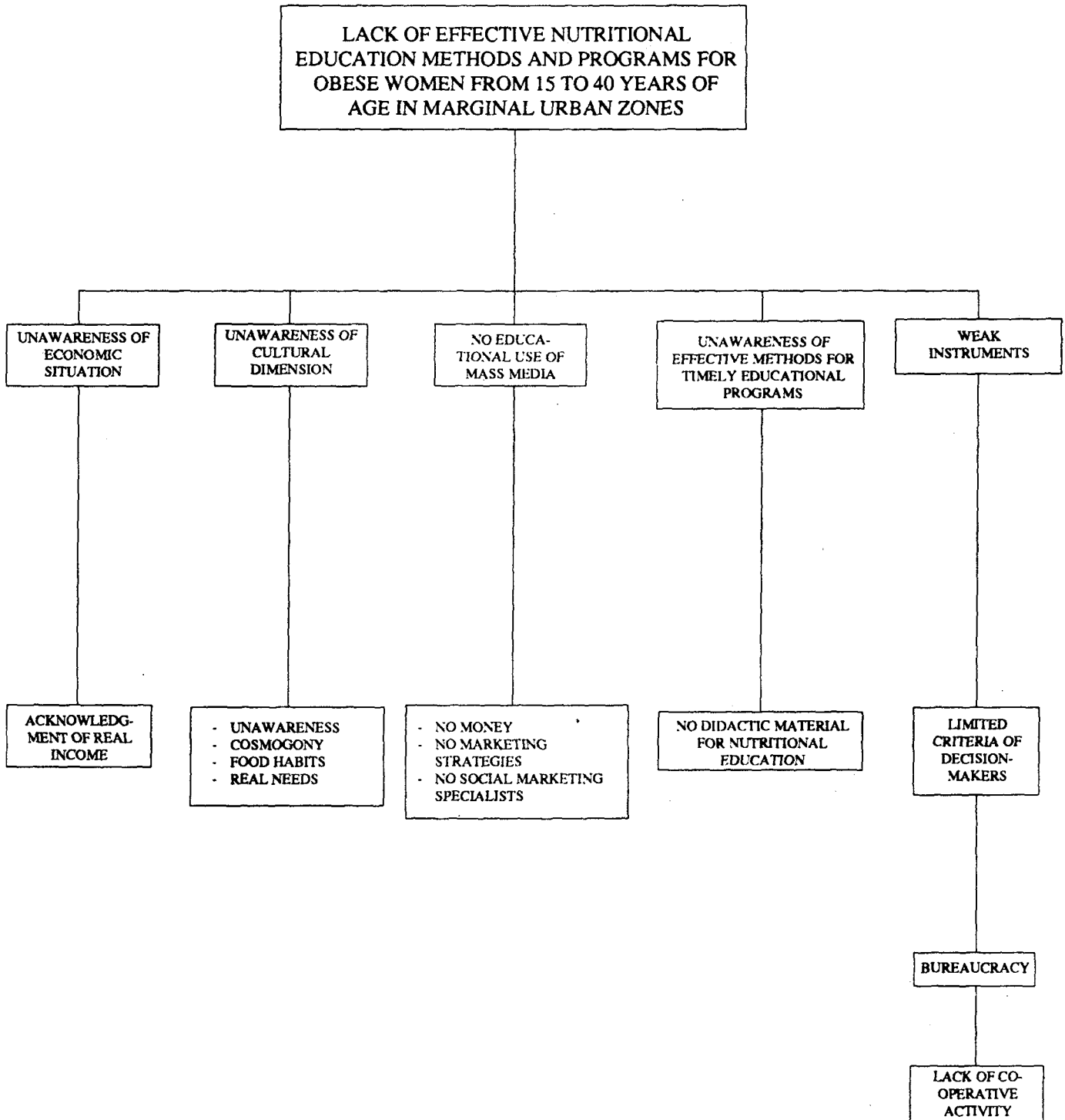
PROBLEMS	CAUSES
<p>1. Methods have been used that are unsuited to the sociocultural, linguistic and economic reality of the target population</p> <p>2. The educational needs of the target population have not been used as a base (together with)</p> <p>3. The real causes of the obesity problem are unknown</p> <p>4. Didactic methods to sensitise women of fertile age are unknown</p> <p>5. Efficient ways of reaching the aim have not been found</p> <p>6. Poor implementation of educational methodologies</p> <p>7. Lack of awareness of the real impact of the mass media</p> <p>8. Rejection of educational methodologies by w.f.a.</p> <p>9. Limited criteria of decision-makers</p>	<ul style="list-style-type: none"> - Importance is not given to socio-educational and cultural research - The educational level of w.f.a. is not considered - Dialogue has not been achieved between nutritional and social scientists - Lack of co-participative attitude (they believe people) - Lack of research into the matter (other priorities are established) - Bibliographic material is limited - Lack of methodological research - Lack of knowledge of the methodologies due to a lack of communication - Use of non-participative method - Lack of evaluation of previous problems - Lack of evaluation - Lack of research - The importance of these media for nutritional guidance and education has not been established - Access to T.V. media is denied due to disparate interests - Use of technical language - Lack of continuity in educational projects because these are not attempted as part of the daily activities of the target population - The educational level of the w.f.a. is not considered - Lack of evaluation of previous problems - Narrow criteria due to lack of knowledge of new methodologies - Lack of knowledge - Institutional, personal, ideological and "feudal" interests

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VARIABLES	INDICATORS	METHODS
1. Socioeconomic.	Income Education Access to food.	Socioeconomic survey
2. Cultural	Food habits (consumption-attitude) Cosmogony Time living in the marginal urban environment	Observation of the participant Dietetic survey
3. Anthropometry	Skin fold Body mass index	Anthropometry: -evaluation every 6 months -skinfold measurement -weight/height
4. Linguistic	Regional idioms Mother tongue	Directed interview Pilot test
5. "Real" educational needs	Own expectations Rejection	Bibliographical review Review of existing didactic material
6. Didactic methods	<ul style="list-style-type: none"> - Good didactic material - Good audiovisual material - Cost effectiveness (validation) - Easily evaluated 	Review of existing educational projects
7. Design of implementation	<ul style="list-style-type: none"> - Continuity - Permanent contact with leaders - Satisfaction of expectations - No. and characteristics of agents involved. - Community participation 	Design and application of a survey
8. Impact of mass media	<ul style="list-style-type: none"> - Time of exposure to mass media - No. of w.f.a. listening - Total no. of w.f.a - Messages maintained type of mass media used by target population - Type of messages used in advertising inciting excessive consumption and "consumer modernness" 	
9. Characteristics of decision-makers	<ul style="list-style-type: none"> - Feudal interests - Bureaucratic attitude - Designated budget 	Organizational analysis Interview of researchers and bureaucrats

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WORKSHOP

Project Planning Matrix GROUP 5: CONDITIONING FACTORS OF THE NUTRITIONAL CONDITION OF PERSONS OF 60 YEARS OF AGE AND MORE

(Research project)

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	Ma. Elena Elias Martínez	Mexico
	Ali Halhali	Mexico
	Adriana Laclé	Costa Rica
	Iván Mendoza	Guatemala
	Zazil Olivares	Mexico
	Emma Wittig de Penna	Chile
	Esperanza Silva del Valle	Mexico
	Carlos Javier Valdéz	Guatemala

CONDITIONING FACTORS OF POOR NUTRITION IN PERSONS OF 60 YEARS OF AGE AND MORE IN URBAN AREAS

Brasil

Costa Rica

Chile

GENERAL AIM:

Guatemala

Mexico

To identify the conditioning factors of poor nutrition in persons of 60 years of age and more in urban areas.

SPECIFIC AIMS:

1. To determine the economic, social and biological conditioning factors of poor diet in this population group.
2. To determine the conditioning factors for incorrect nutritional use in this group of the population.
3. To identify the interactions between the conditioning factors of poor diet.

SIZE AND SELECTION OF THE SAMPLE:

The calculation of the sample size will be made to estimate population parameters, considering as a whole the population of 60 years of age or more in each country. The poor diet rate shall be taken to be the highest value either resulting from undereating or overeating, based on previous information in each country determined by way of pilot studies. A 5% error in the estimate will be accepted.

The sample will be chosen by means of a probability sampling by conglomerates, adjusted for sex and age. Foreigners, chronic bedridden and terminal patients will be excluded from the sample.

METHODOLOGY:

STATISTICAL ANALYSIS

DESIGN:

A multicentric transversal study will be carried out which will identify the association between biological, economic and social variables with poor diet and poor biological use of nutrients in subjects ≥ 60 years of age.

Descriptive statistics will be used for the dependent and independent variables. The associations between dependent and independent variables will be measured by regression analysis and correlation in the case of continuous quantitative variables. In the variables that are discrete or that do not comply with the requirements for parametric tests, non parametric statistics will be used. Categorical variables will use chi-squared and relative and attributable risk estimation.

POPULATION:

Persons of 60 years of age and more

Not institutionalized

Living in urban areas of the following countries.

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Project Planning Matrix
DEFINITION AND OPERATIONALIZATION OF VARIABLES:

Variables	Indicators	Methods
A) DEPENDENT VARIABLES:		
Poor food ingestion	<ul style="list-style-type: none"> - % of recommended allowance - No. of main meals/day - Percentage contribution of macronutrients to energy intake - Percentage contribution of food groups to energy intake - Amount of food consumed/day <p>Biochemical indices</p> <ul style="list-style-type: none"> - Lipid profile - Glycaemia - Proteins (g/day) - Haematological - Vitamins and minerals <p>Parasitological analysis</p>	<p>Usual diet</p> <p>24 hr survey</p> <p>Frequency of consumption (7 days)</p> <p>Direct weight of food</p>
Poor biological use of nutrients.	<p>BMI (Quetelet)</p> <p>AMA-AFA</p> <p>Waist-Hip ratio</p> <p>Signs and symptoms of deficiency or excess of nutrients</p> <p>Balance studies (sub-samples)</p>	<p>Specific laboratory methods for each analysis</p> <p>Idem</p> <p>Anthropometry</p> <p>Clinical evaluation</p> <p>Metabolic studies</p>

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Project Planning Matrix (continued)

Variables	Indicators	Method
B) INDEPENDENT VARIABLES: POOR FOOD INGESTION		
Production and storage	Pending definition	Questionnaire
Availability	No. and type of markets	Questionnaire
Purchasing power	- Per capita income - % of income spent on food - Food price - Basic basket	
Socioeconomic condition	- Housing and basic services	Questionnaire
Stomach alterations	- Cpo index; use and kind of prosthesis - Chewing and swallowing problems	Oral examination and questionnaire
Digestive alterations	Signs, symptoms and specific tests	Clinical examination and questionnaire
Chronic diseases	Presence of disease	Idem
Use of medication	Use, type and frequency	Questionnaire
Osteomuscular alterations	Daily life activities	Questionnaire and direct observation
Physical activity	Physical activity patterns	Questionnaire
Sensoriopathy	Evaluation of sensory accuracy	Specific tests
Mental health	Cognitive ability and degree of depression	Specific tests
Addictions Alcohol Tobacco Drugs	Amount, type/day Frequency Duration	Questionnaire
Education	Number of years of study	Questionnaire
Social participation	Participation in organized groups. Frequency	Questionnaire
	Contacts with: Relatives Friends Neighbours	
Family structure	Number of and relation to family members Relation to head of household	Questionnaire
Habits and beliefs	Dietary knowledge, attitudes and practices	Anthropological interview
Work	Working condition Self employed Salaried employment Pensioned or rent Housework	Questionnaire
Retirement or pension	Yes/no Type of pension	Questionnaire

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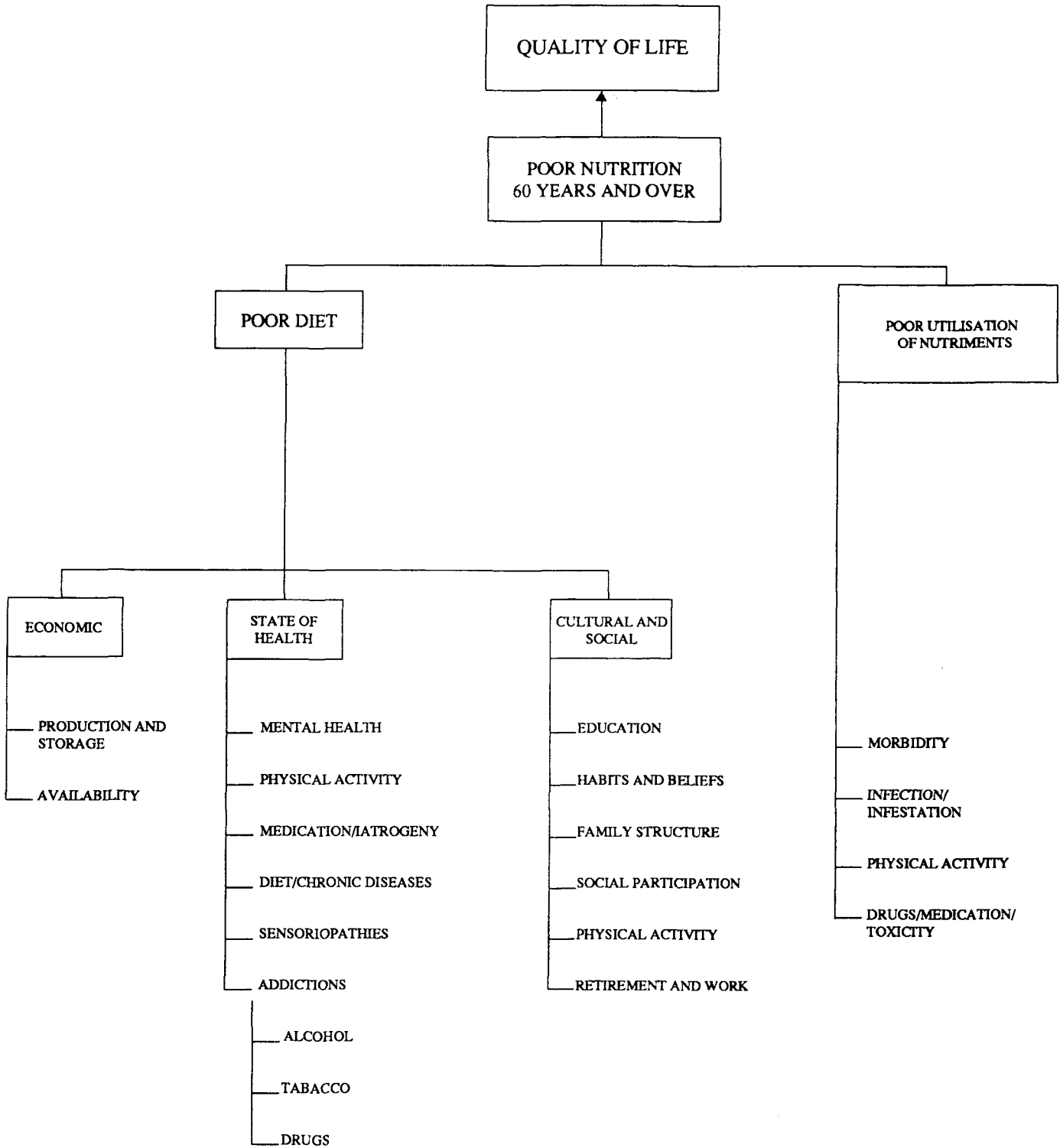
Project Planning Matrix (continued)

INDEPENDENT VARIABLES: POOR BIOLOGICAL USE OF NUTRIENTS

Variables	Indicators	Methods
Digestive alterations	Signs, symptoms and specific tests	Clinical evaluation
Chronic diseases	Presence of disease	Idem
Use of medication	Use, type and frequency	Questionnaire
Physical activity	Physical activity patterns	Questionnaire
Infection and infestation	Presence, type and duration	Clinical history

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WORKSHOP

GROUP 6: RURAL EXODUS: CHANGES IN FOOD PATTERNS

(Research project)

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	Gaby Eguisquiza	Peru
	Carmen Yolanda López	Guatemala
	Patricia Palacios	Mexico
	Juan Rivera	Guatemala
	Jenny Roldán	Peru
	Argelia Salinas Ontiveros	Mexico
	Julieta Aréchiga	Mexico

OBJECTIVES

- 3.1 To identify the factors determining food patterns in a group of migrants from the countryside to the city.
- 3.2 To establish the relationship between food patterns and factors relating to origin, duration of stay and age at migration.
- 3.3 To identify in patterns, known "Risk Factors" for nutrition and pathologies caused by excess-shortage.

HYPOTHESIS

The migration of people from rural to urban areas changes their food patterns and has an effect on their health conditions. These changes vary in accordance with factors relating to origin, duration of stay and age at migration.

GENERAL SUMMARY

In the phenomenon of countryside-city migration and its relationship with food patterns, the following main factors were detected:

ON MIGRATION

1. Patterns of migration
2. Years of urban residence
3. Age at migration

ON FOOD

1. Ingestion of nutrients and their suitability
2. Main source of nutrients
3. Diversity of foods
4. Most consumed food

5. Source of food
6. Ratio of industrialised to non-industrialised foods.

THE STUDY OF THESE FACTORS WILL ALLOW

- a) The identification of factors that determine food patterns in a migrant group.
- b) The establishment of the relationship between food patterns and origin, duration of stay and age at migration factors.
- c) The identification of known risk patterns factors for nutrition and pathologies caused by excess-shortage.

THE STRATEGIC METHOD TO OBTAIN THE NECESSARY INFORMATION IS

1. Direct observation
2. Food census
3. Structured questionnaire

THE DESIGN OF THE STUDY WILL BE

1. Epidemiological, comparative transversal, observational

THE STATISTICAL ANALYSIS

- a) Study unit **THE FAMILY**
- b) Descriptive analysis
- c) Chi-squared test for variables with a non-normal distribution.
- d) ANOVA test for variables showing a normal distribution.
- e) Logistic regression to adjust and control confounding variables.

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1. Transversal, type:	SAMPLE SIZE			
A. Comparative		Desert	Sierra	Coast
B. Observational	≤1a	100	100	100
2. The population to be studied:	≤1a	100	100	100
A. Migrants (urban-city) from rural areas, from country X to peri-urban city communities.		N = 600		

3. Sampling:

A. Directed

B. Stratified

- We will look for migrant families from three regions:

1. Desert: Caucasian or mixed-race
2. Sierra: Indian
3. Coast: negro or Caribbean

Stratified by:

1. Time in urban area
 2. Origin
- Stay: ≤1 year ≥10 years

STATISTICAL METHODS

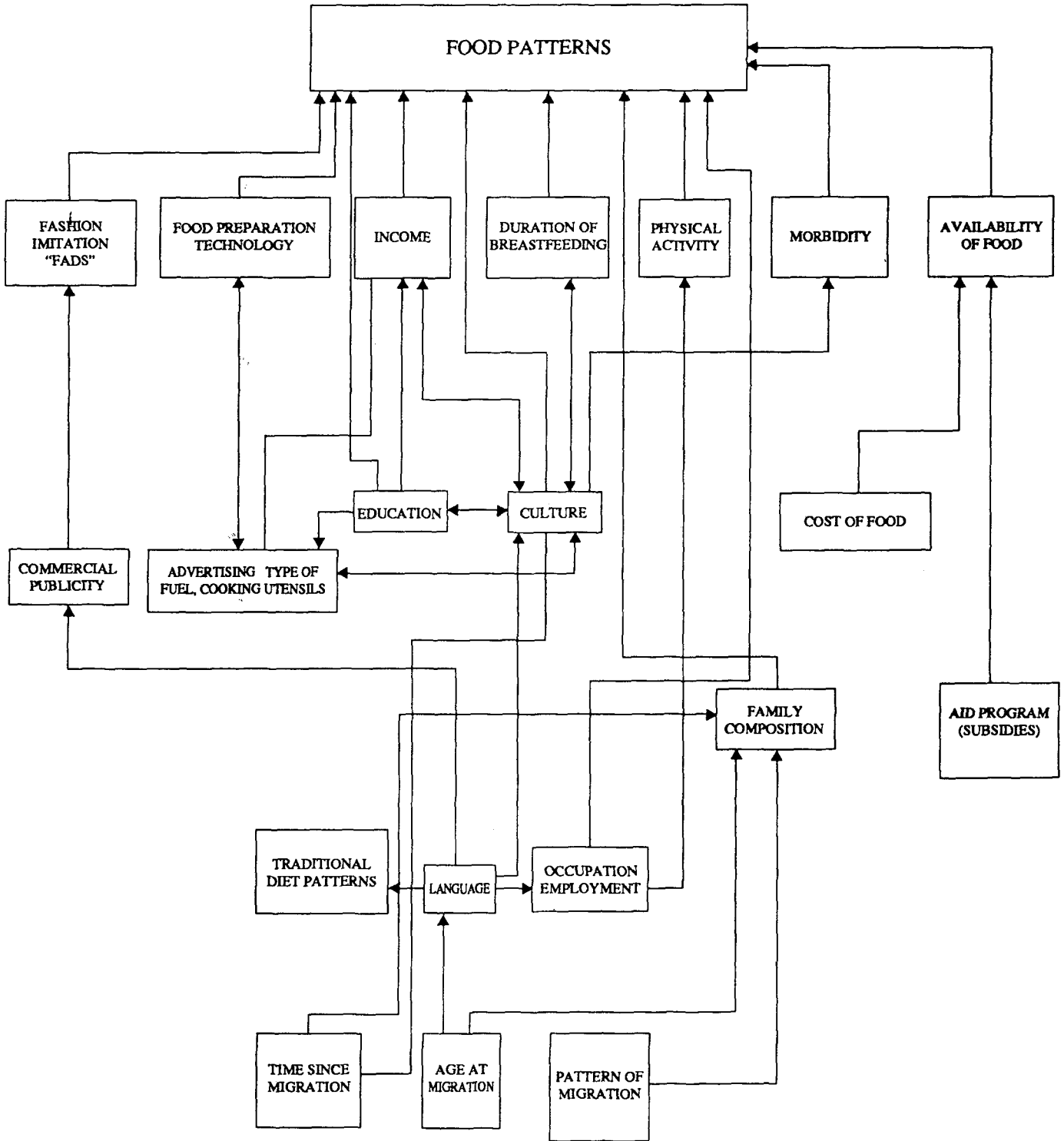
1. The unit of analysis is the family
2. Descriptive statistics
 - a. Years of residence in the urban area
 - b. By place of origin
3. χ^2 (chi-squared) multiple ("3" x "2") for variables with a normal distribution.
4. ANOVA for variables showing normal distribution.
5. Logistic regression for adjustment and controls.

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Variable	Method	Index/Indicator
Food patterns	Quantitative 24 hrs record	<ul style="list-style-type: none"> - Intake of nutrients and their suitability - Ratio of industrialised food
	Frequency of consumption	<ul style="list-style-type: none"> - Origin of food (bought, present, grown, barter) - No. of meals a day - Main sources of nutrients - Most consumed foods
Migration patterns	Structured questionnaire	<ul style="list-style-type: none"> - Family structure on migration - Ethnic group - Place of origin
Duration of stay	Structured questionnaire	<ul style="list-style-type: none"> - Time (months) for each member of current family
Age at migration	Structured questionnaire	<ul style="list-style-type: none"> - Chronological age of person on leaving place of origin - Percentage of life in urban residence (time) - No. of persons migrated and no. born in urban area
Food availability	Questionnaire of food available in the community Direct observation	<ul style="list-style-type: none"> - Amount and variety of food in the community (seasonal) - Variety of food in city (seasonal) - Seasonal prices
Cost of food	Observation in the community Home questionnaire	<ul style="list-style-type: none"> - Amount and type of food - Participation in: school breakfasts, common kitchens - Subsidised food - Family shopping - Food for work
Aid programs (subsidies) for poor families	Census of programs in the community	<ul style="list-style-type: none"> - Salary and other family income - How often paid - Home visit. Expenditure on food (per day, week, month)
Income	Questionnaire	<ul style="list-style-type: none"> - Formal: No. of years - Informal: No. of years - Non-formal: No. of years
Education	Structured questionnaire Education	<p>Employment classification</p> <ul style="list-style-type: none"> - Use of ceremonial food - Hot-cold classification - Strengthening-weakening, helpful-harmful food
Occupation	Recall of last 24 hrs of activity Questionnaire direct observation	<ul style="list-style-type: none"> - Language (dialect) - Food taboos - Intrafamily distribution - Traditional medicine - Use of traditional clothing and footwear
Culture (internal)	Direct observation Questionnaire	<ul style="list-style-type: none"> - Type of cooking and energy source - Form of food conservation - Availability of utensils - Preparation of food
Food preparation techniques	Direct observation Questionnaire	<ul style="list-style-type: none"> - No. of months each child breastfed, per family - Use of substitute milks, months - First non-milk food (weaning months) - Age of weaning (months)
Duration of breastfeeding	Questionnaire	<ul style="list-style-type: none"> - Food changes associated with diseases - Frequency of acute respiratory infections and diarrhoea (infection) - Sick persons day of survey (disease)
Morbidity	Questionnaire	<ul style="list-style-type: none"> - Selection of foods to satisfy unexpected hunger or thirst - Level of activity of family members
Physical activity	Recall of last 24 Hrs of activity Questionnaire	

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Project Planning Matrix

DESIGN OF EPIDEMIOLOGICAL STUDY

GROUP 7: SYSTEM OF FOOD SUPERVISION

(Research Project)

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	Annabella Rebolledo	Chile
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INTRODUCTION

The workshop considered a cause-effect methodology and therefore the first step was to define it as a food supervision system (FSS) in urban areas.

“A system that allows us to monitor systematically and continuously, with simple and practical indicators, the availability, access, consumption and biological use of food for the chosen population groups living in cities, in order to undertake actions aimed at seeking suitable and feasible solutions”.

Secondly, the shortcomings of a FSS were identified. The participants put forward the following negative factors:

- a) Lack of awareness of FSS.
- b) Lack of infrastructure for the achievement of aims.
- c) Verticality in programs and zero participation by beneficiaries.
- d) Lack of political will.
- e) Insufficiency and irregularity in the provision of economic resources.
- f) Shortcomings in methodology and design.
- g) Shortcomings in feedback and information use.
- h) Lack of integration of the components.

For each of the shortcomings detected the causes were sought and presented in causal tree 1.

Aware of the main problems in a FSS, a model was proposed modifying and correcting them.

The results of this debate are shown in causal tree 2.

In the workshop's third stage, a theoretical exercise and project on FSS was carried out with the aim: “After 4 years, a FSS will have been set up for a metropolitan city”.

Causal tree 2 shows the planning matrix for this project.

Finally, the participants gave their opinion on the workshop.

- The workshop was extremely effective, thanks to the active participation by those attending. The technical coordination was highly motivating. I wish that more time had been allowed so greater advances could have been made.
- A good exercise for the formulation of methodological models, although a wider discussion between countries would be necessary for a better standardisation of methodologies.
- The workshop awoke concerns among the participants and generated ideas as to the problems of cities with nutritional problems and how to organise to try to fight them. The workshop needs more time to obtain its objectives. A very good experience.
- The experience has been very enriching despite the time limitations. The group was moderated and led exceedingly well and the group's attitude magnificent to reach the

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- objective was magnificent. It reinforced my idea to improve personal technical training of those involved in the area.
- Each country's experiences must be publicised in others so they may unite criteria and improve FSS. Courses and other ways of keeping communication constant are needed.
 - It is an excellent and very useful mental exercise which could be applied to any discipline although it is not well mastered by experts.
 - The experience is worthwhile but the results would be better with more time to understand the methodology and to allow more dialogue, especially in view of the different experiences of the participants.
 - An interesting practice: it makes the mind faster and more ordered and takes advantage of everybody's experience. It would be more effective if it were based on an example of the effectiveness and problems related to the specific subject before developing an ideal common project. This would require more workshop time.
 - The workshop achieved its aim of awakening concern on problems common to the countries participating. Courses are suggested for the analysis alternative proposed in this workshop, with a multiplier and multisectorial effect.
 - The experience of this theoretical exercise restates the need to provide feedback for each country's FSS to properly focus them toward the aims of care and supervision for the general population.

FOOD AND NUTRITIONAL SUPERVISION SYSTEMS IN URBAN AREAS (FSS)

Definition: The FSS in urban areas is defined as a system that allows us to systematically and continuously monitor with simple and practical indicators the availability, access, consumption and biological use of food for the chosen population groups living in cities, in order to undertake actions aimed at seeking suitable and feasible solutions.

1. The problem of correlating variables to find practical conclusions.
2. To improve methods of evaluating the availability and consumption of food.
3. The need to evaluate the impact of programs applied.
4. The errors in surveys on urban nutrition do not allow high-risk groups to be properly identified.

"LACK OF AN ADEQUATE NUTRITIONAL SUPERVISION SYSTEM"

1. Lack of awareness of what a FSS is.
2. Lack of awareness of the size of the problem.

3. To guarantee correct functioning and to achieve the proposed aims there must be nationwide infrastructure.
4. Verticality of programs, zero participation of beneficiaries.
 - 4.1 Lack of reference and counter-reference systems of models from pediatric care centres to organisations of maternal-infant nutritional recovery centres. Lack of follow-up of malnourished patient.
5. Lack of political will.
 - 5.1 There is a lack of decision-making power and what there is is bureaucratic and slow.
 - 5.2 Problem, it has not been established as a priority.
 - 5.3 Supply is not in accordance with the needs of populations
 - 5.4 Lack of multisectorial agreement.
 - 5.5 Food policies are not continuous.
 - 5.6 The constitutional right to food is non-existent.
6. Insufficiency and irregularity in the provision of human, technical and financial resources.
 - 6.1 Lack of continuity in policies.
7. Insufficiencies in methodology and design.
 - 7.1 Printing of indicators by age groups under consideration, independently of the institutional information system itself.
 - 7.2 There is no practical methodology for: Evaluation of the nutritional consumption profile.
 - 7.2.1. Lack of adequate indicators
 - 7.2.2. Lack of selection of indicators (that really measure changes).
 - 7.2.3. Definition of simple measurement variables to carry out research into members of the community.
 - 7.2.4. Lack of information on indicators.
 - 7.3 Deficiencies in technical training.
8. Lack of feedback and information use.
 - 8.1 Problem: Most of what has been done has no evaluation.
 - 8.2 Information is not opportune: In other words, it does not allow for action to be taken efficiently and rapidly.
 - 8.3 Information users are poorly identified and then the necessary actions are not taken.
 - 8.4 FSS generate a vast amount of information which complicates the problem diagnosis phase.

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- 8.5 Supervision systems normally pay too much attention to collecting information and too little to using data in action.
9. Integration of unsuitable components.
- 9.1 Lack of integration of the system itself such that the system depends entirely on one researcher or group of researchers.
- 9.2 Lack of communication between the research and intervention sectors for the evaluation of the latter.
- 9.3 Lack of integration within the FSS, records of morbidity-mortality considering malnutrition or obesity as a causal factor.

CONCLUSIONS

After having carried out the ZOPP exercise for a day at the II Latin American Workshop, some lessons may be learned.

On the level of prerequisites, there must be facilitators with an in-depth handling of design methodologies and statistical models used in epidemiological analysis.

At least one day is needed for training for these facilitators.

This is so that they can understand the specific scope of the workshop and carry out exercises to make clear each of the points.

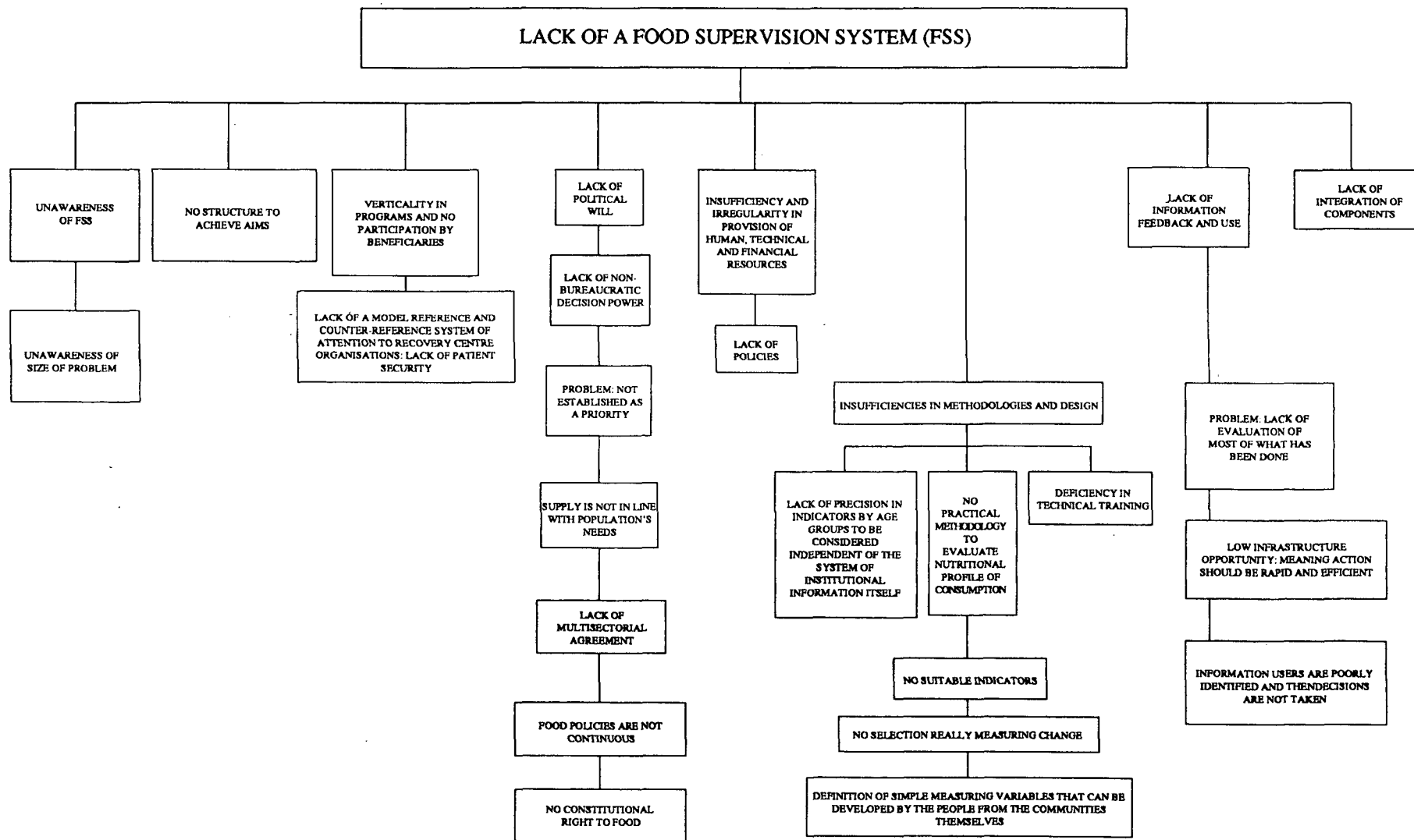
The following important contributions were made:

- The ZOPP demands that we use causal factors as a vision and strategy indispensable for the generation of reliable applicative solutions.
- Its level of realism is praiseworthy. By reviewing, correcting and eliminating unobtainable assumptions (lethal assumptions), planners and intervention workers are forced to continuously rethink the feasibility of their proposals.
- Two points may be mentioned with reference to contributions of training researchers:
 - a) Interdisciplinary work is highly effective. It allows different points of view to be integrated, visions to be worked on in parallel and conventional and obsolete perspectives to be reassessed.
 - b) The ZOPP is a model for the integration of strictly drawn up protocols. In this sense, it works as a useful example of a kind of idea researchers can use to strengthen their protocols.

Project Planning Matrix

	Description	Indicator	Method of verification	Assumptions
Project Aim	After 4 years a FSS will have been set up for a metropolitan city	The intention is to attend to a risk population with an x% coverage evaluated through availability and consumption indicators with maximum error of 5%.	External evaluation survey	Constitutional right to food
Results	1). State policies allow the long-term continuity of the operation	No. of existing or new (published) policies in the period concerning food-nutrition, evaluated by international standards	Official Gazette	Political will Microeconomic situation of country allows financial resources to be obtained
	2). Horizontalisation of the FSS with the participation of the beneficiaries	70% of the representatives of the beneficiaries participate in semestral planning meetings, execution program and existence of a representative for the sectors involved in the FSS and there is transmission of information.	Verifiable list of participants Trimestral bulletin reliability 95% coverage 95%	To estimate availability of food information will be collected on: production, imports and exports of the basic group of foods with respect to a reference pattern: the basic local basket
	3). The developed FSS allows for rapid and non-bureaucratic intersectorial coordination	Existence of a representative for the sectors involved in the FSS and there is transmission of information.		
	4). Awareness of what an FSS is; beneficiary, financiers and experts	Two years after entering the operation 80% of beneficiaries, experts and financiers know the FSS	80% of participants reply to 80% of FSS awareness questions	Consumption of food through food surveys, family income, expenditure on food, comparable pattern nutritional profile vs. FAO/WHO
	5). Proper use and feedback of information	A data base contemplating 100% of the information concerning: coverage of population, availability of food, food consumption	Sending of classified and/or interpreted material to participating beneficiaries, experts, sponsors with documents, reports, leaflets, audiovisual materials	Project monitoring and internal control system ----- Database, project control, periodic meetings by levels in stages
	6). Adequate interaction of the different components involved (researchers,-intervention)	100% of the researchers generated in the FSS are applied in its different stages		Periodic evaluation with respect to the rate of coverage by levels, supervision by random sampling

CAUSAL TREE 1
FOOD SUPERVISION SYSTEM



CAUSAL TREE 2 OF AIMS

