

## Introduction

Non-prescribed medications are used by people throughout the world, including rural societies in sub-Saharan Africa the extent of the use of nonprescription drugs as well as possible variables influencing such consumption. Various studies indicate that age, sex, personality characteristics, perceptions of health status, socioeconomic factors, parental example, and pharmacists all play parts in determining over-the-counter (OTC) drug utilization. Several sources express concern about the inaccessibility of accurate OTC drug information to the consumer (*Norris, 2012*).

Indeed, even the FDA has occasional difficulty obtaining reliable facts on both the numbers and formulae of such products. Several studies indicate that consumers acquire information about their home remedies through advertising, friends and relatives, physicians, pharmacists, and product labels. By far the most influential of these is advertising, and much concern has been voiced over consumers' unquestioning faith in drug ads. Examples are cited of deceptive, inaccurate, and unfair advertising practices used by some OTC drug manufacturers (*Julie, 2016*).

Non-prescribed medicines are medicines you can buy without a prescription from your doctor. Non-prescribed medicines can help you feel better by helping to treat or prevent health problems, such as allergies, constipation, cold and flu (influenza), and nausea. However, sometimes non-prescribed medicines can cause unpleasant effects (also called adverse effects) (*Norris, 2012*).

These adverse effects include side effects, drug-drug interactions, food-drug interactions, and allergic reactions. It is best to be aware of the risks so you know how to avoid them. Certain situations put you at higher risk for adverse effects. Because the possible adverse effects differ from one non-prescribed medicine to another, it's best to carefully read the drug facts label of any non-prescribed medicine so you know what to expect. Non-prescribed medicines have a low risk of adverse effects when used occasionally and properly by adults who are generally healthy. However, they can pose greater risks for some people, including very young children (*Melinda et al., 2014*).

The emergence and spread of resistance related to the irrational use of antibiotics is a major global public health problem. The rapid increase in drug-resistant *Streptococcus pneumoniae* infections is a particular concern in pediatrics because pneumococci are the leading cause of bacterial

meningitis, pneumonia, bacteraemia and otitis media in children (*Okumura et al., 2010*).

Additionally, Food and Drug Administration (FDA) has contributed to increased OTC use by switching more prescription drugs to Non-prescribed status. There are currently more than 75 ingredients, dosage forms and dosage strengths previously available by prescription only that are now. Over-the-Counter Medicines; are bought in stores off the shelf is called over-the-counter or OTC medicine (one type of non-prescribed medicines). Common reasons to use OTC medicines in children include the following; Fever, Pain Cold and Cough Allergy, Itching Rash, Itching, Wound, Stuffy Nose, and Constipation (*Sangasubana et al., 2010*).

Problems of preschool period; high morbidity of infectious and parasitic diseases, high prevalence of malnutrition, high incidence of injuries, high mortality, growth and development, drug abuse. Preschoolers Needs Play with other children so they can learn to listen, take turns and share; Develop more physical coordination-for example, by hopping on both feet; Develop their growing language abilities through books, games, songs, science, math and art activities; Develop more self-reliance skills-for example, learning to dress and undress themselves; Count and measure; Participate actively with adults in

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reading-aloud activities; Explore the alphabet and print; and Attempt to write messages. 4- to 5-year-old children need opportunities to, experiment and discover, within limits; Develop their growing interest in school subjects, such as science, music, art and math; Enjoy activities that involve exploring and investigating; Group items that are similar (for example, by size, color or shape); Use their imaginations and curiosity; Develop their language skills by speaking and listening; and See how reading and writing are both enjoyable and useful (*Parimi, 2010*).

Many health problems can be prevented through early intervention, e.g. rheumatic heart disease (caused by repeated acute follicular tonsillitis), mental retardation (caused by congenital hypothyroidism). Certain diseases may have their roots in early life. e.g., Rickets, Dental caries, Deafness, Obesity. Some chronic adult orthopedic ailments are probably connected with development anomalies in young children (e.g. congenital dislocation of the hip). All family should be alert about their children what they eat and take. Thus, preventive activities are necessary to detect any health deviation, and provide early intervention (*Saradamma, 2010*).

Rural residents often experience barriers to healthcare that limit their ability to get the care they need. In order for rural residents to have sufficient healthcare access, necessary and appropriate services must be available which can be accessed in a timely manner. In addition to having an adequate supply of healthcare services in the community, there are other factors which play a significant role in healthcare access (*Carmines, 2012*).

### **Significant of Study**

In Egypt, the determinants and rationale for drug use among infants has not been previously studied. There are comparatively few studies on the use of medication in children in developing countries. Where children constitute a large proportion of population. Studies on drug use patterns in pediatric outpatient clinics over the past decade were reviewed and conducted in a developing country. Most pediatric drugs are used outside of hospitals, both as prescribed and non-prescribed medicines (<http://www.fda.gov.com> 2014).

Studies from American, Asian and European countries indicated that between 22% and 70% of parents have misconceptions about the appropriate applications and efficacy of antibiotics and often use them without a prescription (*WHO, 2011*).

## **Aim of the Study**

This study aims to evaluate the effects of nursing intervention program for mothers to improve the pattern of using prescribed and non- prescribed medication for mothers having children under five years of age through:

- Assessing mother's knowledge and practice towards their children's condition.
- Assessing factors that influence pattern of using non prescribed medication for mothers having children under five years of age
- Designing and implementing the intervention program to increase mother's knowledge and enhance mother's practice toward giving medication of their children.
- Evaluating the effect of this intervention program on increasing mother's awareness and enhance mother's practice toward giving medication of their children.

### **Research hypothesis:**

The study hypothesises that implementing an intervention program for mothers of children with health problem whom using non prescribed drugs in rural area will improve the mother awareness & practice in using and giving medications to their children.

# Review of Literature

## Introduction

Preschool children are those aged 2 to 5 years. In most countries, there is a relative neglect of children of preschool age, where the schedule of work in maternal child health centers provides only one day per week for preschool children. The preschool years are characterized by high energy, extreme curiosity, soaring imagination, and excessive creativity (*Larsson, 2015*).

Healthy preschoolers enjoy taking risks with anything which challenges their mind and body. Physical development at this age includes an increase in the coordination of gross motor movements and more specialized fine motor abilities. This directs the child in developing new skills in athletics and art. Emotional development covers self-regulation, self-concept, and a better appreciation of emotions and how to express them during the preschool years. Their vocabulary and language skills are increasing rapidly (*Loop, 2010*).

Preschoolers are still very egocentric, but they are beginning to understand that others also have needs and feelings. Children of preschool age can be found engaging in more cooperative play than in the earlier years, and are

learning to make true friends. The preschool years health supervision aimed to; assess the younger preschool-age child's progress through this rough- and - tumble period of high motor activity and rapid emergence of speech and language abilities, assess the older preschool- age child's readiness for school, assess the goodness of fit 'between child's readily visible personal style and the family, administer important booster immunization,. Predisposing factors of maternal & child health hazards; drug use, limited prenatal care, inadequate nutrition, low pregnancy weight, and alcohol consumption & smoking (*Allender, 2011*).

Research shows that the healthcare needs of individuals living in rural areas are different from those in urban areas, and rural areas often suffer from a lack of access to healthcare. These differences are the result of geographic, demographic, socioeconomic, workplace, and personal health factors. For example, many rural communities have a large proportion of elderly people and children. With relatively few people of working age (20–50 years of age), these communities have a high dependency ratio (*Ayanian, 2012*).

People living in rural areas also have poorer socioeconomic conditions, less education, higher rates of



mortality rates when compared to their urban counterparts. There are also high rates of poverty amongst rural dwellers in many parts of the world, and poverty is one of the biggest social determinants of health. Many countries have made it a priority to increase funding for research on rural health (*Wikipedia 2015*).

Preschoolers are curious about everything that they see and hear. This is a great time for caregivers, both parents and teachers, to mold the children's minds and encourage them to use their creativity and imagination. This is also an important time for adults to teach social skills to help them adapt to a new environment filled with other kids. The world is widening for preschool kids and it is important for parents and teachers to give them the encouragement and opportunity to explore their world and build relationships with others, apart from members of their family (*Nies, 2015*).

The emergence and spread of resistance related to the irrational use of antibiotics is a major global public health problem. The rapid increase in drug-resistant *Streptococcus pneumoniae* infections is a particular concern in pediatrics because pneumococci are the leading cause of bacterial meningitis, pneumonia, bacteremia and otitis media in children (*Bauer, 2014*).

It is estimated that more than 50% of antibiotics worldwide are purchased privately without a prescription, from pharmacies or street vendors in the informal sector. The situation in developing countries is of particular concern because the use of antibiotics without medical guidance is largely facilitated by inadequate regulation of the distribution and sale of prescription drugs. Self-medication has also been noted in the United States of America and Europe, particularly for colds and upper respiratory tract symptoms, which are self-limiting and mostly caused by viruses (*WHO, 2014*).

## **Part I: General characteristics of preschool age**

### **Theories explain developmental growth of preschool age:**

Research in the area of developmental growth varies according to type of study such as whether it concentrates on the cognitive or the social aspects of development. Some popular theories identify the following aspects of preschool development.

**Piaget's cognitive - developmental theory:** Preschoolers are beginning the pre-operational stage of development according to Piaget's cognitive-developmental theory, where they are beginning to think symbolically in their environment. Cognitive development becomes more representational and includes metacognitive growth (awareness of one's own thoughts), magical belief, and the increased ability to understand and use symbols (*Huang, 2011*).

**Erikson's psychosocial theory:** Children at age 3 are entering into the "initiative vs guilt" stage of lifelong development according to Erikson's psychosocial theory, in which they are using social interaction to gain control over their world. At age 5, they are entering into the "industry vs

inferiority” stage, where they are developing a sense of competence and pride through successful accomplishments (*Batjargal, 2010*).

**Vygotsky’s cognitive - developmental theory:**

According to Vygotsky’s theory, at this age cognition develops through social interactions around problem-solving. Children reach a level where child can *almost* accomplish task independently, but need just enough scaffolding to encourage independence and growth. The age range normally understood as the preschool age is after age three and up to about age six. As the young child changes from a toddler into a preschooler it is important to understand and promote positive growth through multiple domains. This includes cognitive, emotional, social, and physical development. The following list of characteristics depict the *average* preschool years of four and a half years old (*Arlington, 2012*).

**Characteristics of healthy preschoolers;** Physical Characteristics are; alert and enthusiastic, enjoys vigorous, active play, appears rested, firm musculature, growth-slow, steady increases in height and weight, not easily fatigued, inoffensive breath, legs and back straight, teeth well formed-even, clean, free from cavities, lips and gums pink and firm, skin clear (color is important) and eyes bright,

assumes straight posture, large motor control well developed , beginning to develop fine motor control , good hand-eye coordination (*Web.MeD. 2014*).

**Social Behaviors are;** enthusiastic, curious-interested in surroundings, enters willingly into a wide range of activities, happy and friendly; cheerful most of the time, developing self-confidence; anticipates success, copes with failure, shares in group responsibilities, works and plays cooperatively with peers, respects other's property ,appreciates and understands other's feelings, adapts to new situations, enjoys friends and friendships, participates in cooperative play, understands language; can express thoughts and feelings to adults and peers, demonstrates courage in meeting difficulties; recovers quickly from upsets, begins to exercise self-control (*Suleman, 2010*).

**Characteristic of Work Behaviors;** attentive, begins to carry tasks through to completion, increasing attention span, is persistent in activities; is not easily frustrated, can work independently at times, demonstrates an interest in learning; curiosity, shows originality, creativity, imagination, accepts responsibility, responds quickly and appropriately to directions and instructions, works and shares responsibilities with others, accepts new challenges, adaptable (*Grigoryan, 2012*).

## **Needs of preschool**

Preschoolers Needs are: 3- to 4-year-old children require opportunities to; Play with other children so they can learn to listen, take turns and share; Develop more physical coordination-for example, by hopping on both feet; Develop their growing language abilities through books, games, songs, science, math and art activities; Develop more self-reliance skills-for example, learning to dress and undress themselves; Count and measure; Participate actively with adults in reading-aloud activities; Explore the alphabet and print; and Attempt to write messages (*Benrimoj, 2013*).

4- to 5-year-old children need opportunities to, experiment and discover, within limits; Develop their growing interest in school subjects, such as science, music, art and math; Enjoy activities that involve exploring and investigating; Group items that are similar (for example, by size, color or shape); Use their imaginations and curiosity; Develop their language skills by speaking and listening; and See how reading and writing are both enjoyable and useful (*Parimi, 2010*).

## **Health care of preschool children**

This is the responsibility of MCH centers (urban areas), and Rural Health Centers/Units (rural areas). Care of preschool children includes: Preventive activities, Care in illness, treatment of dental problems, nutritional education, Health education, safety use of medication. Preventive activities; Events in early life (nutritional status and infections) can affect health as the child is growing up to an adult (*Arlington, 2012*).

Many health problems can be prevented through early intervention, e.g. rheumatic heart disease (caused by repeated acute follicular tonsillitis), mental retardation (caused by congenital hypothyroidism). Certain diseases may have their roots in early life. e.g., Rickets, Dental caries, Deafness, Obesity. Some chronic adult orthopedic ailments are probably connected with development anomalies in young children (e.g. congenital dislocation of the hip). All family should be alert about their children what they eat and take. Thus, preventive activities are necessary to detect any health deviation, and provide early intervention (*Saradamma et al., 2012*).