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1.1. INTRODUCTION:

"Child Development" originated a generation ago as an inter-disciplinary movement. It is not a discipline in itself. Consequently, there are many and diverse viewpoints and approaches to this theory. Originally, the term "development" had a biological overtone having to do with physically observable growth in size or edifice in an organism over a period of time. But when the term development is applied to personality formation, it encompasses the sequential phases, levels or stages through which a child's personality progresses in his childhood and youth. Development, therefore, refers to the psycho-social maturational avenue towards adulthood. If it can be stated explicitly, the study of child development envelops the dynamics of personality evolvements and their products by dealing with the qualitative and quantitative factors which help to fashion an individual personality during this period. Thus development includes physical maturation, ability to endure the cultural pressures, acquiring the skill for emotional adaptations and behavioural experiences, and the conglomerations of these factors.
As we all know well, a baby enters the world with genetic predispositions, primary drives and a unique pattern of strength and weaknesses. Every family has a particular set of expectations about that baby, and they reward him when he conforms to these expectations and penalise him when he does not. Thus a baby's behaviour is manipulated by the people who take care of him. Thus family play an important role in the development of both competency and psychopathology in a child. Therefore in order to understand child psychology or child psychopathology, we must understand the child, the family and the larger environment. Hence this study was designed keeping in mind the whole area of phenomenology, focusing on family environment and child's behavioural profile.

Epidemiological studies of childhood mental disorders in India show its prevalence figures of 8.9% (Sethi et al 1972), 8.2% (Varghese et al 1974), 2.5% (Nandi et al 1975), 17.2% (Lal & Sethi 1977). The most common disorders among these were mental retardation, followed by special symptoms like Enuresis and Speech disorders. The quantum of these data, and the lack of studies regarding enuresis in our country inspired the researcher to study the "functional enuresis and its psychosocial correlates".
1.2 NORMAL & ABNORMAL PSYCHOLOGICAL DEVELOPMENT OF THE CHILD:

Child psychology / psychiatry is concerned with the assessment and treatment of children's emotional and behavioural problems. A study done by Rutter et al 1970, Shepherd et al 1971 and Richman et al 1982 have concluded that problems of childhood are varied and common with prevalence rate of 10% to 20% in several communities studied. Psychological disturbance in childhood is most usefully defined as abnormality in at least one of the three areas: emotions, behaviour and relationships. However, unlike most other branches of medicine, it is not helpful to regard these abnormalities as strictly defined disease entities with a precise aetiology, treatment or prognosis. Rather, it is preferable to regard them as deviations from the norm which is distressing to the child or his/her family at large. Although child psychiatric disorders do not conform to the strict medical model of illness, it does not mean that childhood disorders are trivial or unimportant. Some disorders such as conduct disorders or childhood autism have major implications for the childhood development and adjustment in adult life.
In childhood, the distinction between disturbance and normality is often imprecise, since isolated symptoms are common. For example, many children occasionally feel sad, unhappy or aggressive, however this does not mean that child is disturbed. Disturbance is determined by the number, frequency, severity and duration of symptoms rather than by the form of the symptomatology. Hence abnormality is a difference of degree and not kind.

Three other considerations are of general importance in understanding children's behaviour: (i) The "situation specific" nature of behaviour, (ii) the impact of current stressful life circumstances and (iii) the role of family. Several studies, namely, Rutter et al 1970, Shepherd et al 1971 have shown that children's behaviour varies significantly in different situations. For instance, a child may have a major problem at school, but not at home or vice versa. Consequently, there may be an apparent discrepancy between the account of the child's behaviour provided by the parents and that by his teachers. It is therefore essential to obtain several independent narratives about the child's behaviour wherever possible in order to obtain a realistic assessment of the problem.
Several theories have been proposed, and each theory offers different dimensions to the personality development of the child. Developmental theories, Theories of Emotional and Social Development and Social Learning theories are discussed here below.

1.3 DEVELOPMENTAL THEORIES

Developmental theories tend to focus on at least one of three areas: cognitive, emotional or social. Each theory differs widely in its theoretical orientation, supporting empirical evidence and in the relative importance attributed to experience as an influence on developmental process. No single theory is satisfactory, and as the result most psychologists use parts of the myriad theories to explain different aspects of development of a child.

PIAGET'S MAJOR CONCEPTS OF COGNITIVE DEVELOPMENT

Piaget believed that the genetic endowment provides an individual with an invariant pattern or structure for development. He proposed two types of cognitive structures, *schemas and operations*, to explicate the process of
Development. Schemes are relatively simple mental structures present from birth onwards. They are the internal representations of some specific action or behaviour. Typical examples for this would include the sucking or grasping reflexes. By contrast, operations only arise much later in cognitive development, and they are considerably more complex. They represent internal structures of a higher order which have the distinctive feature of being reversible. For example, multiplication is reversible by division. The child adapts his cognitive structure to the demands of the environment through two main processes, assimilation and accommodation. The former refers to the incorporation of new objects, thoughts and behaviour into existing structures, whereas the latter describes the change of existing structures in response to novel experience. A third structure equilibration is the means by which an individual balances the competing forces of assimilation and accommodation. In general, the child attends and learns to adapt to his environment most easily when there is a degree of novelty in the environment which challenges his curiosity, but which is not so strange that it becomes too confusing.
Piaget describes four main phases of cognitive development, namely, sensorimotor (0-2 years), pre-operational (2-7 years), concrete operational (7-12 years) and formal operational (12 years and upward). The age range given for each stage is the average, though this can vary considerably depending upon intelligence, cultural background and socioeconomic factors. However, the order is conjectured to be the same for all children.

OTHER ASPECTS OF COGNITIVE DEVELOPMENT

Psychologists and psychiatrists have become increasingly interested in the development and application of cognitive theory to the understanding and treatment of psychiatric and psychological disorder (Beck et al 1979, Madam & Gilbert 1985, Hawton et al 1989).

Cognitive therapy propounds that the individual's beliefs or cognition ascertain his mood, outlook and behaviour. This idea of cognitive set is akin in some ways to the Piagetian notion of schema. Three key aspects of this cognitive appraisal are the individual's views about (a) himself (b) the world and (c) the future. Cognitive therapy illustrates depression in the following
manner: when a person is depressed, his thoughts are self 
defeating and he commits certain cognitive errors.

1.4. THEORIES OF EMOTIONAL AND SOCIAL 
DEVELOPMENT

There are two theories devoted to social and emotional development in childhood. Both these theories differ notably in their theoretical basis, the scope of their explanation and the amount of independent supporting evidence. Two of the theorists, Freud and Bowlby, have a common background in psychoanalytic thinking, whereas the social learning theory is based upon the application of learning theory principles to various aspects of the child's development.

(a) Freudian Psychoanalytic Theory

Freud (1953) elaborated the most comprehensive theory of emotional development, mainly derived from clinical work with adult patients. Others, including his daughter Anna, Melanie Klein and Winnicott, have extended and developed psychoanalytic concepts as a result of their own work with child patients.
Freudian theory emphasises the biological and maturational components of development of the child. Like Piaget's, this is a stage or phase theory with the individual progressing successively through each phase. A major criticism of Freudian theory is that its concepts do not lend themselves readily to empirical or scientific investigation, and hence it is difficult to prove or more importantly, disprove the validity of the theory. Freud proposed that the individual goes through five stages prior to adulthood: (a) oral, (b) anal, (c) phallic, (d) latency and (e) genital. These terms refer to the major developmental task or potential conflict that the individual has to achieve or resolve during this period. There could be a fixation at any one of these stages. Thereafter the child gradually does not progress from one stage to the other leading to developmental arrest of the personality.
Table A shows Freud's stages of psychosexual development of the child.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Age</th>
<th>Major developmental task</th>
<th>Adult characteristics arising from incomplete resolution of the stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>0-1</td>
<td>Weaning</td>
<td>Addictive behaviour such as smoking, drinking and overeating: also passivity and gullibility.</td>
</tr>
<tr>
<td>Anal</td>
<td>2-3</td>
<td>Toilet training</td>
<td>Obsessional, obstinacy or the opposite extreme untidiness for example</td>
</tr>
<tr>
<td>Phallic</td>
<td>4-5</td>
<td>Oedipus complex: identification with parent of the same sex</td>
<td>Vanity, recklessness (and the opposite)</td>
</tr>
<tr>
<td>Latency</td>
<td>6-12</td>
<td>Development of ego defence mechanisms</td>
<td>None</td>
</tr>
<tr>
<td>Genital</td>
<td>13-18</td>
<td>Mature sexual intimacy in adulthood</td>
<td>Adults who have successfully integrated earlier stages should emerge from this stage with a clear sense of their own identity and interests.</td>
</tr>
</tbody>
</table>
(b) Bowlby's Attachment Theory

Attachment theory advocates that social relationships develop in response to the mutual biological and psychological needs of the mother and the infant.

The mother-infant interaction promotes social relationships. Each member of the dyad has a repertoire of behaviours that facilitates interaction: the infant by crying, smiling and vocalisation, and the mother by vocalisation, gaze and facial expressions. Attachment describes the infant's predisposition to seek proximity to certain people and to be more secure in their presence. Bowlby maintains that there is a biological basis for this behaviour, as it has been found extensively in other primates (Harlow & Harlow 1969). Such behaviour enables the dependent infant to explore the environment, the unknown world, from a secure base. Bowlby, based upon his work with children who suffered severe deprivation and also from observing the effects of hospitalisation on children, described the sequence of reactions following a period of separation as the separation-anxiety response.
(c) Contributions of Other Psychoanalysts

Two other people, Melanie Klein & Donald Winnicott have made decisive contributions to the theory of child development, and to the practice of child psychotherapy. Melanie Klein believed that the infant's fantasy life of the first year was crucial for subsequent personality development. Primitive defence mechanisms such as projection, projective identification and splitting arise at that time. The first stage in development is the paranoid or schizoid position, where the infant attempts to deal with the frightening and hostile world outside of his self. Subsequently, the infant realises that the source of conflict resides within himself leading to the depressive position around the age of one year. The major developmental task for the child is to work through these feelings. Winnicott who had a paediatric training developed important ideas about maternal role, for instance, good-enough mothering, and other ideas such as the true self, the false self and the use of transitional objects by the child to reduce anxiety.
1.5 SOCIAL LEARNING THEORIES

The main principle underlying the social learning theory approach is the application of learning theory to the understanding of children's behaviour. Psychologists generally define learning as “a permanent change in behaviour as a result of experience”. Learning can be sub-divided into three types: a) learning by direct reinforcement, b) learning by induction and (c) Learning by Imitation.

(a) Learning by Direct Reinforcement

Reinforcement means presentation or removal of a stimulus after a response which alters the subsequent frequency of that response. This is the central idea underlying this approach. There are two major paradigms or examples with this type of learning, (a) stimulus-contingent also known as classical conditioning and (b) response contingent also known as operant conditioning.

It is evident that these two types of learning can easily result in adaptive or maladaptive patterns of behaviour depending upon
the circumstances. For instance, classical conditioning can result in the child developing adaptive avoidance of dangerous situations or equally a maladaptive response of becoming phobic about school or social situations.

(b) Learning by Imitation

Everyday observation shows clearly that 'observable' learning or imitation is a common method for altering behaviour. Bandura (1960) showed that observation or modelling of behaviour occurred readily among children in many situations. Two factors influence the acquisition of such behaviour: the direct or inherent consequences of the behaviour and the indirect consequences. For example a child may observe that a person who greets someone in a friendly situation is usually happy himself (direct effect) and in turn this behaviour is usually followed by a warm response from the other person (indirect effect). The two consequence are perceived as desirable by most children, and thus a pro-social behaviour is promoted in the child.
Learning by Induction

Though conditioning and modelling may explain the acquisition of simple behaviours, it is difficult to explain the contingencies for more complex and mature social behaviour. Learning by induction maintains that in order to acquire more complex behaviour, the child needs to be able to extract or comprehend general principles underlying the behaviour, i.e. to induce from a particular to the general.

1.6 DEVELOPMENTAL PSYCHOPATHOLOGY

The most basic question in child psychology is: how do we recognize the disturbed or pathological behaviour of the child. The term developmental psychopathology has been introduced to describe the two important dimensions that are necessary to make an adequate assessment of children's behaviour: (1) the developmental [or, is the behaviour age appropriate?]; and (2) the psychopathological [or, is the behaviour abnormal?]. The developmental aspect is illustrated, here, with reference to separation anxiety. The separation anxiety behaviour is a normal reaction in children between the age of 9 months and 4
years. However, the same response in a 6 year old would be considered abnormal. Similarly, the occurrence of temper tantrums in a 3 year old would not in itself be pathological. The determining factors would be the frequency, severity and persistence of this behaviour.

Childhood psychopathology can be explained under three main headings: (a) Abnormality of emotions, (b) Abnormality of behaviour and (c) Abnormality of Social relationship. Anxiety and depressive symptoms are pivotal features in emotional disturbance. Anxiety has physical manifestations such as palpitations or dry mouth as well as psychological components such as fear or apprehension. Behavioural deviance is most readily conceptualised in terms of social learning theories. For instance, a child with encopresis or enuresis can be regarded as showing a deficit in toilet skills. Similarly, the aggressive child can be seen as displaying oppositional behaviour at an inappropriate time. Social relationships are often impaired in disturbed children. Children with emotional or behavioural problems are usually socially isolated and unpopular with their peer group as they exclude themselves or are themselves excluded as a result of their deviant behaviour.
1.7 PERSONALITY DEVELOPMENT

Childhood is the time when personality is formed. In this context, Wordsworth's aphorism \textit{"the child is the father to the man"} is substantially true. Personality is a broad concept encompassing the enduring and uniquely individual constellation of attributes that distinguish one person from another. It contains the cognitive, emotional, motivational and temperamental attributes which shapes the individual's view of himself, his world and the future. Throughout childhood, various elements interact with each other to mould the child's personality. This process occurs in the context of the child's life experiences, particularly within the family and also subsequently in the world outside the family. Healthy personality functioning is an important prerequisite for satisfactory adjustment during childhood and also during adult life.

Personality formation is influenced by two main groups of factors: (a) Constitutional and (b) Environmental.
(a) Constitutional Factors

The constitutional factors comprise: (i) Genetic factors, (ii) Intelligence, (iii) Temperament, and (iv) Gender differences.

(i) **Genetic** Factors: The evidence of a genetic component in some child psychiatric disorders for instance childhood autism and Gilles de la Tourette syndrome is very clear. Though in these instances it is likely to be polygenic rather than single gene effect (Rutter et al)

(ii) **Intelligence**: Intelligence, often defined as the individual's ability to think rationally about himself, clearly affects the child's ability to understand the world and also to adapt successfully to the environment.

(iii) **Temperament**: Temperament is that facet of personality that refers to the individual's style of
interacting with the environment (how they react) as opposed to the motivational (why they react) or the developmental (what they can do). Temperamental characteristics are seen as genetically determined predisposition to react or respond to the environment in certain characteristic way or style.

(iv) **Gender Differences:** Gender differences, for instance differences in exploratory activity, aggression, and activity levels between boys and girls are also likely to shape child's emerging personality.

**(b) Environmental Factors:**

The main influences on children are: (i) the family, (ii) School and (iii) the Community.

(i) **Family:** The family fulfils many functions for the child. These include (a) Satisfaction of physical needs such as food and shelter, (b) love and security, (c) development of social relationships
with adults & peers, (d) exposure to appropriate role models and socialisation, and (e) acquisition of ethical and moral values.

(ii) **School**: School has three main roles for children, namely, (a) the acquisition of scholastic skills, (b) the promotion of peer relationships, and (c) the acceptance of adult authority outside the family.

(iii) **The Community**: The community, through its neighbourhood resources such as housing or leisure facilities, can clearly have major influence on the quality of the child's life.

Finally, physical illness or handicap, if present, can exert an important influence on personality development. This arises not only from the direct limitations that it may impose upon the child's activities but more important through its indirect effects.
1.8 CLASSIFICATION IN CHILDHOOD DISORDER:

Prior to 1980, the Diagnostic and Statistical Manual (DSM) of the American Psychiatric Association and the International Classification of Diseases (ICD) did not provide adequate taxonomies of childhood psychiatric disorders on which to base research. The first edition of the DSM, for example, did not delineate childhood disorders other than childhood schizophrenia and adjustment reaction. Not surprisingly, a US national study showed that the vast majority of children receiving mental health services were undiagnosed or were labelled as having "adjustment reaction".

The second edition, provided seven behavioral disorders of childhood, including hyperkinetic, withdrawing, overanxious, runaway, unsocialized, aggressive, and group delinquent reactions. Unfortunately, the DSM-II provided only narrative descriptions of disorders, with no explicit diagnostic criteria, and reliability of the system was low.
It was just 10 years ago that the DSM-III provided a differentiated taxonomy of "disorders usually first evident in childhood and adolescence" with explicit diagnostic criteria. A multiaxial system was also introduced for separate classification of clinical syndromes, developmental disorders, physical disorders and conditions, severity of psycho-social stresses, and level of adaptive functioning. Reactions to the DSM-III were mixed. The specification of diagnostic criteria and the multiaxial approach were universally praised, but the validity of many diagnostic categories was questioned. In addition, field trials had shown that the reliabilities of many child diagnoses were still mediocre. DSM III-R and DSM -IV is another updated revision mainly based on DSM-III.

Disorders of Childhood & Adolescence as in DSM III-R

ETIOLOGY: With the exception of the hyper-kinetic reaction, the behaviour disorders are clearly related to faulty parental attitudes or child-rearing practices. Although temperamental factors within the child and accidental occurrences such as illness in the youngster or parent may play significant roles in the development of some behaviour disorders, most problems appear to be related to relatively specific patterns of family
malfunction which are chronic and extend over much of the child's early development. Clinical observation as well as longitudinal studies such as that of Thomas et al. (1968) suggest that behavioural deviations are initially a straightforward response to a poor "fit" between the child's temperament and emotional needs and parental attitudes and practices. Abstract, symbolic elaboration and justification appear to be secondary processes that complicate the basic developmental disturbance later.

The following disorders are included in DSM III-R

1. **MENTAL RETARDATION**: This disorder is characterized by significantly sub-average intellectual functioning (an IQ of approximately 70 or below) with onset before age 18 years and concurrent deficits or impairments in adaptive functioning. Separate codes are provided for **Mild, Moderate, Severe**, and **Profound Mental Retardation** and for **Mental Retardation, Severity Unspecified**.
2. **LEARNING DISORDERS:** These disorders are characterized by academic functioning that is substantially below the expected, given the person's chronological age, measured intelligence, and age-appropriate education. The specific disorders included in this section are *Reading Disorder, Mathematics Disorder, Disorder of Written Expression*, and *Learning Disorder Not Otherwise Specified*.

3. **MOTOR SKILL DISORDER:** This includes Developmental Coordination Disorder, which is characterized by motor coordination that is substantially below that expected given the person's chronological age and measured intelligence.

4. **COMMUNICATION DISORDERS:** These disorders are characterized by difficulties in speech or language and include *Expressive Language Disorder, Mixed Receptive-Expressive Language Disorder, Phonological Disorder, Stuttering*, and *Communication Disorder Not Otherwise Specified*.

5. **PERVASIVE DEVELOPMENTAL DISORDERS:** These disorders are characterized by severe deficits and pervasive impairment in multiple areas of development. These include.
impairment in reciprocal social interaction, impairment in communication, and the presence of stereotyped behaviour, interests, and activities. The specific disorders included in this section are Autistic Disorder, Rett's Disorder, Childhood Disintegrative Disorder, Asperger's Disorder, and Pervasive Developmental Disorder Not Otherwise Specified.

6. ATTENTION-DEFICIT AND DISRUPTIVE BEHAVIOUR DISORDERS: This section includes Attention-Deficit/Hyperactivity Disorder, which is characterized by prominent symptoms of inattention and/or hyperactivity-impulsivity. Subtypes are provided for specifying the predominant symptom presentation: Predominantly Inattentive Types, Predominantly Hyperactive-Impulsive Type, and Combined Type. Also included in this section are the Disruptive Behaviour Disorders: Conduct Disorder is characterized by a pattern of behaviour that violates the basic rights of others or major age-appropriate societal norms or rules; Oppositional Defiant Disorder is characterized by a pattern of negativistic, hostile, and defiant behaviour. This section also includes two Not Otherwise Specified categories: Attention-Deficit/Hyperactivity Disorder Not Otherwise Specified and Disruptive Behaviour Disorder Not Otherwise Specified.
7. **FEEDING AND EATING DISORDERS OF INFANCY OR EARLY CHILDHOOD:** These disorders are characterized by persistent disturbances in feeding and eating. The specific disorders included are *Pica, Rumination Disorder*, and *Feeding Disorder of Infancy or Early Childhood*. Anorexia Nervosa and Bulimia Nervosa are included in "Eating Disorders".

8. **TIC DISORDERS:** These disorders are characterized by vocal and/or motor tics. The specific disorders included are *Tourette's Disorder, Chronic Motor or Vocal Tic Disorder, Transient Tic Disorder*, and *Tic Disorder Not Otherwise Specified*.

9. **ELIMINATION DISORDERS:** This grouping includes *Encopresis*, the repeated passage of faeces in inappropriate places, and *Enuresis*, the repeated voiding of urine in inappropriate places.
10. OTHER DISORDERS OF INFANCY, CHILDHOOD, OR ADOLESCENCE: This grouping is for disorders that are not covered in the sections listed above. *Separation Anxiety Disorder* is characterized by developmentally inappropriate and excessive anxiety concerning separation from home or from those to whom the child is attached. *Selective Mutism* is characterized by a consistent failure to speak in specific social situations despite speaking in other situations. *Reactive Attachment Disorder of Infancy or Early Childhood* is characterized by markedly disturbed and developmentally inappropriate social relatedness that occurs in most contexts and is associated with grossly pathogenic care. *Stereotypic Movement Disorder* is characterized by repetitive, seemingly driven, and nonfunctional motor behaviour that markedly interferes with normal activities and at times may result in bodily injury. *Disorder of Infancy, Childhood, or Adolescence Not Otherwise Specified* is a residual category for coding disorders with onset in infancy, childhood, or adolescence that do not meet criteria for any specific disorder in the classification.
Children or adolescents may present problems requiring clinical attention that are not defined as mental disorders (e.g. Relational Problems, Problems Related to Abuse or Neglect, Bereavement, Borderline Intellectual Functioning, Academic Problem, Child or Adolescent Antisocial Behaviour, Identity Problem). These are problems which are not considered mental disorders, however they require clinical attention.

DSM-III-R included two anxiety disorders specific to children and adolescents, Overanxious Disorder of Childhood and Avoidant Disorder of Childhood, that have been subsumed under Generalized Anxiety Disorder and Social Phobia, respectively, because of similarities in essential features.

1. 9 ELIMINATION DISORDERS:

In elimination disorder the bio-psycho-social determinants of behaviour intermingle in complex patterns. Toilet training is affected by a child's maturational level and intellectual capacity, cultural attitudes and psychological make up of each parent-
child dyad. Bowel control and Bladder control usually develop gradually and sequentially. Most children can control their bowels and are toilet trained by the time they are four years of age. Problems controlling bowel or bladder movements can cause soiling which leads to frustration and anger on the part of the child, parents, teachers and other people important in the child's life. In addition, social difficulties with these problems can be severe; the child is often made fun of by friends and avoided by adults. These problems can cause children to feel badly about themselves. Occasionally the problem of enuresis starts with a stressful change in the child's life, such as the birth of a sibling, separation/divorce of parents, family problems or a move to a new home. Depending upon definition (commonly defined as a frequency of at least once a week), approximately 10% of the 5 year olds, 5% of the 10 year olds and 1% of the 15 year olds have nocturnal enuresis. A small number of individuals continue to be enuretics into adult life.
Table B shows acquisition of dryness according to age:

<table>
<thead>
<tr>
<th>Age</th>
<th>Skill</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5 years</td>
<td>Has a word for wetness e.g. &quot;Pee&quot;</td>
</tr>
<tr>
<td>2 years</td>
<td>Tells parents when wet</td>
</tr>
<tr>
<td>2.5 years</td>
<td>Tells parents the need to urinate but unable to delay micturition</td>
</tr>
<tr>
<td>3 years</td>
<td>Can delay micturition long enough to use toilet, though accidents are common</td>
</tr>
<tr>
<td>4.5 years</td>
<td>Child is interested in lavatories and wishes for privacy</td>
</tr>
</tbody>
</table>
Table B summarises the sequence in the acquisition of dryness. The development of dryness follows an orderly pattern in most children. The newborn empties his bladder regularly but intermittently according to the volume and pressure of urine in the bladder. Around 18 months, the child can tell the parents of the need to urinate but is unable to delay micturition. Prompt production of "potty" is essential. The three years old child can usually delay micturition for sufficiently long to ensure the usage of toilet, though "accidents" are frequent especially when playing. Between four and five years, the child becomes interested in lavatories and wishes some privacy for urination. The child is now able to micturate on request, for instance prior to outings. Girls usually acquire continence before boys and dryness by day usually precedes dryness by night.

1.10 DEFINITION OF FUNCTIONAL ENURESIS. & DIAGNOSTIC FEATURES as per ICD - 9

A disorder in which the main manifestation is a persistent involuntary voiding of urine by day or night which is considered abnormal for the age of the individual. Sometimes the child will gain control and then lose it. Episodic and fluctuating enuresis should also be included. The disorder would not usually be diagnosed under the age of four years.
Nonorganic enuresis is a disorder characterized by involuntary voiding of urine, by day and/or by night, which is abnormal in relation to the individual's mental age and which is not a consequence of a lack of bladder control due to any neurological disorder, epileptic attacks, or due to any structural abnormality of the urinary tract. The enuresis may constitute a monosymptomatic condition or it may be associated with a more widespread emotional or behavioral disorder. There is no clear cut demarcation between an enuresis disorder and the normal variations in the age of acquisition of bladder control. However, enuresis would not be ordinarily be diagnosed in a child under the age of five years or with a mental age under four years. If the enuresis is associated with some (other) emotional or behavioral disorder, enuresis would normally constitute the primary diagnosis only if the involuntary voiding of urine occurred at least several times per week & if the other symptoms showed some temporal covariation with the enuresis. Enuresis sometimes occurs in conjunction with encopresis, when this is the case encopresis should be diagnosed.

*ICD-10*

Nonorganic enuresis is a disorder characterized by involuntary voiding of urine, by day and/or by night, which is abnormal in relation to the individual's mental age and which is not a consequence of a lack of bladder control due to any neurological disorder, epileptic attacks, or due to any structural abnormality of the urinary tract. The enuresis may constitute a monosymptomatic condition or it may be associated with a more widespread emotional or behavioral disorder. There is no clear cut demarcation between an enuresis disorder and the normal variations in the age of acquisition of bladder control. However, enuresis would not be ordinarily be diagnosed in a child under the age of five years or with a mental age under four years. If the enuresis is associated with some (other) emotional or behavioral disorder, enuresis would normally constitute the primary diagnosis only if the involuntary voiding of urine occurred at least several times per week & if the other symptoms showed some temporal covariation with the enuresis. Enuresis sometimes occurs in conjunction with encopresis, when this is the case encopresis should be diagnosed.
DSM III

a: Repeated voiding of urine by day or by night.
b: At least two such events per month for children between 5 to 6 years and at least once a month for elder children.
c: Not due to a physical disorder.

ENURESIS (Not Due to a General Medical Condition)

DSM III-R

Diagnostic Features

The essential feature of enuresis is repeated voiding of urine during the day or at night into bed or cloths (Criterion A). Most often this is involuntary but occasionally may be intentional. To qualify for a diagnosis of enuresis, the voiding of urine must occur at least twice per week for at least 3 months or else must cause clinically significant distress of impairment in social, academic (occupational) or other important areas of functioning (Criterion B). The individual must have reached an age at which continence is expected. (i.e. the chronological age of the child must be at least 5 years) (Criterion C). The urinary incontinence is not due exclusively to the direct physiological effects of a substance (e.g. diuretics) or a general medical condition (e.g. diabetes, spina bifida, a seizure disorder) (Criterion D)
Subtypes:
The situation in which the Enuresis occurs may be noted by one of the following subtypes:

Nocturnal Only. This is the most common subtype and it is defined as passage of urine only during nighttime sleep. The enuretic event typically occurs during the first one-third of the night. Occasionally the voiding takes place during the rapid eye movement (REM) stage of sleep, and the child may recall a dream that involved the act of urinating.

Diurnal Only. This subtype is defined as the passage of urine during waking hours. Diurnal enuresis is more common in females than in males and is uncommon after the age of nine years. The enuretic event most commonly occurs in the early afternoon on school days. Diurnal enuresis is sometimes due to reluctance to use the toilet because of social anxiety or a preoccupation with school or play activity.

Nocturnal and Diurnal. This type is defined as a combination of the two subtypes mentioned above.
Associated Features and Disorders:

The amount of impairment associated with Enuresis is a function of the limitation on the child's social activities (e.g., ineligibility to go for overnight camp) or its effect on the child's self-esteem, the degree of social ostracism by peers, and the anger, punishment, and rejection on the part of care-givers. Although most children with Enuresis do not have a coexisting mental disorder, the prevalence of coexisting mental and other developmental disorders is higher than in the general population. Encopresis, Sleep-walking Disorder, and Sleep Terror Disorder may be present. Urinary tract infections are more common in children with Enuresis, especially the Diurnal type, than in those who are continent. The enuresis commonly persists after appropriate treatment of an associated infection. A number of predisposing factors have been suggested, including delayed or lax toilet training, psycho-social stress, a dysfunction in the ability to concentrate urine, and a lower bladder volume threshold for involuntary voiding.
**PREVALENCE:**

The prevalence of Enuresis at age 5 years is 7% for males and 3% for females, at age 10 years the prevalence is 3% for males and 2% for females. At age 18 years, the prevalence is 1% for males and less among females, as in DSM III-R. Bed wetting is equally common in both sex until the age of five years. Boys then dominate so that by the age of eleven years they are twice as wet as girls (Oppel et al, 1968; Rutter et al 1973; Essen & Peckhan, 1976). This is so because male enuretics are less likely to remit spontaneously but also because boys are more likely to develop secondary enuresis (Essen & Peckhan, 1976). Wetting rarely stops suddenly among children who have remained enuretic into middle childhood. It is preceded by a period of sporadic wetting, and finally occurs only when the child is unwell or during cold weather (Miller et al, 1960). At any age, the likelihood of becoming dry is greatest for those who wet intermittently, for primary than for secondary enuretics, for girls than boys (after the age of eleven years), and for middle class than for working class children (Miller et al, 1960, Essen & Peckhan, 1976).
COURSE:

Two types of courses of enuresis have been described: "Primary" type in which the individual has never established urinary continence, and a "Secondary" type in which the disturbance develops after a period of established urinary continence. By definition, primary enuresis begins at the age of 5 years. The most common time for the onset of secondary enuresis is between the age of 5 and 8 years. However, it may occur at any time. After the age of 5 years, the rate of spontaneous remission is between 5% and 10% per year. Most of the children with this disorder become continent by adolescence, but in approximately 1% of cases the disorder continues into adulthood.

FAMILIAL PATTERN:

Approximately 75% of all children with enuresis have a first-degree biological relative who has had the disorder. The concordance for the disorder is greater in monozygotic than in dizygotic twins. Bakwin (1973) showed that concordance for enuresis was significantly higher in monovular than in binovular twins (68 versus 36%).
DIFFERENTIAL DIAGNOSIS:

The diagnosis of enuresis is not made in the presence of a neurogenic bladder or the presence of a general medical condition that causes polyuria or urgency (e.g. untreated diabetes mellitus of diabetes insipidus) or during an acute urinary tract infection. However, a diagnosis of enuresis is compatible with such conditions, if urinary incontinence was regularly present prior to the development of the general medical condition or if it persists after the institution of appropriate treatment.
### Diagnostic Criteria for Enuresis:

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<tr>
<td><strong>A.</strong></td>
<td>Repeated voiding of urine into bed or clothes (whether involuntary or intentional).</td>
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<tr>
<td><strong>B.</strong></td>
<td>The behaviour is clinically significant as manifested by either a frequency of twice a week for at least 3 consecutive months or the presence of clinically significant distress or impairment in social, academic (occupational), or other important areas of functioning.</td>
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<td><strong>C.</strong></td>
<td>Chronological age is at least 5 years (or equivalent developmental level).</td>
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<tr>
<td><strong>D.</strong></td>
<td>The behaviour is not due exclusively to the direct physiological effect of a substance (e.g., a diuretic) or a general medical condition (e.g., diabetes, spina bifida, a seizure disorder).</td>
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Specify type: Normal Only, Diurnal Only, Nocturnal and Diurnal

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**Table C:** Shows the diagnostic criteria for Enuresis.
1.11 CLINICAL SIGNS AND SYMPTOMS OF FUNCTIONAL ENURESIS:

Numerous psychological factors are of importance in the clinical description of enuresis. Some of the clinical features of an enuretic child can be put forth as following:

**a. Frequency of Bed Wetting:**

The observation of clothes being wet or bed wetting can be made very easily. However, the observer cannot tell whether there is an organic cause as in neurogenic bladder or whether the child is enuretic. Usually, the person who brings the chief complaint can offer testimony as to the wetting episodes and their pattern of occurrence. In majority of cases, there is no difficulty in deciding that the wetting is a case of enuresis. There are two general categories of enuresis. The primary, also called persistent enuretic, and the secondary, also called transient or neurotic enuretic. Four-fifth of all enuretics are primary, which means that a period of sustained dryness has never developed. The secondary enuresis appears after the child had stopped wetting.
b. Rebellious Or Passive Aggression:

Some psychologists interpret the family history data as indicating that the parents may be permissive and unperturbed by enuresis. Hence the enuretic uses his symptoms to express aggression and hostility and to get attention from the parents. Enuresis may be a manifestation and reflection of aggression in the child.

c. Rejected Child:

Parental rejection of the child is closely related to "masked deprivation" and it may be shown in various ways by physical neglect, denial of love and affection, lack of interest in the child's activities and achievements, harsh or inconsistent punishment, failure to spend time with the child, and lack of respect for the child's right and feelings as a person. However, rejection is not a one way street; the child may be equally unaccepting of his parents whether or not they reject him. Research studies indicate that parental rejection tends to foster low self-esteem, feeling of insecurity and inadequacy, retarded consciousness, increased aggression and loneliness.
d. Lack of Sense of Responsibility:

A child responds to his mother's way of handling and training him. Normally, a child is prepared for bladder training during 18 months to 24 months of age. With mother's genuine concern and encouragement for voiding urine at proper place and proper time, the child learns to do it properly. Along with mother's concern, training method depends on the individual child. The parents also have to teach the child to be responsible for his act. But enuretic children have very low sense of responsibility and cleanliness.

e. Dependent:

Sometimes, one or both parents cater to the child's slightest whims, and in so doing they fail to teach desirable standards of behaviour. A child who is over protected and received too much care by overanxious parents are likely to be emotionally dependent. Such children fail to learn to be independent, take care of themselves as well as of their body. Hence such a child will not recognize the need to master his bladder control and therefore be an enuretic child.
1.12 CAUSES OF FUNCTIONAL ENURESIS:

Although Functional Enuresis has been studied extensively, the cause of the disorder is still not asserted, as yet. Hence the causation of this disorder is also a matter of dispute. However, the major area that should be considered are:

a. Developmental Immaturity:

The immaturity view was proposed as early as 1800 when it was found that the functional bladder capacity (volume voided after urgency is noted) was decreased in enuretic children versus non-enuretic siblings. Although bladder stretching exercise led to improvement in a subgroup of children, another group of enuretics did not substantially improve despite a measurable increase in functional bladder capacity (Stratified B: Increase in Functional Bladder Capacity and Improvement of Enuresis).
More recent studies of developmental immaturity in enuretic population correlate delayed sexual maturation with an increased rate of enuresis among adolescents. Perhaps the strongest support for the development immaturity theory is the fact that up to 16% of the enuretic children spontaneously achieve dryness with each successive year. Thus developmental immaturity is believed to reasonably explain the cause of enuresis, although secondary enuretic cases do not support this theory.

b. *Psychological and Psychodynamic:*

Enuresis have been clinically recognized to occur in association with symptoms of childhood psychopathology. In the views of some psychologists it represents a clear evidence for underlying psychological disturbances. Studies have shown that 40% to 50% of enuretic children show symptoms of emotional and behavioural disturbances, although a direct causal relationship is often difficult to establish. Psychological causes are more commonly associated with secondary enuresis, and the onset is often noted following a stressful event.
Sometimes, secondary enuresis is referred to as regressive enuresis. Secondary enuresis can follow a childhood trauma such as a significant loss, birth of a sibling, hospitalization or a move to a new home etc. Depending on the severity of the stress, enuresis can appear during any stage of childhood or adolescence and continue for a prolonged period. Some psychologists have associated secondary enuresis with separation anxiety and with childhood depression. The emotional behavioural difficulties associated with enuresis do not follow any consistent pattern. Rutter et al (1973) found that children who were dry at 5 years but who started wetting during the next two years were more likely to show emotional behavioural difficulties, thus confirming that children with secondary enuresis were having emotional problem.

Another view is that enuresis is a direct manifestation of an underlying emotional disturbance or conflict with a hypothesis that wetting is an immature form of gratification. It is a manifestation of anxiety, mediated by a direct autonomic effect on bladder function, or it is an expression of hostility in a child who has difficulty in showing aggression in more direct ways.
c. Genetic Factors:

Enuresis commonly runs in families. Approximately 70% of all enuretics have a first degree relative who is or has been afflicted with the same condition (Bakwin 1961). There are no studies done on twins reared apart, although Kaffman (1962) investigating children living in Kibbutz (and hence a part reared by adults other than their parents) found a higher wetting among the relatives of enuretic children than among non-enuretic controls. Wetting is more common in blacks than in whites, and in the oriental immigrants to Israel than the immigrants of European descent. However, these differences may reflect social disadvantage rather than genetic differences.

d. Medical/Organic Factors:

The medical/organic causes of enuresis include urologic disorders such as obstructive lesions, anatomic deformities such as spina bifida, and metabolic or neurophysiologic disturbances such as diabetes mellitus or epilepsy.
1.13 DOES ENURESIS HAVE PSYCHOLOGICAL EFFECT

Physicians stress that enuresis is not a disease but a symptom, and a fairly common one. Occasional accidents may occur particularly when the child is ill. Traditionally the symptom has been thought to be due to one or a combination of influences from psychological, sociological or biological sources. For the practising psychotherapist, however, the major consideration in etiological theory is whether there is any relationship between enuresis and maladjustment. A corollary question is whether there is any relationship between psychotherapy and the cure of enuresis. There is a growing corpus of opinion that maturational or developmental factors are more critical in causation than in psychodynamic considerations. This controversy is as old as the literature in enuresis. The psychological position assumes that the presence of the symptom of enuresis was an evidence of both a disturbed family and a maladjusted child. The developmental position cited the well known relationship between occurrence of a family history of enuresis and the symptom of enuresis. There is conflicting evidence on the
relationship between early stress events and later enuresis. In an early longitudinal study, Doughlas (1973) found that children who have more stressful life events between 3 and 4 years of age had a two-fold increase in the risk of enuresis. However, a prospective study that used multivariate techniques to reduce the problem of confounded predictors (Fergusson et al, 1986) found no relationship between primary enuresis and childhood stress-score. There seems to be a clearer relationship between stressful events and the onset of secondary enuresis. Stresses found to be associated with late onset of enuresis include birth of a younger sibling (Werry & Cohrasen, 1965), severe head injury (Chadwick, 1975) and natural disaster (Durkin et al, Pers. comm.)

In the most detailed cohort study to date Kaffman & Elizur showed that children with certain personality types were statistically more likely to have enuresis at the age of 4 years. They are the highly dependent child, the child who resists change, and the child with motor hyperactivity. They could find no evidence of a specific behavioural syndrome in the enuretic children although these children were more likely than those without enuresis to have had at least one behavioural symptom before the age of four years.
Although physicians and parents share the common concern that the symptom of enuresis might act as a chronic stressor, and if persistent might have a negative effect on the child's personality, very little research have addressed this issue.

1.14 WHEN IS NIGHT WETTING ABNORMAL

The likelihood that a child will acquire continence spontaneously over a 12 month period is reduced sharply after the age of 4. In the Baltimore developmental study (Oppel et al, 1968), the prognosis for becoming dry over a following 12 month period fell from over 40% among wet 2 year olds through 20% of wet 3 years old to only 6% of wet 4 year olds. This low rate of spontaneous remission persisted through the rest of childhood. Other longitudinal studies (Miller et al, 1960; Kaffman & Elizur 1977; Verhulst et al 1985 et al) that have used similar criteria. (1 -3 nights wet per month) confirm a general trend for rates of incontinence to decline between ages 2 and 4 and thereafter to remain largely stable, although Verhulst et al, (1985) show a continuing sharp decline among Dutch girls until the age of 6. Defining enuresis as persistent
incontinence after the age 4 is also supported by findings by Kaffman and Elizur (1977) who found that while incontinence 3 year olds were no more likely to have associated psychopathology than continent 3 year olds, at later ages psychopathology was more common in enuretics. Additional support comes from Jarvelin et al finding (1988) that the offspring of parents who were wet after the age of 4 were at significant excess risk for enuresis.

1. 15 DAY WETTING

4% of 5 to 7 year olds wet at least once a week during the day and about 8% wet at least once a month (De Jonge, 1973). Only 1% of the 12 year olds wet at least once a month (Oppel et al, 1968). Day time wetting is more common among girls than boys. About half of the day wetters are also enuretics at night. At the age of 5, about 1 in 6 boys and 1 in 3 girl nocturnal enuretics also wet during the day. These proportions fall by half by the age of 7 (Blomfield & Douglas, 1956; Hallgren, 1956; Jarvelin et al, 1988). Day wetting alone or in combination with night-wetting is associated with higher rates of psychiatric
disturbance (Rutter et al, 1973) and genitourinary tract anomalies and infection (Hallgren, 1956; Savage et al, 1969) than nocturnal enuresis.

1.16 WHY DO CHILDREN WET THEIR BED

There are many factors known to be associated with bed wetting. These include biological associations such as increased rate of urinary infection, apparent abnormalities in the rate of development of the structure at the base of the bladder and a genetic predisposition. There are also a number of associations of a social or environmental nature. Enuretic children are more likely to come from large or broken or impoverished or unhappy families. Their parents may be less caring and more likely to have allowed or have been forced to allow their children to be separated from them during early childhood.

Enuresis occurs more often in children living in institutions, and it may respond to psychological changes and interventions. It has the effect of increasing the attention that is paid to the child.
A social motivational model would seem to bring together many of these apparently desperate associations. Enuresis can then be viewed as a socially unacceptable response that has persisted either because the social reinforcement or social inhibitory influences have not acted at an optimal level, or because biological deviance renders the force of these influences inadequate.

Azrin et al (1974) have pointed out that social reactions to the act of bed wetting are delayed because the event takes place at night and the child does not wake after the event. In some cases, the effectiveness of even these delayed responses is reduced still further, by the unsatisfactory nature of the child's environment. In other cases, the appropriate social response is hindered by abnormal bladder function. The bell and pad is effective because it focuses the family's attention on the symptom in a consistent fashion, and because it reduces the delay between the act of wetting and the social response. The tricycle and daytime training are presumably effective because they facilitate the child's appropriate inhibitory response.
Irrespective of the cause of bed wetting, this common symptom can be treated successfully in nearly all cases, and that treatment brings practical relief to the family and the child both socially as well as emotionally.

Thus, although enuresis may result from a variety of psychological reasons, most investigators have pointed to:

**Faulty Learning:** resulting in the failure to acquire a needed adaptive response i.e. inhibition of reflex bladder emptying.

**Personal Immaturity:** associated with or stemming from emotional problems.

**Disturbed Family Interactions:** particularly involving conditions leading to sustained anxiety / and or hostility. In some instances a child may regress to bed wetting when a new baby enters the family and replaces him as the centre of attention; or he may resort to bed wetting when he feels hostile towards his parents and wants to get even with them, since such a behaviour annoys and upsets them.

**Over Authority:** In many children we get parental over authority or criticism for day to day behaviour or poor performance. Such children do not express their anger openly, and thus enuresis may be the passive aggressive mode of their expression.
**Sleep:** Parents have known that bed wetters are heavy sleepers. Laboratory investigators have reported that even picking up a child who has just wet, in order to change his clothing, does not stay him from hypersomnolent behaviour. Sometimes buzzer devices used in treatment have awakened all the family in adjoining rooms but have had no effect on the enuretic. It is known, now, that bed wetting seldom occurs during rapid eye movement sleep, the stage of sleep in which the subject is relatively wakeful and having eye movements associated with hight dream recall. (Broughton 1968; et al 1969, Pierce 1963)

**The Role of Stress:** There is a relationship between stressful life events such as family change or break-up, illness and separation and the incidence of secondary functional enuresis. Regression to loss of control is not very common in young children. Some children who are dry, normally, will wet at times of situational stress, such as school entry.

**1.17 PRESENT STUDY:**

This research is undertaken to study "Some Psycho-Social Correlates of Functional Enuresis". There are a variety of underlying psychological reasons for bed-wetting. For example,
when a young child begins bed-wetting after several months or years of dryness during the night, this may reflect the appearance of new fears and insecurities. This may be followed by an event which makes the child feel insecure such as loss of a family member, change of home or school etc. At times, bed-wetting occurs after a period of dryness because the child's original toilet training was too stressful. Sometimes the child may also show symptoms of emotional problems such as persistent sadness or irritability or a change in sleeping habits.

In our country, enuresis is a common diagnostic category which is well reflected in the epidemiological studies. However, enuresis as a diagnostic category may not be the same as in the western studies. In fact, when we apply a classificatory label to a group of children it is expected that they will have a similar clinical picture and outcome as other children grouped under that category. But this has not been shown to be so in Indian studies. Though follow up studies have not been conducted, it is not certain whether enuretics in Indian clinics have the same outcome as the ones in the western studies. For example, a proportion of enuretics in the western studies are likely to have specific reading disabilities and conduct (antisocial) problems. But this has not been demonstrated for the Indian children. We do not understand the whole problem probably because of the
tendency to try to ascribe it to one cause instead of linking to a combination of many interacting causes. Thus detailed psychological / psychiatric evaluation may not necessarily lead to a definite diagnosis. There is a need to interpret such data on the basis of child rearing practices, family environmental factors, and other psychological influences which cannot be under-estimated. It was with this in mind that the present study was undertaken.