

INFORMAL HEALTH EDUCATION FOR EARLY CHILDHOOD IN INDONESIA

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ABSTRACT: *The spurting growth and development of early childhood are usually identified as a golden time, the window of opportunity and critical period as well. It needs appropriate and optimum method of caring for loving and teaching in informal education. This informal health educational program is accomplished by parenting method, primary health care, adequate nutrition intake and healthy environment. Breastfeeding, including early breastfeeding program as well as exclusive breastfeeding, adequate nutrition intake, healthy environment, disease prevention, healthy house and utilization of sanitation as healthy and clean life behavior are contents of informal health education for early childhood. Stimulation and embrace from mother provide satisfaction and secure feeling to baby. Mother's instinct to educate through learning-by-doing method, supported by knowledge and skill to maintain health, disease and nutrition control, healthy house and environment, healthy life behavior and nutrition awareness will complete the education in concrete situation. Healthy and clean life behavior are vice versa healthy environment. Family members and parents, especially mother, have roles, functions and responsibilities in informal health education. This article purposes to provide information and present materials and how informal health education is implemented as well as the role and importance of parenting in growth and development of early childhood in Indonesia.*

KEY WORDS: *informal education, early childhood, growth spurt and development, nutrition, healthy environment and healthy life.*

INTRODUCTION

Both education and health are parts of human rights, according to the Constitution of the Republic of Indonesia (see UUD, *Undang-Undang Dasar* or Constitution of 1945, article 28H). Early age is a period which is sensitive to environment. It is called as *the golden period* and *critical period*. These periods are a sensitive time as well as important growth burst and development. Therefore, it needs adequate nourishment in both quality and quantity. A newborn has brain size only 25% of

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adult. About 50% of the brain is developed during the first year of his life and 20% is during his second year (Pediatrics, 2005). On the contrary, it is also called as critical period since when problems occur during this period, the problems will give serious and continuous effect in the next life cycle. Brain growth in the first year is very fast, and it needs balance fat acid and protein (Pediatrics, 2005). The growth burst and development of early childhood are influenced by “three main pillars” that are health care, nutrition and psychosocial stimulation. A child must get primary health care (immunization), adequate and balance nutrition, and healthy environment as a psychosocial stimulation.

This early childhood education is a study subject of effective ways to support early childhood students to grow in accordance to the growth phases (Supriadi, 2004). Juridically, early childhood education is a building effort for children from newborn to six years. It consists of educative stimulations for physical and spiritual growth and development in order to prepare them for entering further education (see *Undang-Undang No.20/2003 tentang Sistem Pendidikan Nasional* or Regulation Number 20/2003 concerning on National Education System, article 1 number 4). Early education can be categorized as formal, non formal and informal education (in article 28). Formal education is conducted by kindergarten institution; non formal education is by study group, playgroup, day care, etc; while informal education is conducted by and in the family and the environment. Formal health education can be effective when parents or society have knowledge of health and how to educate children. This kind of education is a part and fundament of education and establishment of next attitude and behavior.

The method and substance must be adjusted to age, local resources, culture and social. This article purposes to provide information and present materials and how informal health education is implemented as well as the role and importance of parenting in growth and development of early childhood.

HEALTHY VERSUS SICK

Health concept, by knowledge and technology development, tends to dynamic and relative. The previous, health definition has not included productive health as formulated by WHO (World Health Organization) in 1948 which adopted definition of Winslow in 1920 as follows: “*Health is state of complete physical, mental and social wellbeing and not merely the absence of disease and infirmity*” (in Hanlon & Pickett, 1984).

In 1988, WHO renewed and completed definition of health, based on recommendation of WHO assembly at Ottawa in 1986, which was: “*Health is a source of everyday life, not merely the objective of living*” (WHO, 1986 and 1988). This definition was then quoted and included in Regulation Number 23/1992 about Health (article 1 number 1) that health is condition of complete physical, mental and social wellbeing which enable everyone to live productive socially and economically (see *Undang-Undang No.23/1992 tentang Kesehatan* or Regulation Number 23/1992 about Health). Implication of the concept is paradigm changing

from *Health Program for Survival to Health Program for Human Development* (Sampurno, 2003).

The four aspects i.e. physic, mental, social and economic, indicate that health is holistic and comprehensive. Holistic and comprehensive are fundaments to provide child health care and education as included in *Undang-Undang No.23/1992 tentang Kesehatan* or Regulation Number 23 about Health that *child health is implemented to realize the building of child's growth and development* (article 17 number 1).

What is mentioned as healthy or health in that definition has four meanings. *First*, condition of physical health which is not sick/free of any diseases, physically defect and weak, but all parts of body are in good condition and function normally/ no disorders. *Second*, condition of healthy mental, at least covering 3 aspects: (a) healthy mind, which is indicated by positive, logic and well-organized way of thinking; (b) healthy emotion, which is shown by capability to express happiness and disappointment, fear, worries, etc, and take the second chance to fix something failed; and (c) healthy mental, which is having secure feeling and certainty of a protection. *Third*, in social meaning, capable to interact or communicate to individuals and family members, and tolerate and communicate in certain limitations. *Fourth*, in economic meaning, having capable of taking advise to be thrifty, keep the belongings and productive in the activity. Healthy is not similar to not sick. Health is a beginning process of life and growth process of every individual life.

Child health care purposes children having normal growth and development. Growth means increasing size and number of cell and tissue. It is indicated with bigger body structure in a whole or only in some parts that the body becomes higher and heavier. Development means body function and structure becoming more complex in capabilities of hard motion, soft motion, speech and language as well as socialization, creativity and self-motivation, such as hard motion or hard motoric, to sit, to crawl on hands and knees, to stand up, to walk, to drink, to eat using spoon, etc (Sutjiningsih, 1995). *Soft motion* or *soft motoric*: child is able to observe something, pinch, write, etc. *Speech* or *language*: giving response to sound, following the instruction, etc. *In socialization* or *self-motivation*: child is able to untidy the toys, to keep and to arrange, and to interact with the surrounding.

Characteristic of child's growth and development are: (1) simultaneous and correlate; (2) the early phase of growth and development determine the next phase; (3) every child has different speed of growth and development; and (4) child's growth and development have gradual and fixed patterns (Sutjiningsih, 1995).

DETERMINANT FACTORS TO HEALTH STATUS

Health status is influenced by 4 determinant factors, starting from the most to the smallest influential, that are environment, behavior, health service and heredity (Blum, 1974). Interaction between child and environment has been begun since in the mother's womb. Growth and development process from fertilization to delivery are called as passive phase, while after the delivery it is called as active phase. It is

active because it involves experience in interaction to be grown and developed individual.

Prenatal factor is shown by pregnancy condition of mother. Health condition of mother is very determinative. Mother with undernutrition often bears baby with birth weight less than 2,500 gram (usually called as low birth weight). Low birth weight condition will destruct brain development and make baby is easily infected by disease. After birth, environment factor could be both positive and negative (risk) factors. Positive factor leads to life quality improvement, while risk factor is a media of disorder and source of disease. Behavior includes attitude, action and perception of mother/parents to herself during pregnancy and to her baby, how mother's reaction to breastfeeding, love feeling to baby, etc. Primary health care given to prenatal consists of prenatal health care focusing on pregnant woman health. In antenatal care, health service is given to newborn, including immunization, monitoring growth and development, medical check up and treatment during sickness. Hereditary factor is a congenital factor either normal or pathologic. Every child is born with their own hereditary factor. Environmental factors that are influential to child's growth and development are usually called as bio-physio-psycho-social environment.

Healthy environments are very crucial to meet the needs based on phases of child's growth and development. *First*, biomedical-physics, consisting of primary health care such as immunization, breast-feeding and complementary feeding or MP-ASI (*Makanan Pendamping – Air Susu Ibu*), nutritious food, growth monitoring, personal hygiene and sanitation, physical fitness and recreation, clothing, etc (CARE FOR). *Second*, love and emotional environment (LOVE). *Third*, psychosocial environment as a child education process to improve intelligence, skill, self-motivation, creativity and personality (TEACH).

In every disease, there are three interacted elements. Those are the cause/agent, individual/person and environment (Almatsier, 2004). The disease cause can be divided into exogenous and endogenous. *Exogenous* is a type of disease cause which comes from outside human body, such as: (1) Biologic, micro-organism: bacteria, virus, germ, worm, protozoa, etc.; (2) Nutrient, deficiency of nutritive substance: lack of protein, vitamin, etc.; (3) Chemical: poison, metal, etc.; (4) Physical: dust, heat, light, etc.; (5) Mechanical: collided by blunt and sharp things; and (6) Psychosocial/psychological pressure. *Endogenous* is a type of disease cause which comes from inside human body, such as hereditary diseases e.g. asthma, color-blind and hemophilia. Body immunity factors, such as nutritious food, immunized body, and healthy and clean life behavior, are included also as endogenous factor.

From transmission factors, there are many types of transmission. It can be through physical contact, such as direct or indirectly contact to patient body. Skin disease is one example of disease which is transmitted by direct contact. In indirect contact, disease seed is transmitted through patient cloths or things, for example, towel, handkerchief, shirt, pant and bed. Another transmission is through foods, drinks, water, insect bites and air or respiratory. To protect from infection, baby is

immunized completely before age of one year. The immunizations are BCG, Hepatitis B (yellow disease), Diphtheri-Pertussis-Tetanus/DPT, Polio and Measles. Slight sickness, such as cough, common influenza, diarrhea and skin disease, is not an obstacle for baby to get immunization. Therefore, the baby should still be immunized.

NUTRITION

Nutrition or *Gizi* comes from Arabic language, *Al-Gizzai*, which means foods and its benefit to health. Well-chosen daily foods will provide all nutrients that are very important for the function of normal human body. The purpose of food consumption is to provide adequate nutrient to meet health needs as well as to maintain health, for recovery during illness, energy of activities, and for psychomotor and physical growth and development. Therefore, people should be accustomed of consuming various and balance foods regularly.

Human body needs nutrients contained in foodstuff, such as carbohydrate, protein, fat, vitamin and mineral (Almatsier, 2004). Since carbohydrate is main energy source and heat source for body system, it is needed in bigger quantity. One gram of carbohydrate produces 4 calories. Inside the body, one part of carbohydrate is in blood circulation as glucose for immediate energy needs, one part is in liver and muscle tissue as glicogen and one part is produced into fat and then kept as energy reserve (1 gr = 9 cal) in fat tissue and has function to protect body organs. Sources of carbohydrate are grains, kinds of tuber, legumes and sugar, not to mention products of noodle, thin rice noodle, flour bread, fruit syrup concentrate for drink, etc. Fruits and vegetables contain not much carbohydrate, while food made from animal only contains a little carbohydrate. Another energy source is fat. It is important to consume fat since it has function to supply calorie and solubilize vitamin.

Protein is very important nutritive substance because it has close relation to life process. Protein comes from the word *protebos*, which means “the first” or “the most important”. Based on the sources, protein is classified into: (1) animal protein which is protein in food made from animal, such as meat, chicken, fish, egg, shrimp, mollusk, crab, milk, etc.; and (2) vegetable protein which is protein in foodstuff of vegetables, such as tofu, fermented soybean or *tempe*, legumes, etc. Protein is the third energy source (1 gr = 4 cal). Function of protein is to develop cells of body tissue, renew the old body cell, produce enzym, hormone and blood protein, keep the balance of acid and bases, and as calorie source.

Vitamins are complex organic substances needed by body in very small number and usually can not be produced by body. These substances are found in food. Firstly these substances called as vitamin was found in mixture of rice and bran that could heal beriberi disease. It is important for life (*vita*) and contains nitrogen (*amine*) element. Therefore, it is called then as *vitamin*. Vitamin is included in substance group for controlling growth and sustaining life. It is classified into vitamin soluble in fat (vitamin A, D, E and K) and vitamin soluble in water (vitamin B and C).

Mineral has big roles in sustaining the function of human body starting from cell, tissue, organ to the whole parts of body. Mineral is divided into macro mineral and micro mineral. Human body needs macro mineral in a big number, which is 100 mg, everyday. Substances included as mineral macro are: sodium (Na), chloride (Cl), potassium (K), calcium (Ca), phosphor (P), magnesium (Mg) and sulfur (S). On the other side, human body everyday needs micro mineral less than 100 mg, and number of it is only 15 in everyday. Although there is only a very little number of micro mineral in body, it is very essential for life, health and reproduction. The content of micro mineral in foodstuff depends on mineral concentrate of the ground where the vegetables are planted. Micro mineral consists of iron (Fe), zinc (Zn), iodine (I), selenium (Se), copper (Cu), manganese (Mn), fluorine (F), chromium (Cr) and molybdenum (Mo).

Liquid is a main part of body. In the body, it is about 55-60% of total weight or 70% of body parts, excluding fat. Children have more liquid in their body, while newborn has liquid approximately 75% of its total weight. Body liquid closely relates to number of solubilized mineral in it. Body can survive for weeks without any food, but only a few days without water. Number of water in every individual is different one to another. Every time body loses liquid, it must be substituted, and composition on every compartment has to be kept always in homeostasis condition. The liquid has functions as: (1) dissolver and transporter of nutritive substances to whole parts of body, and carrier of the rest of metabolism, including carbon dioxide and ureum; (2) catalyst of any biological reaction in digestion tract and hydrolysis of complex nutrients into simple form; (3) smoother in liquid of body joints; (4) growth facilitator and parts of body tissue, therefore, water also has function as builder substance; (5) controller of body temperature, so it has capability to distribute heat throughout the body, since body always produces heat during the metabolism process, the excess of heat is removed through the sweat; and (6) impact reducer, such as liquid in eyes, fetal membrane water and backbone nerve system.

Child nutrition status is indicated not only by changes of weight and height or other parts of body, but also by description about the balance of nutrition needs and intake. When quantity of nutrition intake meets the need, this condition is called as balance or *adequate nutrition*. On the contrary, when the nutrition intake is less than the needs, it is called as *undernutrition*, but when the intake is more than the needs, it is called as *overnutrition*. Growth disruption in short term affect changes of body weight, while growth disruption in long term causes slow development of body height.

Balance nutrition is crucial for normal growth, intelligence, health sustainability and doing daily activity. It comes from consuming various foods because not all foodstuffs contain complete nutrient. Every kind of foodstuff has certain special quality and weakness. Some have high calorie but less protein, vitamin or mineral, and vice versa. Balance and various menu model have been known since 1950 and deeply rooted in society as *empat sehat lima sempurna* or 4-healths 5-completes slogan. In 1985, this slogan was then developed into balance nutrition (Almatsier, 2004). Each child needs 5 nutrient groups (carbohydrate, protein, fat, vitamin and mineral)

in proper number. In addition to those 5 nutrient groups, water is needed to speed up psychological processes inside body. That various foodstuffs will meet the body needs, which is in study of nutrition known as three food functions: (1) food as source of energy; (2) food as source of regulator; and (3) food as source of builder substance.

For baby, breast milk is natural and the best food. It must be fed to baby immediately, at least 30 minutes after baby is born. The initial secreted breast milk, called as *colostrums*, contains high quality nutrient and antibody (Pudjiadi, 2003). Breast milk has 7 advantages as follows:

First, high nutrition: (a) where colostrums contains high vitamin A and protein, low fat and carbohydrate, antibody to protect baby from infections, especially diarrhea; (b) absorbable, containing enzymes to dissolve nutrients, high quality nutrient for growth and development of baby/child's intelligence; (c) having adequate ratio of Whey and casein for baby. Breast milk has more Whey than casein, which is 65:35. This composition makes protein of breast milk is more absorbable than cow milk. The composition ratio in cow milk is 20:80. It means cow milk has more casein, which is difficult to absorb; (d) containing taurine, a kind of amino acid and it is not found in cow milk. Taurine has function as neurotransmitter and has big roles in maturation process of brain cells; and (e) containing *Docosahexaenoic Acid* or DHA and *Arachidonic Acid* or AA. These are poly unsaturated fatty acids that are important for optimal brain cells development. Breast milk contains very enough number of DHA and AA for child's growth and intelligence in the future.

Second, immunological aspect means: (a) clean and free of contamination though it is possible being contaminated through the nipple; (b) having anti infection substance, especially immunoglobulin or Ig A, killing pathogen bacteria, E. Coli and many viruses in digestion tract; (c) containing lysozyme, an enzyme to protect baby from harm virus and bacteria; (d) containing leukocyte, during the first two week, breast milk has more than 4,000 cells per ml. It consists of three types: Bronchus Associated Lymphocyte Tissue (BALT), producing antibody to respiratory infection, Gut Associated Lymphocyte Tissue (GALT), producing antibody to digestion tract, and Mammary Associated Lymphocyte Tissue (MALT), distributing antibody through tissue of mother's breast. Cells produce Ig A, lactiferous, lysozyme and interferon. Interferon destructs certain virus activity; and (e) having bifidus factor, a kind of carbohydrate containing Nitrogen, and supporting growth of bifidus lactobacterus bacteria. This bacteria maintains acidity of baby intestine flora that is useful to destruct growth of harm bacteria.

Third, psychological aspect of breastfeeding: (a) improving mother's self-confident that she is able to breastfeed and believes she can produce sufficient milk. It is very important to success of breastfeeding and increasing hormone production, especially oxytocin, which then finally will increase production of breast milk; (b) mother-to-baby interaction affects baby psychological growth and development. Mother and baby interact during the first 30 minutes through early breastfeeding; and (c) mother-baby direct contact. Baby feels secure, hears mother's heart beat,

which has been heard since in the womb or skin to skin contact and smells mother-baby special aroma.

Fourth, intelligence. Studies show that breastfed babies have IQ 4.3 point higher in age of 18 months, 4-6 point higher in age of 3 years, 8.3 point higher in age of 8 years 6 months than babies that are not breastfed.

Fifth, neurological aspect. Nerve coordination of newborn to swallow, suck and breathe is not good and complete. But, this incompleteness could be developed into better and perfect coordination through sucking process during breastfeeding.

Sixth, economic aspect. During exclusive breastfeeding, mother does not need to pay for baby's food for six months. Exclusive breastfeeding means feeding baby only with breast milk, since baby is born until aged 6 months, without any food and drink. Breast milk is given to newborn starting from, at least, 30 minutes after baby is born. Nutrient in breast milk is almost perfect, and it can fulfill baby's needs from 0-6 months.

Seventh, exclusive breastfeeding can delay menstruation and pregnancy, so it might be used as natural contraception.

After 6 months, breast milk is not enough for baby. Baby aged > 6 months needs other food or complementary foods or *Makanan Pendamping – Air Susu Ibu* (MP-ASI). Purposes of this complementary feeding are for optimum growth and development as well as protecting and controlling baby from malnutrition and undernutrition. It is given until baby aged 12 months. Some requirements of complementary are: (1) easy to find; (2) easy to make; (3) not expensive; (4) well-accepted by targets; (5) nutritive substances meet the nutrition needs; (6) type of food is adjusted to age of baby; (7) free of bacteria, preservative, dye and poison; and (8) in accordance to social, economic, culture and religion values.

Complementary foods are based on the age of baby/child. Baby aged six to seven months might be fed with milk porridge or very tender rice, and introduced to egg yolk and chopped lever. Eight month baby shall be fed with soft steamed rice and chopped vegetables, though having had no teeth, but baby can chew with gum. Appearing one year old, a child wants to eat by him/herself either using hand or spoon. Starting from age of one year, a child can be introduced with family menu, such as soft steamed rice, vegetables and side dish.

In sick condition, baby needs more nutrition, but has less appetite. Breastfeeding can be made more frequent and complementary foods is given still in accordance to baby's age but softer than usual. Food should be in warm temperature and fed to baby little by little. When baby has recovered, the portion might be added. The composition of food and complementary foods must contain balance nutrient for energy, building and regulation. This balance nutrition comes from staple foodstuff, side dish, vegetables and fruits.

The composition of healthy food serving includes various foodstuffs, that are easy to get and available in local place. It is still based on the purchasing power. Various are because there is no foodstuff having complete nutrient. Staple foodstuff is not always rice, side dish must be alternated between animal and vegetable, and both fruit and vegetable have to be more and various. Sukirman (2001) believes this

new paradigm is able to tackle nutrition problems by emphasizing how important the outcome of child's growth and nutritional status.

Nutritional problem could happen in poor and moderate society. It includes lack of and overnutrition. This condition is usually called as *malnutrition*. Today, there are 4 kinds of undernutrition: (1) protein energy deficiency; (2) vitamin A deficiency; (3) iron or Fe deficiency; and (4) iodine deficiency disorder. These conditions are caused by many things, for example, family incapability to provide food, less information about healthy food and disadvantage traditions and eating habit that are opposite with health, such as breastfeeding is only until baby aged 2 years, eating too much can cause intestinal worms. In addition, infection diseases e.g. intestinal worms and diarrhea can lead to undernutrition.

This protein and energy deficiency disease are caused by deficit of carbohydrate and protein intake, usually called as *kwashiorkor* and *marasmus*. *Kwashiorkor* is protein energy deficiency with protein as the dominant cause, while *marasmus* is protein energy deficiency where energy deficiency is the dominant cause. How to control protein energy deficiency on baby: (a) continuing breastfeeding until age of six months at least 8 times in a day and every time baby needs or as much as possible; and (b) starting to fed complementary foods when baby is six months? Three ways to control protein energy deficiency on children under five years: (1) continuing breastfeeding until age of two years; (2) continuing complementary foods until age of twelve months and other age-appropriate foods; and (3) breastfeeding first, before complementary foods.

Vitamin A deficiency occurs on children suffering of protein energy deficiency or severe malnutrition. Disorder caused by vitamin A deficiency is called as *Xerophthalmia*. One of initial symptoms of it is night blindness (*nyctalopia*), which is a disability to adjust the eyesight from bright to dim light. At dusk, eyesight becomes dark, and it causes to collide with anything. This disease is called *night blindness*. It can be controlled by vitamin A supplementation and consuming many green vegetables, colored fruits and foods made from animal.

Iron (Fe) deficiency is the most common type of nutrition deficiency. It can be avoid by consuming foods made from animal, green vegetables, legumes and colored fruits. The continuous iodine deficiency disorder can affect baby born in cretin condition, suffering of two or more disorders that can lead to mental retardation, hearing problem/deaf, slow progress of normal physical growth and speaking problem. It is marked with enlargement of thyroid gland on the neck. Iodine deficiency disorder in serious level will cause child to be dumb, deaf, stupid and dwarf. It can be prevented by always using iodized salt for foods.

Overnutrition, this condition comes from unbalance calorie intake with energy needs. It is commonly marked with fat or overweight performance. It might be controlled by: (1) lessening number of carbohydrate source food such as rice, bread, noodle, tuber and sugar; (2) lessening fatty foods or coconut milk; (3) lessening snacks; (4) consuming many vegetables; (5) consuming many fruits; and (6) increasing activities.

In individual level, nutrient intake and infection are always connected each other. Child with less nutrient intake will suffer of undernutrition and be infected easily, and vice versa. In family and society level, nutrition problems are affected by: (1) family capability to supply foodstuff for whole family members in number and type, which is based on the needs; and (2) knowledge, behavior and skills to (a) choose, process and manage foods for family members appropriately based on their needs; (b) care and love for children; and (c) make use of accessible and proper health care facility.

Nutrition improvement is focused on improvement of nutritional status through nutrition knowledge and family empowerment for nutrition-aware family or KADARSI (*Keluarga Sadar Nutrisi*). Nutrition-aware family is a family which can apply all good and appropriate nutrition behavior and be capable of monitoring child's growth and development regularly in every month by ascertaining the heaviness of child, exclusively breastfeeding baby until age of six months, consuming variety of foodstuff for balance nutrition, using iodized salt for daily food, supplementing vitamin A capsule to baby and under five year child and feeding child with complementary foods until age of one year.

The important thing is how to recognize and solve the nutritional problems in the family. Some basic nutritional problems in family are not only caused by poverty and foodstuff unavailability. Factor of deciding what kind of food will be consumed that day is in family level. Resources, foodstuff availability and how it is utilized as well as close relationship among family members make it easier to recognize if there is nutritional problem and to mobilize society to tackle and solve it.

In every family, there should be, at least, one member who is aware of and ready for any changes leading to a family with good and right nutrition behavior. It might be father, mother, son, daughter or anyone in the family.

HEALTH AND CLEAN LIFE BEHAVIOR VICE VERSA INFORMAL HEALTH EDUCATION

Healthy and clean life behavior are the collection of behaviors that are implemented based on self-awareness. It is a training for someone or a family to help their themselves in health and a study as well as a result of health science. The real application in household becomes responsibility of each family member. There are 10 indicators, consisting of 7 indicators in household and 3 indicators of healthy lifestyle. Indicators in household are: (1) every delivery is assisted by health personnel; (2) providing exclusive breastfeeding; (3) weighing children under five years; (4) washing hands before having any meals; (5) using clean water; (6) defecating in proper latrine; and (7) having free-larvae house. Meanwhile, indicators for healthy lifestyle are: (1) not smoking; (2) physical activity every day; and (3) consuming fruits and vegetables.

Healthy and clean life behavior are introduced since newborn, starting with early breastfeeding initiation (putting a 30 minutes baby on mother's breast, and instinctively the baby will search mother's nipple), breastfeeding correctly, weighing

baby regularly, always washing hands before having meals and after playing, defecating and urinating, throwing garbage away in the right place, adjusting and loving to eat vegetables, fruits, consuming variety of food and avoiding smoke of cigarette. Many approaches and instructions how to do it, for example: providing model to keep clean living place and clean water source, placing things to take water, such as pail and water dipper, in the right and safe place and not in floor or ground so that the water inside will not be contaminated with any materials, making drinking cooked water as habit, closing water container to avoid vectors, such as fly, cockroach, ant, mosquito and rat, defecating in proper latrine and not in any places, putting feces of baby and patient in latrine and always keeping and cleaning it, washing hands with soap after defecating, fulfilling requirement of healthy privy, such as good ventilation, enough light, unslick floor that it will be safe, and teaching child always to throw garbage away to garbage disposal or hole in the ground.

Nutrition aware family, personal hygiene and maintaining healthy environment are parts of healthy and clean life behavior. This healthy and clean life behavior also include: placing foodstuffs in protected, safe and clean place, washing vegetables before cooked or eaten (freshly eaten) to avoid muck, worm egg or pesticide substance which might be still on it, washing hands with soap before processing and serving foods and drinks, keeping eating and cooking implements always clean and never using dirty towel to wipe the implements, washing eating equipments and foodstuff not in pool or river, placing clean eating and cooking implements in safe place from any pollution, consuming variety of foods, not eating snack from everywhere, not consuming foods with preservative, not sharing the same eating implements in same time and avoiding every smoke, especially smoke of cigarette.

The description above explains that healthy and clean life behavior lead to healthy environment, and vice versa of health education. Health education purposes to change into and create healthy and clean behavior. Meanwhile, healthy and clean life behavior are a media and an education way.

INFORMAL HEALTH EDUCATION

Education is generally defined as all situations in life which affect someone's growth and development, shaping, forming, molding activity than a shaping into the standard form (Dewey, 1964). In other words, education is all studying experiences in the whole life (life long education) since born (even the early life in the womb) until dead. Parents have responsibilities for transformation of values and norms (Carol & Barbour, 1990). Parents must have knowledge and skill in order to be able to educate their children, to care for and to love (Joan, 1995).

In informal health education, however, mother has the vital and the most important role. Why mother has vital and important role? Health is one of human rights. Mother is first teacher, security symbol and source of love (Hainstock, 2002). Pregnant woman has rights to save herself and baby in her womb and after the delivery process, she gets gift to breastfeed the baby. Mother does everything based on her nature, role and function. Health behavior is affected by 3 factors those are:

predisposing factors, enabling factors and reinforcing factors (Green *at al.*, 1980). Predisposing factors include knowledge, attitude, belief, trust, values, traditions, etc.

A mother, who has knowledge and belief that a baby needs breastfed immediately and that colostrums is very useful and has high quality nutrient, will early breastfed 30 minutes after her baby was born. Caring model, protection, providing secure feeling and self-confident depend on parent's environment, especially on mother-child and father-child relationship, not to mention on other surrounding family. Enabling factors are factors that enable or facilitate the actions or attitudes, for example the health service facilities such as health center, hospital, etc. Reinforcing factors are factors that support or reinforce action or attitude to appear, for example public leaders or figures that support an attitude to be done.

The purposes of education domains are domains of daily knowledge, attitude and practice (Bloom, 1956). Early childhood education is a part of process in a human life cycle where early age is one unit of the cycle series. Child education process is started when child is still in mother's womb, where mother always cares of her own health and regularly checks her pregnancy. Coverage of education is established from informal things as experiences unlimitedly on time and place in the living place (Mudyahardjo, 2004). Providing health information, especially to mothers having child on early ages, is very important. Health sector provides it through integrated health center or POSYANDU (*Pos Pelayanan Kesehatan Penduduk*), village maternal hut or POLINDES (*Pos Bersalin Desa*), village health post or POSKESDES (*Pos Kesehatan Desa*), mother and child clinic or BKIA (*Balai Kesehatan Ibu dan Anak*) and health center or PUSKES (*Pusat Kesehatan*).

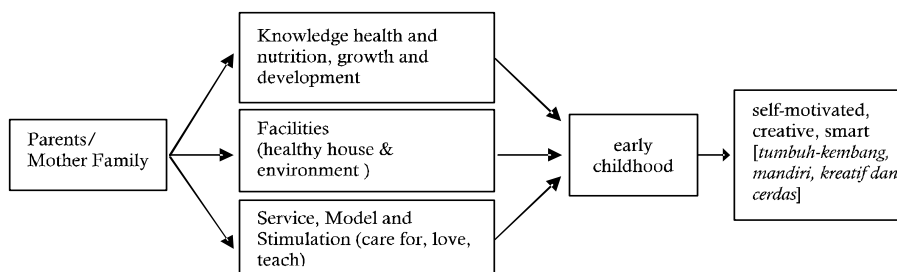


Figure:
 Basic Capital of Informal Health Education for Early Childhood in Indonesia

A child, who feels safe and loved, will be motivated to explore his/her world as if this child is invited to come to the world (Semiawan, 1977). In this situation, based on the knowledge, father, especially mother, and other surrounding family will support the child's stimulus to creative response and intellectual development. Therefore, parents must be supplied with and have knowledge of health and nutrition, healthy house and environment, healthy eating habit and nutrition, self-cleanliness, disease factor and symptoms, diseases transmission and immunization, since parents,

especially mother have strategic roles in informal education of child on early ages because of both their biological position and their roles in the caring model.

The appropriate information with adequate strategic to fulfill child's needs and edutainment learning process is fundament of informal health education for early childhood to develop daily health attitude and behavior. Family in healthy house and environment will provide condition supporting to healthy and clean life behavior as well as health status improvement.

CONCLUSION

Informal education, included in Regulation Number 30/2003 about National Educational System, is one step ahead and one chance for informal health education for early childhood in Indonesia. This will take many concerns and be carried on to mainstream of preparing healthy child entering school with daily health behavior and optimal growth and development. Health education is not only responsibility of health sector, usually known as health informer, but also responsibility of education sector.

Informal health education is implemented with approaches and cooperation of parents, especially mother, through caring model, available playing facilities and sanitation, not to mention network of integrated health center or POSYANDU (*Pos Pelayanan Kesehatan Penduduk*), village health post or POSKESDES (*Pos Kesehatan Desa*), village maternal hut or POLINDES (*Pos Bersalin Desa*), PKK (*Program Kesejahteraan Keluarga* or program to educate women on aspects of family welfare), foremost health service unit such as health center and hospital, as one of primary health care, and regular weighing. These are entirely model of caring for loving and teaching.

Informal health education for early childhood is a strategic way to apply health concept starting from early childhood through concrete and direct experience, not to mention developing and preparing human resources as health concept progress which is not only free of diseases, physical defects and other weaknesses but also having daily healthy behavior and character as well as safety condition of body, mind and social. These will enable everyone to live productive socially and economically in the future.

Recent method and technique of education are providing appropriate breastfeeding, basic health service and care, health and clean life behavior as well as nutrition aware behavior. Local environment and natural resources can be used as education content by making advantages of it as food sources and edutainment facility. Healthy and clean life behavior are implemented in integrative ways during edutainment, story telling, singing, physical exercising, eating time together and study tour. This happens also with introduction to nutrient, its source and benefits, as well as consuming balance nutrient that are also implemented in the same ways. These integrative ways include edutainment about various sources of food substances and the benefits for human health as well as how important physical exercise is.

Informal health education for early childhood with direct and concrete experience as well as by maintaining health, adequate nutrition intake and healthy house and environment are a fundament and part of long-lived education in Indonesia.

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