Communication Inventory for Infants (CII)

6 – **12** months

Madhu K

Register Number: 09SLP013

A Dissertation Submitted in Part Fulfillment of Final Year

Masters of Science (Speech Language Pathology)

University of Mysore, Mysore

ALL INDIA INSTITUTE OF SPEECH AND HEARING

MANASAGANGOTHRI, MYSORE – 570 006

JUNE 2011

CERTIFICATE

This is to certify that this dissertation entitled "*Communication Inventory for Infants (CII) 6- 12 Month)*" is a bonafide work submitted in part fulfilment for the degree of Master of Science (Speech Language Pathology) of the student Registration No. 09SLP013. This has been carried out the under guidance of a faculty of this institute and has not been submitted earlier to any other university for the award of any diploma or degree.

> Dr. S. R. Savithri DIRECTOR All Institute of Speech and Hearing Manasagangothri, Mysore – 570 006

Mysore June, 2011

CERTIFICATE

This is to certify that this dissertation entitled "*Communication Inventory for Infants (CII) 6- 12 Month*)" has been prepared under my supervision and guidance. It is also certified that this dissertation has not been submitted earlier to any other university for the award of any diploma or degree.

Mysore

June, 2011

Dr. K. S. Prema Guide

Professor of Language Pathology Head- Dept. of Special Education All Institute of Speech and Hearing Manasagangothri, Mysore – 570 006

DECLARATION

This is to declare that this Master's dissertation entitled "*Communication Inventory for Infants (CII) 6- 12 Month*)" is the result of my own study under the guidance of Dr. K. S. Prema, Professor of Language Pathology & Head- Dept. of Special Education, All India Institute of Speech and Hearing, Mysore, and has not been submitted earlier to any other university for the award of any diploma or degree.

Register No. 09SLP013

Mysore

June, 2011

Acknowledgement

The first and foremost thanks to almight for keeping me in his shadow and blessing me with the ability to bring together this piece of work.

I thank Dr. Savithri S. R. Director, AIISH, Mysore. for allowing me to do the research.

Sincere thanks to my guide Dr. K. S. Prema to have the patience to find the researcher in me and for all the timely guidance whenever approached for.

I thank Dr. Vasanthalakshmi, for helping me with statistical analysis part during the research

The heartfelt thanks to my dear brother Mr. Suresh B. Nayak for being my constant strength all through the path.

I thank my best friends Maruthi and Shalini for all the moral support across time.

I thank my juniors Usha, Inchara, Swathi, Chaithra, Nirupama, and their family members who helped in finding the subjects for my research. Special thanks to Usha, who counseled many parents during data collection.

I thank Dr. Prashanth, Associate professor in JSS Medical College, for all the references. This research wouldn't have completed without his support and concern. Sir your interest towards the research is heartily appreciated.

I thank my classmates Adithya, Sangeetha G and Nirmal for helping me in doing this research and building confidence in me.

A special thanks my juniors Hemraj Nayaka, Madhu, Himansu varma, Pavan and My classmates Adithya, Sangeetha and Nirmal for helping me across the research and being with me.

Many people have been a part of my graduate education, as friends, teachers, and colleagues. Dr. Pushpavathi M first and foremost, has been all of these.

TABLE OF CONTENTS

| Chapter No. | Title | Page No. |
|-------------|------------------------|----------|
| | List of Tables | viii |
| | List of Figures | ix |
| 1 | Introduction | 1-10 |
| 2 | Review of Literature | 11-38 |
| 3 | Method | 39-45 |
| 4 | Results and Discussion | 46-55 |
| 5 | Summary | 56-60 |
| | Reference | |
| | Appendix I | |
| | Appendix II | |
| | Appendix III | |
| | Appendix IV | |
| | Appendix V | |
| | | |

List of Tables

| Table No. | Title | Page No. |
|-----------|---|----------|
| Table 1 | Developmental milestones of facial expression | 21 |
| Table 2 | Piaget's stages of sensorimotor development: Birth to 2 years of age | 25 |
| Table 3 | Development of motor skills | 27 |
| Table 4 | Development of communication and social behavior | 28 |
| Table 5 | Intrinsic and extrinsic factors for communication development | 30 |
| Table 6 | Summary of checklists and tests developed in Indian context | 37 |
| Table 7 | Participants | 40 |
| Table 8 | Modifications in sections of CII after pilot study | 44 |
| Table 9 | Mean and SD across different sections of communication inventory | 47 |
| Table 10 | Group-wise and skill-wise differences | 49 |
| Table 11 | Summary of Group-wise and skill-wise differences | 49 |
| Table 12 | Gender-wise differences across infant groups and sections of CII | 53 |
| Table 13 | Subgroups in demographic parameters | 54 |
| Table 14 | No. of items in CII after Item Analysis | 55 |

List of Figures

| Table No. | Title | Page No. |
|-----------|---|----------|
| Figure 1 | Communication skills in three groups of infants | 50 |
| Figure 2 | Item analysis of CII | 56 |

CHAPTER I

INTRODUCTION

Communication is the process by which individuals exchange information and convey ideas (Owens, 1990). It is an active process, which involves encoding, transmitting and decoding intended message. It requires a receiver who decodes or comprehends the message. It is one of basic needs of human beings and a gift that helps to lead a better quality of life. Communication may take place wither in the verbal mode with the help of speech of in the nonverbal more through gestures, signs, symbols, body language and/or written language. Verbal mode of communication to transmit messages involves precise coordination of neuromuscular mechanism in order to produce speech sounds and linguistic units. Individuals select a mode depending on the context, their needs, the needs of the decoder and messages they wish to transmit. Messages for communication are coded by employing language system that is specific to a given community.

Language is a socially shared code, or conventional system, that represents ideas through the use of arbitrary symbols and rules that govern combinations of these symbols. There are many languages, each with its own particular symbols and rules. Language exits because language users have agreed on the symbols and rules to be used. Language is described by five domains, phonology, morphology, syntax, semantics and pragmatics. These domains can be grouped into Form (Phonology, Morphology, Syntax), Content (Semantics) and Use (Pragmatics) of language.

The form of the language comes from the sound system (phonology) and the grammar system (morphology and syntax). It is the structural aspect of the language.

While phonology is the sound system of a language, morphology is the smallest unit of language that expresses meaning and syntax is the sentence-level structure of language that marks relationships between words and ideas and semantics is the meaning system of language. It can be the meaning expressed by single vocabulary (e.g., Dog i.e., noun, animal), items of the proposition expressed by vocabulary items in combination (e.g., mommy shoe i.e., the shoe belongs to mummy; shoe mommy i.e., a request for the child's shoe). Pragmatics refers to how an individual uses the form and content of language. Pragmatic behaviors may include the intention that an utterance or gesture conveys, the way in which an individual uses and understands body language, the social appropriateness of utterances, and the process of ensuring that appropriate amount of information is provided to a listener.

Effectiveness of communication also depends on usage of paralinguistic and nonlinguistic cues. Paralinguistic cues include intonation patterns, stress, and speech rate, can signal attitudes and emotions of the speaker and alter the linguistic information. In addition to paralinguistic cues, non linguistic cues also contribute to the communication process. Nonlinguistic cues include gestures, body movements, eye contact, and facial expressions. For example, an individual who looks at the speaker and intermittently nods his or her head, indicate active involvement in the communication process. Conversely, an individual who does not make eye contact often communicates a lack of interest or involvement in the communicative interaction, and in turn may diminish communication with the listener.

In many conditions individuals can expresses better with nonverbal behavior than with speech. Nonverbal behaviors are right from the infancy stage of communication development. Infancy is the stage which happens between birth to 2 years or first two years of life where an infant learns to communicate and nonverbal behaviors such as smiling, pointing to objects as well as a few paralinguistic behaviors such as different types of crying, making different intonation patterns.

1.1 Development of Communication

Stages of communication development are described in detail by Shulman and Capone (2007) as perlocutionary, illocutionary and locutionary stages. The perlocutionary stage refers to the unintentional stage of communication. During this stage, the infant produces behaviors such as burping or vocalizations that have no intended message. This stage typically occurs around 8 to 10 months of age. Typically developing infants begins to use gestures and nonlinguistic vocalizations (e.g., jargon) intentionally to communicate around 10 months which is called as illocutionary stage of communication. Around 12 months of age, an infant enters the locutionary stage of communication and produces his/her first words. This phase is characterized by intentional communication expressed with words. Some behaviors observed during the perlocutionary and illocutionary stages of communication are referred to as prelinguistic skills. They include gestures, eye contact, joint attention, and turn taking behaviors. The prelinguistic skills such as eye contact, joint attention; and taking turns during an interaction are building blocks of successful communication and language learning. Imitation is another skill that helps infants to learn language. The locutionary phase of communication development involves linguistic and metalinguistic skills. Development of language is largely completed by eight years of years (e.g., phonology), however, with a few aspects such as semantics that continue to develop through adulthood. In order to

understand the development of communication and its disorders, assessment of communication skills is done by employing checklist, tests and other such tools.

1.2 Assessment of Communication

There are different ways to assess communication skills in infants. Checklists, scales, tests and inventories are the most often employed tools in clinical and field set-up. Checklist helps to examine the presence of a few specified behaviors in an individual, where as tests are used for the purpose of diagnosis of a condition. Purpose of a language test could be either for screening to check if children have any problem with language development or for diagnosis and quantification of behavior(s) in a condition.

i) Denver Developmental Screening Test II (DDST-II) developed by William & Josiah (1984) is a performance based test that assesses children's development, between one month and six years. It assesses four areas of functioning: fine motor-adaptive, gross motor, personal-social and language skills.

ii) Receptive Expressive Emergent Language Skills, REELS (Bzoch & league, 1971) is a scale for assessment of language development that assesses verbal language ability of a child in comprehension and expression domains. It assesses a child from zero to thirty six months of age. While the first year age range is divided into one month interval, the second year with 2 months age interval and at third year with 3 month age interval periods. Each interval includes three skills in both comprehension and expression domains. It assesses the language ability in the phonology, semantic and syntactic domains only and does not consider the pragmatic or cognitive dimensions as a part of the assessment. *iii) The Rossetti-Infant Toddler Scale (Rossetti, 1990)* is a scale assesses the preverbal and verbal domains of language development (interaction, attachment, pragmatics, gesture play and language development and language expression). It is designed for the children from birth to 36 months. It is administered based on a child in 3 months groupings with approximately 30 items in each group. The items are compilation of author's observation, description from developmental hierarchies of behaviors recognized and used by leading authorities in the field of infant and toddler assessment. The scale is criterion referenced and measures the child's communicative behavior on direct observations and parental reports obtained through questionnaire.

iv) The communication and symbolic behavior scale (Wetherby and Pizant, 1993) is a norm referenced standardized instrument used to assesses infants, toddlers and preschool children. It is an interactive assessment designed to provide opportunities for children to communicate non-linguistically with gestures and vocalizations during play routines with adults. It is administered on children with functional communication age of 6-24 months to 72 months. The test comprises of 22 rating scales grouped under 7 heads namely; communicative functions, gesture communicative means, verbal communicative means, vocal communicative behaviors, reciprocity, social-affective signaling and symbolic behavior.

Checklists, scales and tests includes skills related to verbal language (for example, REELS), and many tests fail to account for non verbal communication. Checklist and scales generally include critical items to decide on the presence or absence of the problem, while tests having corporate representational skills, the presence or absence of which indicate normal development of impairment. Not all tests for language account for

the other related behaviors like cognition, social communication, play behaviors, etc., since communication is strongly related to these above mentioned behaviors, it is necessary to assess development of language as well as these associated behaviors. Therefore, to overcome this problem language inventory is developed by a few investigators, one such being Mac Arthur Communication Developmental Inventory (1993).

Inventory includes items for a detailed profiling of developmental pattern under different domains. It also includes associated factors which are likely to influence communication development. Inventory helps in both assessment and in intervention. Inventory serves as a guide for goal setting, by finding hierarchy for items to develop. E.g., Mac Arthur Communication Developmental Inventory, CDI (Fenson et al, 1993). Communication Developmental Inventory is used by many investigators to study communication development in Children. Fenson, Dale, Reznick, Thal, Bates & Reilly (1993) developed a Mac Arthur communication developmental inventory. They included all the domains of communication, like reception, expression and cognition skills of communication. The age range is divided into 2 groups, 8-18 months and 18-24 months. Inventory is divided into three parts: the early phrases, the vocabulary and the nonverbal communication. Early phrases include the phrases which the infant understands in that age. E. g., are you hungry? Want to go out? This section assesses only comprehension ability of the child. Vocabulary section is further divided into many parts according to different lexical categories like body parts, family members, food items, etc.... In this section both comprehension and expression of lexical items are evaluated. Nonverbal communication part includes gestures, games, routines, and adult imitated activities. This

section assesses gestural communicating ability of the child. Authors have provided the normative values for each age group and separately for male and female children with which a clinician can understand whether a given child is following normal developmental pattern or not (See Appendix I for Mac Arthur's communication developmental inventory).

1.3 Assessment of Language in Indian Context

Receptive Expressive Emergent Language Skills, REELS (Bzoch & League, 1971) is main test which is to measure the language ability in Indian population. It assesses child for zero months to thirty six months. REELS was standardized on Indian population (Madhu, Deepa, Harshan, Suhas and Chengappa, 2009). Authors administered REELS test on 720 typically developing children in Karnataka and make necessary changes in REELS according to the Indian Developmental pattern.

The scales of early communication skills for hearing impaired (Moog & Geers, 1975) which measure the speech and language development of the hearing impaired children age range between 2 years to 8 years 11 months. Test divided into four sections-receptive language skills, expressive language skills, nonverbal receptive language skills and expressive language skills. There are two levels specified in receptive and expressive language skills section as A and B. 'A' level items describe the use of skills in structured situation and 'B' level items represents use skills spontaneously. The scales of early communication skills for hearing impaired was standardized on Indian population of hearing impaired by Swati (1993).

Preschool language scale (Vaidyanathan, 1984) assesses early communicative behavior of children in the domains of comprehension, expression and cognition using questions addressed to parents or caregivers. This was specifically intended for children in the age of 9 months to 36 months. It consists of twenty seven items grouped under 9 different age groups depending on age at which the aspects of language and cognition emerge. Unlike other language scales, this emphasizes on the pragmatic aspects and enables to identify language delay/disorder and aids to plan appropriate intervention programs. The items from the preschool language scale were adapted to devise the 3 D LAT (Herleker, 1986). The task was framed as questions and rest of the frame work was similar to Vaidyanathan's scale. These scales measure the verbal language ability of children and pay no focus on the nonverbal language skills of preschool children. Assessment tools solely evaluating nonverbal language development are very limited, although, some tests have included assessment of non verbal language development along with verbal development.

Behavior Assessment Scales for Indian Children with Mental Retardation, BASIC-MR (Peshawaria and Venkatesan, 1992). A test which was developed for identification of Mentally Retarded children. This scale includes mainly 2 parts, Part A has 280 items spread over 7 skills behavioral domains and Part B has 75 items pertaining to problem behaviors. BASIC-MR focuses on older children (3-18years) than the infants, toddlers, and preschoolers. To overcome this problem Venkatesan (2002), developed a activity checklist for preschool children with developmental disabilities (ACPC-DD). It assesses the children between zero to seventy two months. The ACPC-DD consists of 400 items distributed evenly across 8 behavioral domains that are relevant to daily activities of infants, toddlers, and preschool aged children with developmental disabilities. India is a multilingual country where we can find 5 different language families with more than 100 languages (Mallikarjun, 2002). There is another checklist which develop for multilingual children is language acquisition in multilingual children (Prema, & Geetha, 2005). It assesses children between nine months to thirty six months. Skills are classified under three domains, language domain, behavioral domain and developmental domain. Language domain includes skills with respect to communication. It considers both verbal and nonverbal language skills. Behavioral domain includes skills with respect to associated problems like learning disability, Mental retardation, Cerebral Palsy and Developmental domain skills with respect to different developmental domains like sensory, gross and fine motor and cognitive development.

Culture is a product of universal biological needs and function universal problems created to address their needs, and the context in which people live (Matsumoto, 2006). Language in a multicultural and multilingual population is diverse. Culture affects the language lexicon (Caroll, 1956; Stigler & Baranes, 1988), thought (Abel & Candel, 1998; Ervin, 1964; Hull, 1963; Matsumoto & Asser, 1992) and pragmatics [children personal narratives (Minami & McCabe, 1955), self discourse (Chen, 1995), Compliments (Barnuld & Araki, 1985) and interpersonal criticism (Nomura & Barnlond, 1983)]. Applying these tools on Indian population is not appropriate. Hence it is necessary to develop inventory for Indian population.

1.4 Need for the Study

Communication starts developing as soon as a child born with the onset of birth cry. Communication is very rapid during the early childhood. Communication development in early childhood like infancy is an indicator of a child's communication proficiency in future (Shulman and Capone, 2007). There many assessment tools developed for toddlers and children with late childhood period than infants. There are very less number of tools available to measure communication among which majority of the tools focus on verbal language and very few on nonverbal language.

Among the available tools for language measures, there are many tests and a few Inventories which were developed for Western population. MacArthur Communication Development Inventory (CDI) is a tool which is widely used to measure both modes of communication (verbal and nonverbal) in infants (eight months to sixteen months). It can be easily adapted to other languages. It is standardized in 60 languages worldwide.

Since culture has an impact on language and communication (Hall, 1959), and India is well known for its multicultural and multilingual nature with five different language families and more than 100 languages (Mallikarjun, 2002), the available tests and tools developed for the Western context, cannot be directly employed for Indian population. Hence there is a need to develop Communication Inventory for Indian population. In view of the above need, the present study was designed with the following objectives:

1.5 Objectives of the Study

- 1. To develop a Communication Inventory (CII) for Infants aged 6 -12 months keeping the framework of MacArthur CDI as reference
- 2. Translation and adaptation of CII for infants from Kannada speaking families.

CHAPTER II

REVIEW OF LITERATURE

Communication is part of human life "Communication is the process in which individuals exchange information and convey ideas" (Owens, 1990). Communication needs two persons one is a sender and another is a receiver of message. Owens (1990) states that communication happens only when a message is conveyed between or among two or more individuals. Communication consists of speech, language, paralinguistic cues, and nonlinguistic cues.

There are two main ways of communication, verbal and nonverbal communication. Nonverbal communication can be divided into three group manual signs, symbol system, and communication aids. Speech is the verbal method of communication. Speech is one of the modes that may be used for communication. It is the oral verbal mode of transmitting messages and involves the precise coordination of oral neuromuscular movements in order to produce sounds and linguistic units. There are other modes available to communicate apart from speech. Writing, drawing, and manual signing are the other modes of communication. Individuals select a mode depending on the context, their needs, the needs of the decoder and messages they wish to transmit.

Language is a socially shared code, or conventional system, that represents ideas through the use of arbitrary symbols and rules that govern combinations of these symbols. There are many languages, each with its own particular symbols and rules. Language exits because language users have agreed on the symbols and rules to be used. Language is described by five domains: pragmatics, semantics, phonology, morphology and syntax. These domains can be grouped into the Form (Phonology, Morphology, Syntax), Content (Semantics) and Use (Pragmatics) rules of language.

The form of the language comes from the sound system (phonology) and the grammar system (morphology and syntax). It is the structural aspect of the language. While phonology is the sound system of a language, morphology is the smallest unit of language that expresses meaning and syntax is the sentence-level structure of language that marks relationships between words and ideas and semantics is the meaning system of language. It can be the meaning expressed by single vocabulary (e.g., Dog i.e., noun, animal), items of the proposition expressed by vocabulary items in combination (e.g., mommy shoe i.e., the shoe belongs to mummy; shoe mommy i.e., a request for the child's shoe). Pragmatics refers to how an individual uses the form and content of language. Pragmatic behaviors may include the intention that an utterance or gesture conveys, the way in which an individual's uses and understands body language, the social appropriateness of utterances, and the process of ensuring that appropriate amount of information is provided to a listener.

Communication will be effective when an individual uses paralinguistic and nonlinguistic cues. E.g., the individual who looks at others as they talk and may intermittently nod his or her head, indicate active involvement in the communication process. Conversely, the individual who does not make eye contact often communicates a lack of interest or involvement in the communicative interaction in turn may hamper communication with the speaker. In other words we can call this as non verbal communication. Nonverbal Communication (NVC) is usually understood as the process of communication through sending and receiving wordless messages. Nonverbal communication is defined as "The way in which people communicate, intentionally or unintentionally, without words; nonverbal cues include paralinguistic cues like intonation, stress, speech rate, and Nonlinguistic cues like gestures, body movements, eye contact, facial expression (Bernstein & Tiegerman, 1997; Areson, Wilson, & Akert, 2010). Paralinguistic cues can signal attitudes and emotions of the speaker and alter the linguistic information. In addition to paralinguistic cues, non linguistic cues also contribute to the communication process.

Argyle (1986) put forward the hypothesis that whereas spoken language is normally used for communicating information about events external to the speakers, nonverbal codes are used to establish and maintain interpersonal relationships. It is considered more polite or nicer to communicate attitudes towards others non-verbally rather than verbally, for instance in order to avoid embarrassing situations.

Argyle (1986) concluded there are five primary functions of nonverbal bodily behavior in human communication:

- Express emotions
- Express interpersonal attitudes
- To accompany speech in managing the cues of interaction between speakers and listeners
- Self-presentation of one's personality
- Rituals (greetings)

Doherty and Sneddon (2003), outlined seven principles to capture the essence of communication with children. Among these, four refer to adult and the child communication and the other three principles are characteristics of adult communication.

13

i) Intentionality: nonverbal behavior is distinguished from nonverbal communication on the basis of its intentionality. A nonverbal behavior produced with intent would mean nonverbal communication. Most of the information derived from babies behaviors particularly in their early months are not produced intentionally. For example, crying is initially reflexive; only at around nine months, babies cry to get others attention or attain certain things. Response by the communication partner to the child's early attempts to communicate intentions fosters communication development.

ii) Visual cues: For communication, children rely mostly on visual cues. A shared visual context to interact and the nonverbal signal that the context encompasses are central to children's ability to communicate their feelings and thoughts and to understand other people. The rich repertoire of visual cues that children employ provides the communication partner a window to the child's emotional physiological and cognitive states.

iii) Communication is innate: The debate on nature-nurture argument prevails in communication development. Doherty and Sneddon (2003), outlined three evidences to support the innateness in communication. First, is the evidence of skills such as emotional facial expression in lower animals, which do not possess human like thinking abilities suggesting that the skill is innate. Second, that the skill is universal and is derived from the genetic make-up. Third, that these skills are seen in babies before they learn formal communication suggesting innateness.

iv) Communication is learned: Though children are born with genetic endowment that unfolds later to become a good communicator, their childhood experiences influence their

14

communication development. Children learn how best to use their nonverbal skills, the rules concerning them and read other nonverbal cues in their late childhood.

v) Adult should be attentive: Not much information about children's nonverbal cues can be obtained unless they are attended to effectively by the communication partners/ adults.

vi) *Responsiveness:* This is an essential feature in providing quality interaction for children. The response ought to occur within a reasonable time span and in a consistent manner to children's requests to facilitate communication.

vii) *Scaffolding*: It is the support given by an adult to the child in assisting their understanding. In order to scaffold effectively the adult should be able to judge accurately the child's ability and level of knowledge in order to provide new information and also to help at appropriate times. These principles form the basis of communication development in children.

Bruner (1981) identified three broad functions of communication that emerge during the infancy that covers the first year of life:

- a) Behavior regulation (acts used to regulate another's behavior)
- b) Social interaction (acts used to gain or maintain others attention to self) and
- c) Joint attention (acts used to direct another's attention to an entity or an event)

Infancy is the stage which happens between birth to 2 years or first two years of life where infants start learning to communicate using paralinguistic (different types of crying, making different intonation patterns) and nonlinguistic cues (smile at listener, pointing to the objects) than verbal language. Infancy stage is very critical because there

15

will be rapid growth in all the areas of development like speech, language, motor, cognitive and social.

2.1 Communication Development

Stages of communication development are described in detail by Shulman and Capone (2007), as perlocutionary, illocutionary and locutionary stages. The perlocutionary stage refers to the unintentional stage of communication. During this stage, the infant produces behaviors such as burping or vocalizations that have no intended message. This stage typically occurs around 8 to 10 months of age. Typically developing infants begins to use gestures and nonlinguistic vocalizations (e.g., jargon) intentionally to communicate around 10 months which is called as illocutionary stage of communication. Around 12 months of age, an infant enters the locutionary stage of communication and produces his/her first words. This phase is characterized by intentional communication expressed with words. Some behaviors observed during the perlocutionary and illocutionary stages of communication are referred to as prelinguistic skills. They include gestures, eye contact, joint attention, and turn taking behaviors. The prelinguistic skills such as eye contact, joint attention; and taking turns during an interaction are building blocks of successful communication and language learning. Imitation is another skill that helps infants to learn language. The locutionary phase of communication development involves linguistic and metalinguistic skills. Development of language is largely completed by eight years of years (e.g., phonology), however, with a few aspects such as semantics that continue to develop through adulthood. In order to understand the development of communication and its disorders, assessment of communication skills is done by employing checklist, tests and other such tools.

2.1.1: Verbal language development: Verbal communication starts as soon as the child is born with 'birth cry'. At birth, the first vocalizations a child makes are reflexive and are sometimes called unlearned sounds. Reflexive vocalization are also referred to as vegetative sounds, sounds made by a passive, living organism (Hulit & Howard, 2002). Such sounds may include cries, coughs, gurgles, hiccups, and burps. As the child rapidly develops, different types of pre-language sounds are produced that eventually formulate meaningful utterances (Hulit & Howard, 2002; Owens, 2008). Between 2 and 3 months of age, young children often begin cooing. Cooing sounds are noncrying vowel-like productions made when the child is comfortable contented. These sounds generally include vowel-like sounds produced within a single breath that many contain brief consonant-like sounds (/k/, /g/, /h/) (Angell, 2010).

At approximately 5 to 6 months of age, children begin to babble, producing fully resonant nuclei (Hulit & Howard, 2002; Owens, 2008). These vocalizations consist of vowel-like sounds that are similar to /a/ along with consonants-like sound production made up mostly of /p/, /b/, /w/ and /m/ sounds. These utterances are random combinations of vowels and consonants. At babbling stage child appear to listen to caregivers' speech and try to imitate intonation patterns be making experiments with the volume, pitch, and rate (Owens, 2008).

During the time babbling is produced, different types of babbling develop that bring children closer and closer to true word production. Babbling types include marginal, reduplicated, variegated, and jargon babbling (Hulit & Howard, 2002). Marginal babbling is a bridge between cooing and true babbling and consists of singlesyllable productions of vowel and consonants sounds. These productions can begin with either the consonant or the vowel sound, such as /ab/, or /ba/. Reduplicated babbling is considered the beginning of true babbling, beginning to appear at approximately 6 months of age. This type of babbling is the repeated consonant-vowel productions (e.g., /babababa/, /mamamama/). Consonant sounds used in this type of babbling are generally front-of-the-mouth utterances (e.g., /m/, /p/, /b/, /t/, /d/, and /n/).

Variegated babbling contains syllable production that is further developed, appears at 7 months of age (Angell, 2010). This form of babbling includes successive syllables of different consonant-vowel productions. Children may different patterns like CV, CVC, and VCV patterns. Example includes /badagata, /mamgaga/, or /amatod/. Variegated babbling often includes wider variety of consonant sounds includes fricatives (/f/, /v, /s/, /z/, /ð/, / \mathcal{O} /,/s/and /z/), affricates (/ts/ and /dz/), liquids (/l/ and /r/), and fewer reduplicated babbling productions (Angell, 2010).

At approximately 8 months of age, children begin jargon babbling and begin to include intonation to their utterances. Intonation is the melodic patterning of adult speech utterances that includes rhythm, stress, and rote variations. As children babble reduplicated and variegated types of syllables with intonation, the utterances begin to sound more like adult speech productions. Children's utterances may often sound like questions, commands, and statements. Jargon babbling, however, is still not true language production.

Echolalia, repeating the communications of others immediately after their production by caregivers, is also common between the approximate ages of 8 to 12 months. Echolalic imitation is done without understanding of the meaning of the

utterance. During 9 to 10 months of age, transition between babbling to true language begins. At this level children produce vocables, phonetically consistent forms (PCF), performatives, or protowords. All these terms refer to vocalizations that are consistent patterns of sound used within reference to particular things or situations. These vocalizations are not true words within the native language of caregivers, but they do fit the definition of true words; consistent and meaningful utterances that are used with intention (Hulit & Howard, 2002). Children develop their first words at approximately 12 months of age. By the end of first year child's expression includes words from three lexical categories, animals, food and toys. First words include dog, cat, ball, water, food, etc., (Nelson, 1973). Action words also appear quite early in life. They describe own actions before describing the actions of others (Huttenlocher, Smiley and Charney, 1983).

2.1.2: Development of Nonverbal Communication

It is generally agreed that infants communicate before they talk (Sugarman, 1983). That means nonverbal communication develops before verbal communication. Development of nonverbal communication is a cumulative effect of the development occurring in different channels like eye gaze, gestures and facial expression. Intentionality forms a basis of communication and hence, development of intentionality plays a major role in the development of communication. The development of intentionality is linked with the development of communication too. Intentional communication occurs when the child deliberately uses the specific signal to affect another's behavior (Bates, 1976). In an attempt to order the emergence of intentionality, Carpenter, Mastergeorge and Coggins (1983) studied 6 children at monthly intervals from 8 to 15 months of age. The median age of acquisition of "protest" was less than 8 months;

for "requesting actions and objects", "commenting on actions" was around 9.5 months and "commenting on objects" and "answering to questions" begin to emerge at 10.5 and 15 months respectively. Though this was the common trend, there were individual differences in typically developing children with respect to the order of acquisition.

Eye gaze is an important source of social communication for both child and adult. It is linking to number of aspects of social and emotional development. Eye contact and other aspects of gazing behavior play an important role in children's mental development. As early as one month of age, baby establishes eye contact with the parents, and by three months of age, the baby smiles backs to parents (Sugarman, 1983). Very young infants (3 months of age) show preferences for faces looking at them rather than looking away from them (Caron, Caron, Mustelin and Roberts, 1992). Table 1 shows the developmental milestones of facial expression.

Normal children are aware of "being seen" by the time they are around 30 months of age. Children alternate the gaze between the object and the other person as an indicator of request or comment on an object by one year of age. They begin to use gaze declaratively, accompanied by pointing gestures and head orientation by 18 months of age (Charman, Swettenhan, Baron-Cohen, Cox, Baird and Drew, 2000).

2.1.3: Development of Gestural Communication

There is abundant literature on the development of gestures and its relation to verbal communication development.

Table: 1

Developmental milestones of facial expression

| Age (in months) | Developmental milestones | |
|-----------------|---|--|
| Birth | Babies show a number of inborn reflexive facial expressions. These | |
| | include startle, crying and disgust. | |
| | They smile reflexively during rapid eye movement stage of sleep. | |
| 2-4 months | During the second month they show 'true smiling'; they smile when | |
| | they find pleasurable. | |
| | They show anger on their faces by 4 months of age. | |
| 5-8 months | Expression of 'fear' emerges around 6 months. | |
| | 'Surprise' tends to emerge around seven or eight months but it is not | |
| | accompanied by raised eye brows. | |
| | Babies are increasingly adept at using facial and other expressions of | |
| | emotion to fulfill their desires. | |
| 9 – 12 months | By ten months, babies began to use adult like facial expressions | |
| | directed to object as a source of information about the object. | |
| | At 12 months, children begin to use finer emotional expressions and | |
| | learned to display the rules of their culture. | |
| 2-4years | By 2 years, children begin to recognize the main expressions of | |
| | emotion. | |
| | Preschool children can focus only on one feature of the facial | |
| | expression. | |
| 5 years and | They have deeper understanding of mixed emotions. | |
| above | Older children have the ability to use internal features of faces such as | |
| | configuration of eye, mouth and nose. | |

(Ref: Doherty-Sneddon, 2003)

a) "Showing off" is reported as one of first signs that an infant gives of intentional communication (Bates, Camaioni and Voltera, 1975; Bates, Benigni, Bretherton, Camaioni and voltera, 1979). Young infants repeat behaviors that have previously been

successful in gaining adults attention. The "showing off" behaviors received the "use of objects" as a means to obtain adult attention. The "use of objects" to gain adult attention is emergence of deictic gestures (showing, giving, pointing). These are also referred as prelinguistic gestures. They are termed prelinguistic as they occur prior to the development of spoken language, but deictic gestures continue to be used throughout the development of verbal communication. Showing, giving and pointing emerge in a predictable sequence at approximately 10 months of age (Bates, Camaioni and Voltera, 1975). These behaviors show a marked increase in occurrence after 11 months as other primitive gestures decline.

b) "*Ritualized request*" which includes a variety of behavior such as gesturing with a open-close grasping motion, placing adult hands on object to request or pulling at an empty hand to obtain something (Bates, Benigni, Bretherton, Camaioni & voltera, 1979), occur between 9 and 13 months. Around 12 months, "recognitory gestures" emerge which are actions without an object and depict the object by means of its function. These behaviors illustrate the potential for symbolic representation which is similar to spoken language.

c) "*Representational gestures*" are reported to be appear at around one year in children. Most of the representation gestures are used in first half of the second year of life and is continued until a comparable word is developed (Acredolo & Goodwyn, 1988). Representational gestures emerge before the onset of 25-word milestone. They are variously termed as symbolic, iconic, empty-handed or referent gesture (Acredolo & Goodwyn, 1996; Nicoladis, Mayberry & Genesse, 1999). During toddlerhood, typically developing children prefer verbal to gestural expression. Beginning of toddlerhood is marked by decrease in representational gestures, but on the other hand deictic gestures will increase (Iverson, Capirci, Longobardi & Caselli, 1999).

Typically developing children spontaneously produce gestures along with speech. Nonverbal and verbal language development co-occur in typically developing children. According to McNeill (1992), speech gesture coherence is possible because gesture and speech share common cognitive representation; that is, before the communication unfolds, gesture and speech are the part of a single idea. As expression developed further, message is parsed, with most information channeled into speech but some information channeled into gestures. The age at which children produce supplementary gesture speech combinations reliably predicts the age at which they produce two word utterances (Ozcaliscan and Golden-Meadow, 2005). Capirci, Iverson, Pizzuto, and volterra (1996), found that gestures and gesture-word combinations produced at 16 months of age correlated significantly with the total vocal production at 20 months of age and they also established a significant relation between the frequency of deictic or representational gesture use with the production of representational words at 16 months and total vocal production at 20 months of age. Harris, Barlow-Brown and Chasin (1995), found that the occurrence of pointing and comprehension of object name occur at nearly identical median age of 10 months; 21 days and 10 months; 22 days respectively. Gestures are related to the children's lexical and syntactic development. Firstly, most of the lexical items that each child produces initially in gesture later move to that child's verbal lexicon. Secondly, children who are first to produce gestures-plus-word combinations conveying two elements in a proposition (point at bird and say "nap") are also first to produce two-word combinations ("bird nap") (Iverson & Goldin-Meadow, 2005).

Early symbols, manual and spoken appear to share underlying cognitive abilities, so manual symbols can aid in advancing verbal language milestones and predict them to some extent. Gesture thus serves as predictors of language development and plays a vital role in normal language development. Gesture and language are developmentally linked in children with language impairments as much as they are related in typically developing children.

From the beginning of life, children develop in many ways, physically, cognitively, and socially. As the child develops across these areas, the child becomes more and more able to begin communication with others. Language development and the ability to communicate with others is an intricate process of development (Angell, 2010). In order for children to develop language abilities, skills associated with physical, cognitive, and social development must develop in a coordinated way, so that they can be integrated or combined to create meaningful connections with the child's environment. For example, once a child learns to pull to standing and begins to explore the environment, the child is exposed to new stimuli, which in turn can enhance cognitive and language development (Shulman & Capone, 2007).

2.1.4 Cognitive Development

Cognitive development refers to the progressive and continuous growth of perception, memory, imagination, conception, judgment, and reason; it is the intellectual counterpart of one's biological adaptation to the environment (Nicolosi, Harryman & Kresheck, 1989). Cognition also involves the mental activities of comprehending information and the process of acquiring, organizing, remembering, and using knowledge

(Owens, 2008). Paiget (1954) described cognitive development under four different stages. First stage is called as sensorimotor, starts at birth to 2 years of age. Second stage is preoperational stage exists between 2 to 7 years, concrete stage is the third stage, between 7 to 11 years and formal stage between 11 to 15 years. The cognitive development in sensorimotor stage is extraordinary (Shulman & Capone, 2007). Because of this Piaget further divided sensorimotor stage of cognitive development into 6 different stages. As main focus is on early cognitive and language development, it is important to look closely at these six stages, as the foundations of communication behavior are formed in this period. It helps us to know links between the various aspects of cognitive, motor, and linguistic development. Table 2 shows the stages of sensorimotor development as described by Piaget (1954).

| Stage | Age range | Features |
|-----------|------------|---|
| Reflexive | Birth to | A child interacts with the environment purely through |
| | 2 months | reflexes such as sucking, looking, or grasping. |
| Primary | 2-4 months | A child begins to coordinate sensory input and new |
| Circular | | motor patters. For example, child may accidentally |
| Reaction | | suck his thumb and enjoy the sensation. He later |
| | | repeats the actions |
| Secondary | 4-8 months | Input – output patterns (schemas) become more |
| Circular | | complex and externally focused. A child may put a toy |
| Reaction | | in his mouth repeatedly to trigger a response in the |
| | | environment. |
| | | |
| | | |
| | | |

Table: 2Piaget's stages of sensorimotor development: Birth to 2 years of age

| Coordination | 8-12 months | Intentional behavior is evident in this stage. A child |
|----------------|-------------|--|
| Of Reaction | | will also combine schemas to achieve a desired effect. |
| | | A child will imitate the behavior of others. A child |
| | | recognizes the objects have particular qualities. |
| Tertiary | 12 – 18 | A child will explore new ways to achieve purpose. For |
| Circular | months | example, the child may knock over a container to |
| Reaction | | access something inside. The child is usually |
| | | beginning to walk, and has great access to new aspects |
| | | of the environment. Words also emerge, which give |
| | | the child great power and control in this stage as |
| | | communication is more sophisticated. |
| Early | 18 – 24 | Expanding language skills gives the child more ability |
| Representation | months | to control the environment. The child can now talk |
| al Thought | | about events and things that are not present using |
| | | words. |

(Ref: Shulman B. B., & Capone, 2007)

2.1.5: Motor development

Each developmental milestones is marked by intricate changes in motor and communicative skills. Motor development includes development of both gross motor and fine motor skills. Gross motor skills refers to movements involving large muscles used for sitting upright and leg muscles used for walking. Smaller muscles, such as those in the fingers or tongue, are used for fine motor tasks, such as writing or talking respectively (Shulman & Capone, 2007). WHO Multicentre Growth Reference Study Group (2006) conducted longitudinal study on more than 800 children as an international study. Results include development of motor skills from birth to 18 months. In this study author gives a

range of age in months to each skill than a specific age at which motor skills develop is given in Table 3.

Table: 3

Development of motor skills

| Sl no | Motor skill | Age range |
|-------|--------------------------|--|
| 1. | Sitting with support | 4-9 months |
| 2. | Standing with assistance | 5-11 months |
| 3. | Hands-&-knees crawling | 5 ¹ / ₂ to 13 ¹ / ₂ months |
| 4. | Walking with assistance | 6 to 14 months |
| 5. | Standing alone | 7 to 17 months |
| б. | Walking alone | 9 to 18 months |

2.1.6: Social Emotional Development

In order to be an effective communicator a person should have good social behavior. This is true also with infants (Shulman & Capone, 2007). Infants have a preference for faces, and it is through this preference that they establish the foundation for early social relationships with others. Children establish imitation skills by studying others in their environment. This practice begins as imitation of facial expressions (such as smile) and then develops into imitation of more complex behaviors, such as actions or objects (e.g., throwing a ball, emptying a container), specific motor patters (e.g., clapping, dancing) and eventually speech and language development.

Self-regulation is an important dimension in social. Development of regulatory capacity evolves from control of physiological responses to control of emotional state of attention (National Research Council & Institute of medicine, 2000). The infant's ability

to control respiration, heart rate and temperature will be less at birth, as age advances, self regulation helps to control these factors. Similar is the picture for response to different sensory stimuli like visual, auditory, tactile and with sleep-wake cycle. A strong social-emotional foundation is the key to the development of verbal language behavior. Communication development does not take in isolation but in conjunction with other developmental milestones.

Table: 4

| A (30) | Communication | Socialization |
|----------------|--|--|
| Age | Communication | Socialization |
| (months) 0. | CriesMakes noncrying speech-like | Recognizes nippleComforted by human voice |
| | sounds (usually while eating) | Smiles reflexively |
| 1. | Responds to human voiceCries for assistance | Establishes eye contactQuiets when held |
| | Makes pleasure sounds | Adjust body to person holdingSmiles |
| 2. | Distinguishes different speech sounds Makes more guttural sounds | Excites when seeing people Prefers touch and oral stimulation to social stimulation Unselective social smile |
| 3. | Coos single syllables (CV) Turns head towards voice Responds vocally to others Makes vowels (predominantly) | Visually discriminate different people and objects Recognizes mother Selective social smile |
| 4. | Babbles strings of consonants Varies pitch of vocalization Imitates tones Smiles at person speaking to them | Pays attention to faces Discriminate different faces Looks in direction of person leaving room Anticipate being lifted Laughs when played with |
| 5. | Vocalizes to toys Discriminate angry and friendly voices Experiments with sounds Imitates some sounds Responds to name | Discriminate parents and siblings from others Imitates some movements of others Displays anger when some objects are taken away |

Development of communication and social behavior

| | • Smiles and vocalizes to image in a mirror | |
|-----|---|--|
| 6. | Varies volume, pitch and rate of vocalization Vocalizes pleasure (squeals) Vocalizes displeasure | Differentiate social responses Prefers people games (i.e. peek-a-boo) Explores face of person holding them |
| 7. | Play vocally Produces several sounds in one breath Listens to vocalization of others Recognizes different tones and inflections | Resists Teases (start of humor) Laugh at funny expression Raises arms to be picked |
| 8. | Recognizes some words Repeats emphasized syllables Imitates gestures and tonal quality of adult speaker Echolalia | Act positively towards peers Attach to parent (mother) Shouts out for attention Responds to self in the mirror May prefer to be others (not left alone) |
| 9. | Produce distinct intonational patterns Imitates non speech sounds Uses social gestures Uses jargon | Explores other children "Performs" for family (i. e. "so big") Imitate play of others Plays action games May respond to name + no Attends to conversation |
| 10. | Imitate adult sounds (if in repertoire)Obeys some commands | • Becomes aware of social approval and disapproval |
| 11. | • Imitates inflections, rhythms, facial expressions | Seeks approval Anticipate parents goals for child's action and tries to change it (protest or persuasion) |
| 12. | Follow simple motor instructions with visual cues. Reacts to "No" Speaks one or more words Mixes word and jargon (Angell. C., 20) | Expresses people preferences Expresses different emotions |

(Angell. C., 2010)

Development of communication, although follows a regular pattern, is not uniform. Owing to certain demographical factors that could have an influence on an infant's developmental stages, there are likely to be differences in the ages and stages of development. For example, as shown in Table 4 motor development has a range because one child may start at one point and other in some other point. E.g., a child may start sitting with support at the age of 6 months and another at either earlier or later. There are lots of factors will creates the difference in development of communication. Gender, social background, education of parents, socio-economic status, birth order of a child, in addition to certain inherent factors like hearing, motor, social, cognitive skills could exert its own influence on communication development. Battin & Haug, (1970) reported that a few intrinsic and a few extrinsic factors could affect development of communication in infants and children.

| Tabl | 10. | 5 |
|-------|-----|---|
| 1 a01 | LC. | J |

| Factors within himself | Within child's environment |
|--|--|
| Adequate intelligence | Love, acceptance and security. |
| Near normal hearing | Healthy intrafamily relationship |
| Properly functioning speech mechanism | Allowance for, challenge to, and stimulation of the child |
| | to function at this age level |
| Average auditory memory and attention span | Allowance of the child to function within his capabilities |
| | without undue pressure or unreasonably high standards. |
| Freedom from chronic illness | Discipline which is appropriate and consistent |
| Freedom from brain injury | Sufficient time, opportunity and encouragement for self |
| | expression. |
| Good emotional balance. | Stimulation with rich language experiences so that the |
| | child will have something to talk about. |
| | Good speech standards within the family. |

Intrinsic and extrinsic factors for communication development

(Battin & Haug 1970)

Bereiter & Engleman, (1966) and Deutsch, (1967) said that children from deprived backgrounds exhibit thought processes and oral communication skills that are generally inferior to those of middle-class children. Williams (1969) reported that there are restriction and short comings in the language development of children from lower socio-economic group. Madhu, Deepa, Harshan, Suhas and Chengappa (2009) studied language development in 720 children from different regions of Karnataka (a state of India) and concluded that girls show faster development than boys, in comparison to rural children urban children had good number of vocabulary and less complex sentences. They reported even social economic background of the children will be having effect on language development. In view of the influence of demographic factors on communication development, it is necessary to examine if there are differences in communication development among such children.

2.2 Assessment of Communication

There are different ways to assess communication skills in infants. Checklists, scales, tests and inventories are the most often employed tools in clinical and field set-up. Checklist helps to examine the presence of a few specified behaviors in an individual, where as tests are used for the purpose of diagnosis of a condition. Purpose of a language test could be either for screening to check if children have any problem with language development or for diagnosis and quantification of behavior(s) in a condition.

i) Receptive Expressive Emergent Language Skills, REELS (Bzoch & league, 1971) is a scale for assessment of language development that assesses verbal language ability of a child in comprehension and expression domains. It assesses a child from zero to thirty six months of age. While the first year age range is divided into one month interval, the

second year with 2 months age interval and at third year with 3 month age interval periods. Each interval includes three skills in both comprehension and expression domains. It assesses the language ability in the phonology, semantic and syntactic domains only and does not consider the pragmatic or cognitive dimensions as a part of the assessment.

ii) Denver Developmental Screening Test II (DDST-II) developed by William & Josiah (1984). It is a performance based assesses children's development, between one month – six year. It assesses four areas of functioning: fine motor-adaptive, gross motor, personal-social and language skills.

iii) The Rossetti-Infant Toddler Scale (Rossetti, 1990) is a scale assesses the preverbal and verbal domains of language development (interaction, attachment, pragmatics, gesture play and language development and language expression). It is designed for the children from birth to 36 months. It is administered based on a child in 3 months groupings with approximately 30 items in each group. The items are compilation of author's observation, description from developmental hierarchies of behaviors recognized and used by leading authorities in the field of infant and toddler assessment. The scale is criterion referenced and measures the child's communicative behavior on direct observations and parental reports obtained through questionnaire.

iv) The communication and symbolic behavior scale (Wetherby and Pizant, 1993) is a norm referenced standardized instrument used to assesses infants, toddlers and preschool children. It is an interactive assessment designed to provide opportunities for children to communicate non-linguistically with gestures and vocalizations during play routines with

adults. It is administered on children with functional communication age of 6-24 months to 72 months. The test comprises of 22 rating scales grouped under 7 heads namely; communicative functions, gesture communicative means, verbal communicative means, vocal communicative behaviors, reciprocity, social-affective signaling and symbolic behavior.

v) Preschool language scale-4, PLS-4, (Zimmerman, Steiner, and Pond, 2002) is a Preschool Language Scale that is designed to identify young children from birth to 6 years 11 months old who have a language disorder or delay. It consists of two subscales for the assessments of auditory comprehension and expressive comprehension respectively. It also provides three supplemental measures, which include an articulation screener, a language sample checklist and a caregiver questionnaire.

Checklists, scales and tests includes skills related to verbal language (for example: REELS), and many tests fail to account for non verbal communication. Checklist and sc ales generally include critical items to decide on the presence or absence of the problem, while tests having corporate representational skills, the presence or absence of which indicate normal development of impairment. Not all tests for language account for the other related behaviors like cognition, social communication, play behaviors etc., since communication is strongly related to these above mentioned behaviors, it is necessary to assess development of language as well as these associated behaviors. Therefore, to overcome this problem language inventory is developed by a few investigators, one such being Mac Arthur Communication Developmental Inventory (1993).

Inventory includes items for a detailed profiling of developmental pattern under different domains. It also includes associated factors which are likely to influence communication development. Inventory helps in both assessment and in intervention. Inventory serves as a guide for goal setting, by finding hierarchy for items to develop. E.g., Mac Arthur's Communication Developmental Inventory CDI (Fenson et al, 1993). CDI is used by many investigators to study communication development in Children. Fenson, Dale, Reznick, Thal, Bates & Reilly (1993) developed a Mac Arthur communication developmental inventory. They included all the domains of communication, like reception, expression and cognition skills of communication. The age range is divided into two groups, eight to sixteen months and sixteen to twenty four months. Inventory is divided into three parts -the early phrases, the vocabulary, and the nonverbal communication. Early phrases include the phrases which the infant understands in that age. E. g., are you hungry? Want to go out? This section assesses only comprehension ability of the child. Vocabulary section is further divided into many parts according to different lexical categories like body parts, family members, food items, etc. In this section both comprehension and expression of lexical items are evaluated. Nonverbal communication part includes gestures, games, routines, adult imitated activities. This section assesses gestural communicating ability of the child. Authors have provided the normative values for each age group and separately for male and female children with which a clinician can understand whether a given child is following normal developmental pattern or not (See Appendix I for MacArthur Communication Developmental Inventory).

2.3 Assessment of language in the Indian Context

Receptive Expressive Emergent Language Skills, REELS (Bzoch & League. 1971) is main test which is to measure the language ability in Indian population. It assesses child for zero months to thirty six months. REELS was standardized on Indian population (Madhu, Deepa, Harshan, Suhas and Chengappa, 2009). Authors administered REELS test on 720 typically developing children in Karnataka and make necessary changes in REELS according to the Indian Developmental pattern.

The scales of early communication skills for hearing impaired (Moog & Geers, 1975) which measure the speech and language development of the hearing impaired children age range between 2 years to 8 years 11 months. Test divided into four sections-receptive language skills, expressive language skills, nonverbal receptive language skills and expressive language skills. There are two levels specified in receptive and expressive language skills section as A and B. 'A' level items describe the use of skills in structured situation and 'B' level items represents use skills spontaneously. The scales of early communication skills for hearing impaired was standardized on Indian population of hearing impaired by Swati (1993).

Preschool language scale (Vaidyanathan, 1984) assesses early communicative behavior of children in the domains of comprehension, expression and cognition using questions addressed to parents or caregivers. This was specifically intended for children in the age of 9 months to 36 months. It consists of twenty seven items grouped under 9 different age groups depending on age at which the aspects of language and cognition emerge. Unlike other language scales, this emphasizes on the pragmatic aspects and enables to identify language delay/ disorder and aids to plan appropriate intervention programs. The items from the preschool language scale were adapted to devise the 3 D LAT (Herleker, 1986). The task was framed as questions and rest of the frame work was similar to Vaidyanathan's scale. These scales measure the verbal language ability of children and pay no focus on the nonverbal language skills of preschool children. Assessment tools solely evaluating nonverbal language development are very limited, although, some tests have included assessment of non verbal language development along with verbal development. Usha (1986) found out effectiveness of 3 D LAT on hearing impaired population, whereas Kamalini, (1986) studied Mental retardation Population using 3D LAT.

Behavior Assessment Scales for Indian Children with Mental Retardation, BASIC-MR (Peshawaria and Venkatesan, 1992). A test which was developed for identification of Mentally Retarded children. This scale includes mainly 2 parts, Part A has 280 items spread over 7 skills behavioral domains and Part B has 75 items pertaining to problem behaviors. BASIC-MR focuses on older children (3-18years) than the infants, toddlers, and preschoolers. To overcome this problem Venkatesan (2002), developed a activity checklist for preschool children with developmental disabilities (ACPC-DD). It assesses the children between zero to seventy two months. The ACPC-DD consists of 400 items distributed evenly across 8 behavioral domains that are relevant to daily activities of infants, toddlers, and preschool aged children with developmental disabilities.

India is a multilingual country where we can find 5 different language families with more than 100 languages (Mallikarjun, 2002). There is another checklist which is developed for multilingual children is, language acquisition in multilingual children (Prema & Geetha, 2005). It assess children between nine months – thirty six months. Skills are classified under three domains, language domain, behavioral domain and developmental domain. Language domain includes skills with respect to communication. It considers both verbal and nonverbal language skills. Behavioral domain includes skills with respect to associated problems like learning disability, Mental retardation, Cerebral Palsy and Developmental domain skills with respect to different developmental domains like sensory, gross and fine motor and cognitive development. There are checklists and tests developed for assessment of communication skills in the Indian context. Table 6 shows the details of available checklists and tests.

Table 6

| Sl | Title of test | Authors/Year | Age | Content areas |
|----|------------------------|----------------|-------|-----------------------------------|
| No | | | range | |
| 1. | A test for assessing | Vijayalakshmi | 1-5 | It assesses comprehension and |
| | syntax in Kannada | (1981) | years | expression of a wide spectrum |
| | | | | of grammatical categories and |
| | | | | sentence types. |
| 2. | A language test in | Kathyayani. | 5-8 | It evaluates various concepts of |
| | Kannada for | 1984 | years | expressionin terms of nouns, |
| | Expression in | | | verbs, gender, markers, tense |
| | Children | | | markers. |
| 3. | A Screening Picture | Sreedevi, 1988 | 3-6 | Helps in screening languge |
| | Vocabulary Test in | | years | acquisition of Kannada speaking |
| | Kannada | | | children. Used as a clinical tool |
| | | | | to identify comprehension |
| | | | | deficiencies in language |
| | | | | disordered children. |
| 4. | A Screening Picture | Bhuvaneshwari, | 3-6 | Mainly a comprehension test. |
| | Vocabulary Test in | 1993 | years | Helps in identifying children |
| | Kannada | | | with language delay or language |
| | | | | disorders |
| 5. | Comprehensive | Navitha, 2009 | 3-6 | Assesses language abilities- |
| | language assessment | | years | reception, expression and |
| | tool for children (3-6 | | | cognition. |
| | years) | | | |

Communication development in an infant starts early in life. By first year of age child starts using meaningful words. There is rapid growth in development during the first year of life. Verbal and nonverbal communication develops in parallel in the early years. Communication skills develop in conjunction with development of other related skills. Among the tools that are developed to assess the development of communication, few focuses on nonverbal communication and much fewer number focus on the development of communication skills during the first year of life. Besides all these, majority of tests are developed and standardized for Western population. Owing to socicultural and linguistic differences use of such tests for Indian population is not appropriate. Therefore there is need to develop a tool which is descriptive and incorporates both verbal and nonverbal behaviors for Indian population.

Chapter III

METHOD

The aim of the study was to develop a communication inventory for infants in the age range 6 to 12 months. It includes prelinguistic skills, comprehension of early phrases, comprehension and expression of vocabulary and non verbal communication.

Participants were selected for the study based on the following criteria:

3.1: Inclusion criteria

- a) Infants in the age range of 6 months to 12 months
- b) Infants from the urban population who are located in Mysore city
- c) Infants without any sensory problems
- d) Infants with no other associated problems
- e) Basic metric level education in parents
- f) Infants from Kannada speaking families

3.2: Number of participants

30 infants in the age range of 6 to 12 months from Mysore city were selected as participants for the study. The participants were divided into three groups in the age range of 6-8 months, 8-10 months and 10-12 months.

| | Tabl | e: | 7 |
|--|------|----|---|
|--|------|----|---|

| | oants |
|--|-------|
| | |
| | |
| | |

| Age range | Sample size | Total | |
|--------------|---------------|-----------------|----|
| | Male children | Female children | |
| 6-8 months | 5 | 5 | 10 |
| 8-10 months | 5 | 5 | 10 |
| 10-12 months | 7 | 5 | 12 |
| Total | 17 | 15 | 32 |

3.2.1. Tools for the study

3.2.1.1: Indian high risk register

Indian high risk register is developed by the All India Institute of Speech and Hearing (2000-2001). It includes pre- peri- and post- natal risk factors which affects communication development. The high risk register contains factors that affect hearing development, factors affecting motor development and communication development. It also includes the HRR for nonmedical professionals and medical professionals. The risk register has two parts- HRR for 0-28 days of birth and HRR for 29 days – 3 years.

3.3.2.1: Screening tools

Screening was done to rule out any sensory, motor and cognitive abnormalities and to make sure child was following normal developmental pattern. Screening includes general observation, auditory screening and visual screening. a) A general observation was done to make sure that children do not have any physical abnormality.

b) Hearing screening was done with calibrated noise makers that include drum and bell. Drum to check hearing sensitivity in low frequency region and bell in high frequency regions. Drum produced 50 dB sound at 2 feet distance and bell produced 45 dB sound at 2 feet distance. Name calling with soft voice was also used as part of hearing screening. Behavioral responses like searching for sound source and localization to sound source were expected.

c) Screening for vision was carried out with light from torch and use of colorful objects.

Torch light was passed on the wall in front of children in dark room setup, eye tracking was done using colorful objects like ball and doll. Eye movement of the child was observed during screening.

3.3.3: Communication Inventory

Communication Inventory for Infants (CII, described in detail in the following section) developed in the study was used to measure communication skills of infants. The CII includes three sections prelinguistic skills, vocabulary section and nonverbal communication.

3.3.3.1 Development of the inventory

An inventory is prepared based on the literature on communication development and a few models chosen from the existing tools. Keeping the framework proposed by Mac Arthur, the CII was developed with three main components that are reported be essential for communication (See Appendix II for more details).

- i. Early communication skills
- ii. Early vocabulary
- iii. Gestures and action

Section I in includes early communication skills mainly the comprehension part like attention to the speech of the others, attention to music. This part is again divided into two sections: prelinguistic skills and early phrases.

The prelinguistic skills section part it includes the basic skills that help in language development such as attention to speech, intention for communication, memory skills, perception of emotions by facial expressions and variations in voice. The section on early phrases includes phrases such as 'look here', 'are you hungry? ', 'want to go out', 'throw the ball', for which children develop comprehension early in life.

Section II includes vocabulary, the words which develop early in life. Lexical categories such as family members, body parts, food items, birds and animals, vehicles, toys, rooms and furniture, house hold items, dress materials, action verbs, words indicates time, questioning words, adjectives, pronouns, prepositions and others. Section II assesses both comprehension and expression.

Section III includes gestures and actions. The gestures such as indicating 'no', 'yes' define early communication characteristics in addition to a few actions and play behaviors such as 'peek-a-boo' using real objects and adult imitated objects.

Summary of CII developed in the study is described in the following paragraph. Communication Inventory for Infants (CII) which includes three sections. Section 1, includes few early emergent behaviors; section 2 different lexical categories; and section 3, includes nonverbal communication. Section 1 is further divided into A and B parts, Section 1 A includes prelinguistic skills and Section B includes early phrases. Section 2 includes various lexical categories like body parts, food items, vehicles, common objects, etc., Section 2 has common components for both comprehension and expression. It includes words like quantifiers, time related words and question words. Nonverbal skills in the Section 3 were divided under 4 headings, those are first communicative features; games; actions and objects and imitating adult like actions.

3.3.3.2: Translation of items from English to Kannada

As the objective of the present research includes adaptation of Mac Arthur Communicative Development Inventory for infants from Kannada speaking family, the inventory was translated to Kannada language from English language. This translated inventory was given to three native speakers of Kannada language who are qualified post graduates in speech language pathology to check for accuracy of translated items (see Appendix III for sample response sheet). The responses received from the judges showed good agreement on all the items except on /his/ and /her/ items. Modifications were made with mutual discussion with the judges and the CII was finalized.

3.3.4: Pilot study

A pilot study was conducted on two children in each age group. Inventory was given to the mothers of infants (selected for the study) to indicate the presence or absence

of communicative skills listed in the inventory. The modifications as listed in Table 8 were made after the pilot study as the majority of mothers indicated absence of development of the listed items. The items removed from the CII before finalizing the inventory are shown in Table 8.

Table 8

| Sl. No | Sections | Number of Skills | Skills after |
|--------|-------------------------------|--------------------|--------------|
| | | before pilot study | pilot study |
| 1. | Part I a- Prelinguistic skill | 20 | 19 |
| 2. | Part I b-Early phrases | 31 | 28 |
| 3. | Vocabulary | 290 | 244 |
| 4. | Part III - gestures & actions | 44 | 38 |

Modifications in sections of CII after pilot study¹

3.4 Procedure

Brief history of the infant (see Appendix IV for details) that include general information of the child and parents, educational status of parents, annual income of the

⁽Part I a- Prelinguistic skill: sustenance of interest for upto a full minute in looking at a person or picture when named

Part I b-Early phrases: hold still, spit it out, this little dolly

Vocabulary: boy, girl, person (family members); ears, nose, teeth (body parts); curds, ice cream (food items); sparrow, squirrel, birds, donkey, frog, honey bee (animals and birds); train, airoplane (vehicles); bubbles (toys); coat, boots (dress); photos (house hold items); draw, help me (action verbs); yesterday (words about time); how much, when (question words); dry, old (descriptive words); more, another, few (quantifiers); and farm, river (other).

Part III - gestures & actions: wipe face or hands with a towel or cloth; put on necklace, bracelet or watch; talk to toy; under the heading of actions with objects. Put key in door or lock; water plants; wash dishes;)

parents, family background, birth and medical history of the infant was collected in addition to information on communication skills with the help of CII.

3.4.1.: Scoring of data: Response from mothers on the CII was scored as 'one' for presence of the specific behavior elicited by the item and 'zero' for the absence of the skill in infants. Total number of skills present in each infant and all the participants in each of the three groups were calculated from the responses of mothers.

3.4.2.: *Ethical procedure*: A written informed consent was taken from the parents (Appendix V). A booklet of inventory was given to the mothers of the children and requested to read the whole inventory and to indicate the presence or absence of communications skills in their infant. Mothers were appraised about the different sections of the CII before collecting data on infants in order to familiarize with different items on the inventory. The data obtained was computed and coded for further analysis.

3.5: Statistical analysis

SPSS 10.0 software was used to do statistical analysis for the study. Descriptive statistics was done to find out Mean and Standard deviation of communication development in each age group. One way ANOVA was used to evaluate the group difference as well as difference, if any, in all the sections of CII across different age groups and between gender. Mann-Whitney U test was used to check for specific group differences, if any. Reliability test was administered to check for test and retest reliability using Cronbach's alpha test for reliability.

CHAPTER IV

RESULTS AND DISCUSSION

Communication includes both verbal and non verbal language. A communication inventory includes items to evaluate the development of communication with other related factors that facilitate communication development. The Communication Inventory for Infants (CII) developed in the present study includes verbal language in the form of comprehension and expression of lexical categories, nonverbal language like imitating adult activities, prelinguistic skills and play behavior related to communication development.

30 infants in the age range of 6 months to 12 months were considered as participants to the study. Participants were selected from Mysore city, part of Karnataka state. All participants were taken from Kannada speaking families. Participants were divided into three groups based on their age. The mothers were requested to compile information on the basis of presence or absence of communication behavior in their infant keeping the CII as reference. Responses obtained from mothers were tabulated and subjected to statistical analyses.

i) Descriptive statistics

Descriptive statistics was done to find out Mean and Standard deviation of communication development in each age group. Mean and standard deviation of each age group across different domains were listed below in the Table 9.

Table 9

Mean and SD across different sections of communication inventory

| Sections | 6 – 8 m | onths | 8 – 10 n | nonths | 10- 12 n | nonths |
|----------------------------|---------|-------|----------|--------|----------|--------|
| | Mean | S D | Mean | S D | Mean | S D |
| | | | | | | |
| Section 1 A Prelinguistics | 10.90 | 1.66 | 13.90 | 1.37 | 15.17 | 1.99 |
| (Max=19) | | | | | | |
| Section 1 B Early phrases | 7.50 | 3.38 | 15.60 | 3.27 | 19.90 | 4.07 |
| (Max=28) | | | | | | |
| Section 2 (Max=245) | | | | | | |
| Vocab Comp | 39.80 | 19.50 | 73.00 | 13.85 | 116.92 | 34.98 |
| Vocab Exp | 5.70 | 2.16 | 12.50 | 1.84 | 12.92 | 2.90 |
| | | | | | | |
| Section 3 Nonverbal | 10.40 | 3.68 | 13.60 | 2.32 | 23.00 | 5.64 |
| Comm (Max=38) | | | | | | |

| (Total number of items=330) |
|-----------------------------|
|-----------------------------|

The Mean and SD scores indicated that the 10 - 12 month old infants showed presence of communication skills on all the sections of CII followed by 8 - 10 months group, while 6 - 8 months age group scored lowest in all domains infants was better in. In section 2 i.e., comprehension, infants Children in the 6 - 8 month age group were found to achieve around 40 words of comprehension which was lesser than the 8 - 10months group which scored 73 in comprehension vocabulary. The 10 - 12 months age group obtained the highest score 117 words in comprehension vocabulary. Standard deviation was higher in this section. Similar pattern was followed in other sections of communication inventory. In section 2 vocabulary Expression, the 10 - 12 month age and 8 - 10 month age group was scored 12.92 and 12.50 respectively. That means these two groups were not differing in turns of mean, where as standard deviation of 10 - 12 months (2.9) was more compared to 8 - 10 months age group (1.84). The 6 - 8 month age group was last with 5.7 as expressive vocabulary. Nonverbal communication part also followed similar pattern where infants in 6-8 months, 8-10 months and 10 -12 months groups showed mean scores of 10.40, 13.60 and 23.00 respectively. Figure 1 shows the development of communication skills in infants across different sections of CII. In general, high SD score for vocabulary comprehension (section 2) suggests the possibility of other factors influencing the development of comprehension skills which is discussed in the later section under relationship among demographic factors and communication development.

ii) Analysis of variance

Variance across groups and sections of CII was analyzed by employing. One way MANOVA was used to test for significant difference across age groups. Mann-Whitney U test used as Post hoc test, to find out group differences, if any, for all sections of the communication inventory. Results show that in section I A (prelinguistic skills) and section 3 (expression), the 6-8 month group differs from the other two higher groups (p > 0.9) whereas in section 3 (nonverbal communication), the 10-12 month group differs from other two lower groups, the difference being statistically significant (p > 0.9). In section 1 B (early phrases) and section 2 (comprehension), all the three groups show significant difference (p > 0.9) among each other showing a clear developmental pattern. Table 10 and Table 11 show the group-wise and skill-wise differences.

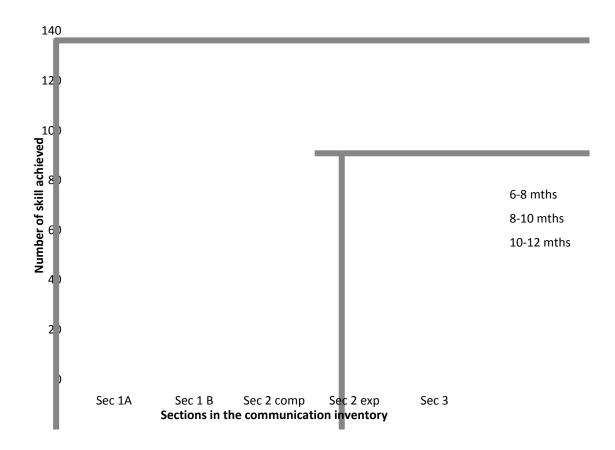
Table 10

| Sections | 6-8 months | 8-10 months | 10-12 months |
|-------------------------|------------|-------------|--------------|
| Section 1 A | 1.00 | 0.10 | 0.10 |
| Section 1 B | 1.00 | 1.00 | 1.00 |
| Section 2 comprehension | 1.00 | 1.00 | 1.00 |
| Section 3 expression | 1.00 | 0.62 | 0.62 |
| Section 3 | 0.09 | 0.09 | 1.00 |

Table 11Summary of Group-wise and skill-wise differences

| S.No | Sections | Significant difference noted |
|------|-------------|---|
| 1. | Section 1 A | Group 1 differs from Group 2 and Group 3 (1.00) |
| 2. | Section 1 B | All three groups are significantly different (1.00) |
| 3. | Section 2 A | All three groups are significantly different (1.00) |
| 4. | Section 2 B | Group 1 differs from Group 2 and Group 3 (1.00) |
| 5. | Section 3 | Group 3 differs from Group 1 and Group 2 (1.00) |

Figure 1 Communication skills in three groups of infants



iii) Test-retest Reliability Assessment

To check test retest 10 percent of the population was retested on CII. Reliability was checked after one week of first administration of communication inventory. Cronbach's alpha test was used to measure reliability. Reliability test revealed that reliability coefficient of 0.98, that means high correlation was found to first and second administration of communication inventory.

Shulman & Capone (2007) mentioned eye contact, joint attention and turn taking behaviors as the prelinguistic skills which develop during perlocutionary and illocutionary stages. Which are included in section 1 A. These are the prelinguistic skills which facilitate development of communication. As we can see above is section 1 A 6 - 8 month group differ from 8- 10 and 10-12 month age groups, where 8 - 10 and 10 - 12 month age groups did not differ with respect to acquisition of prelinguistic skills. The CII communication inventory may be either inadequate to assess the prelinguistic skills that develop in 8-10 month or 10 - 12 month age group or that the development of prelinguistic skills for communication in infants reach a plateau by this age. However, the present study does not address this question as it is designed only to develop, translate and adapt an Inventory. Section 1 B (early phrases) showed normal developmental pattern where comprehension towards phrases increased along with age. Fenson et al (1993) studied communication development and reported that comprehension towards early phrases increases with increasing in age.

As part of the communication, verbal language was divided into two parts that is comprehension and expression. In comprehension there was a growth seen with age. All the groups were differing form other groups. On an average 8 month old children comprehend 40, 10 month old children comprehend 70 and 12 month old children comprehend170. Fenson et al (1993) studied vocabulary development and reported children with age of 8 months, 10 months and 12 months acquired 37, 60 and 85 words respectively. Present study is consensus with the Fenson et al (1993) in early months that are till 8 months, after 8 months there was a difference acquisition of vocabulary. Indian children acquired vocabularies faster than children in the western countries. Cultural differences is the one of factor for difference language acquisition (Battle,1998). India is a multilingual country where there is different type of child rearing practices compare to western population(Westby, 1994) and there is different type of language stimulation at families than western population (Freedman, 1974).

In section 2 B (expression) part, 6 - 8 month age group infants differ from 8 - 10and 10 - 12 months, but no difference was found between 8 - 10 and 10 - 12 month old age group. Fenson et al (1993) reported there is increase in expressive vocabulary with age. As reported by Fenson et al (1993) children of 12 months produces around 12 words. Present study is in agreement with Fenson et al (1993) as the mean scores on expressive vocabulary was 12. 96, slightly higher than reported by Fenson (1993).

Section 3 was (nonverbal communication) showed clear pattern of development and there was no significant difference between the 6 - 8 month and 8 - 10 month group whereas 10 - 12 month old infants differed from the other two lower groups. Nonverbal communication is a part of social behavior and therefore, it may be attributed to exposure to society with age that facilitates nonverbal communication (Battin and Haug, 1970). This could be one of the reasons for the significant difference seen in third group. While there is an increase in comprehension and expression of verbal skills, there is also a parallel increase in nonverbal communication skills as reported by McNeil (1992). Suggesting that both complement each other.

Table 12

| Age | Section 1 A | Section 1B | Section2 Comp | Section 2 exp | Section 3 |
|-----------|-------------|------------|---------------|---------------|-----------|
| | | | | | |
| 6-8 mon | 0.74 | 0.16 | 0.83 | 0.82 | 0.23 |
| 8-10 mon | 1.00 | 0.66 | 0.83 | 0.16 | 0.19 |
| 10-12 mon | 0.8 | 0.56 | 0.87 | 0.93 | 0.51 |

Gender-wise differences across infant groups and sections of CII

Mann-Whitney U test was administered to find significant difference between gender across all age groups in all sections. Test result showed that there was no statistically significant difference for gender across all the age groups and the sections of CII except on section 1 A (prelinguistic skills) in the 8-10 month group (p > 0.9) and section 2 (vocabulary expression) in 10-12 month age group (p > 0.9).

Fenson et al (1993) reported that there is gender difference in language acquisition. They also said that language development is faster in female children than male children. Whereas present study is not agreeing with previous studies, which showed that there is gender difference in male and female children.

As reported earlier many factors like, education of parents, age of mother, socio economic status of the family, order of the child will influence communication development. For education of the parents, participants were divided into three groups like under graduated, graduated and post gradated. In case of age of the mother, it is divided into mother with below 25 of age an mother aged more than 25 years. For socio-economic status it is divided into 3 groups income below Rs. 10,000, between Rs.10,000 – 1,00,000 and more than Rs. 1, 00, 000. Order of the child was divided into first child and second child. Mann-Whitney U test was administered to find difference between

these groups. Results showed that there was no significant difference in any of the factors. Subgroups of each factor and number of participants were depicted in Table 13

| Sl no | Influencing factors | subgroups | Number of participants |
|-------|--------------------------|--------------------|------------------------|
| 1. | Education level | Under graduated | 14 |
| | of the parents | Graduated | 14 |
| | | Post graduated | 4 |
| 2. | Age of the mother | < 25 years | 8 |
| | | 25 years and more | 26 |
| 3. | Annual income | < 10,000 | 0 |
| | of the family | 10,000 - 1, 00,000 | 21 |
| | | 1,00,000 and more | 11 |
| 4. | Birth order of the child | First child | 20 |
| | | Second child | 12 |

| Table 13 | |
|--------------------------|------------|
| Subgroups in demographic | parameters |

Culture is communication; communication is culture (Hall, 1957). Culture has an effect on language development and intervention procedure (Battle, 1998). Many other studies reported that communication development will be influenced by many other factors like development of other skills like motor, cognitive, hearing (Boone & Plante 1993). In the present study demographic parameters did not show any effect on communication development. Reasons may include less number of participants in each group and large range of standard deviation.

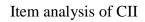
iv) Item analysis of CII

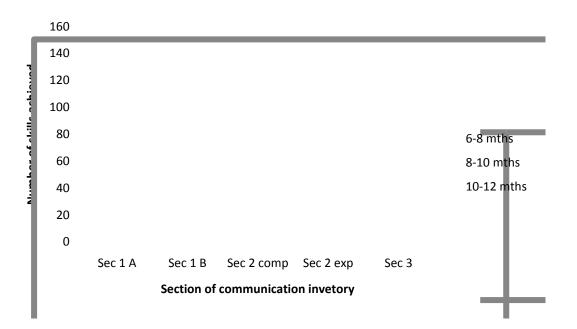
Item analysis is procedure was used to measure effectiveness of individual test item. Item analysis was done to see order of emergence of different skills during developmental period. Manual analysis method is used to do item analysis. On the basis of the scores obtained for each of the item on CII, those items which derived a positive score from more than 50% of participants in each of the age group were considered for the final list. Number of items present in each age group after item analysis is shown in Table 14. (See Appendix VI for details).

| No. of items in CII after Item Analysis | | | |
|---|--------|--------|---------|
| No. of items in original CII | 6 - 8 | 8 – 10 | 10 – 12 |
| No. of items after Item analysis | months | months | months |
| Section 1 A = 19 items | 13 | 15 | 17 |
| Section 1 B= 28 items | 6 | 18 | 26 |
| Section 2 Comp = 245 items | 32 | 75 | 137 |
| Section 2 Exp = 245 items | 8 | 10 | 10 |
| Section 3 nonverbal Comm= 38 | 10 | 22 | 29 |

Table 14

Figure 2





Chapter V

Summary

Communication is a phenomenon. When it does not happen in the oral mode, the hands, fingers and facial gestures are used for communication (Goldin-Meadow, Mordford 1985). There are two modes of communication- verbal and nonverbal. Verbal and nonverbal communication occurs simultaneously in typically developing children. Nonverbal communication is most effective in case of young children (below one year) as well as children with developmental delay. It is an area which is less researched compared to verbal communication as majority of studies are focused on verbal aspect of communication. Communication starts developing early in life i.e., as soon as the child born with birth cry and by the end of the first year a typically developing child starts verbal communication. There is a critical period for the development of communication. Studies on infants have focused on phonological development, semantic development, and on the emergence of first words.

Checklist and Tests are used to check for presence or absence of communication in children. However, these tools fail to give information on communication ability of the children. Inventory is another type of assessment tool, which gives detailed information on communication aspects of children. Most of the assessment tools focus on verbal communication skills and very few on nonverbal skills that complement communication in infants and young children. Since tools that test verbal abilities alone fail to give complete information on communication aspects of children, there is a need to incorporate component of nonverbal communication skills in any tool that is designed for infants and young children. Besides these, majority of the tools available are developed for Infants in the Western population. Direct adaptation of such tools to the Indian population is not recommended because cultural influence on verbal and nonverbal communication necessitates designing and or adaptation of the tools for the specific population and purpose. Therefore, there is an immense need to develop Inventory for assessment which gives complete information on verbal and nonverbal communication of in infants.

Present study is focused on the development of inventory which account for verbal and nonverbal communication in 6 – 12 month old children. A communication Inventory for Infants (CII) was developed, which includes three sections. Section 1, includes few early emergent behaviors; section 2 different lexical categories; and section 3, includes nonverbal communication. Section 1 is further divided into A and B parts, Section 1 A includes prelinguistic skills and Section B includes early phrases. Section 2 includes various lexical categories like body parts, food items, vehicles, common objects, etc., Section 2 has common components for both comprehension and expression. It includes words like quantifiers, time related words and question words. Nonverbal skills in the Section 3 were divided under 4 headings, those are first communicative features; games; actions and objects and imitating adult like actions.

Study includes 32 participants form the Mysore city. Participants were divided into under three age group 6 - 8 months, 8 - 10 months and 10 - 12 months. First two include five male and five female children and third group includes 7 male and 5 female children. All the participants were screened to rule sensory, neurological and cognitive deficits. For the mother of children who passed the screening, communication inventory

was given. Mothers were instructed to indicate the presence or absence of activity in their ward for the items listed in CII. Reliability check was done on 10% of the population.

Statistical analysis with SPSS version 17.0 was carried out to see significant difference in each among the three groups as well as for different sections of CII. Descriptive statistics was done to see Mean and Standard deviation. One way MANOVA was used to see significant difference in each section across age groups under study. Mann-Whitney U test was used to find group differences if any, for all the sections and age groups.

Descriptive statistics revealed that there was a difference in mean scores across the different age groups and sections of CII. It showed a developmental pattern with mean scores increasing with increase in age, which means Mean was higher for the higher age groups than lower age groups. One way MANOVA indicated a significant difference in different section across age groups. Man-Whitney U test revealed that in Variance across groups and sections of CII was analyzed by employing. Results show that in section I A (prelinguistic skills) and section 3 (expression), the 6-8 month group differs from the other two higher groups (p > 0.9) whereas in section 3 (nonverbal communication), the 10-12 month group differs from other two lower groups, the difference being statistically significant (p > 0.9). In section 1 B (early phrases) and section 2 (comprehension), all the three groups show significant difference (p > 0.9)among each other showing a clear developmental pattern. Table 10 and Table 11 show the group-wise and skill-wise differences. Present study did not show any difference in a development of communication behavior across and gender, it failed to show effects of different contributing factors on communication development like socio-economic status

of the family, education of parents and order of the children. Present study highlighted assessment of communication as a whole, than parts like verbal and non verbal communication during early childhood. It also account for the other developmental aspects of children. It also focused on usage of inventory as a tool for assessment of communication than tests and checklist.

This study is clinically relevant in terms its application on both assessment and management of children below 12 months of mental age. It helps in checking the normal developmental pattern of communication, and in identifying children with delay in communication development. This also gives guidelines to select different lexical categories in hierarchy during intervention. This can be a reference guide for the parents, pediatricians, speech language pathologists and early child educators to check communication development in infants and young children.

Further Recommendations for Research

- Study may be replicated on children above 1 year and below 6 months
- *⊯* Study may be carried out with larger population
- Study may be done on rural children and children with communication disorders

REFERENCE

- Abel, T., & Goodwyn, S. (1998). Positive and negative regulatory mechanisms that mediate long term memory storage. *Brian Research Reviews*, 26(2-3), 360-378.
- Acredolo, L., & Goodwyn, S. (1988). Symbolic gesturing in normal infants. *Child development*, 59, 450-466.
- Angel, C. A. (2010). *Language development and disorders*. A case study approach. Jones and Bartlett Publishers, Canada.
- Argyle, M. (1996). *Bodily communication*. London: Routledge.
- Bates, E., Benigi, L., Bretherton, I., Camaioni, L., & Volterra, V. (1979). In E. Bated (Ed.), *The emergence of symbols: Cognition and Communication in Infancy*. New York and London: Academic Press.
- Bates, E., Camaioni, L., & Volterra, V. (1975). The Acquisition of Performatives Proir to Speech. *Merill-Palmer Quarterly*, 21, 205-226.
- Bernstein, D. K. & Tiegerman, E. (1997). Language and Communication Disorders in Children. USA.
- Bhuvaneshwari, (1993). A Screening Picture Vocabulary Test in Kannada, Unpublished Masters Dissertation, University of Mysore.
- Burner, J. (1981). *The social context of langue acquisition. Language and Communication*, 1, 155-178.
- Bzoch, K. & League, R. (1971). *Receptive Expressive Emergent Language Scale*. Baltimore, MD: University Park Press.
- Capirci, O., Iverson, J., Pizzuto, E., & Volterra, V. (1996). Gestures and words during the transition to two-word speech. *Journal of Child Language*, 23, 645-673.
- Carroll, J. (1956). *Language, thought, and reality: selected writings of Benjamin Lee Whorf.* Cambridge, MA: MIT Press.
- Carpenter, R. L., Mastergeorge, A. M. & Coggins, T. E. (1983). The acquisition of communicative intentions in infants of eight to fifteen months of age. *Language* and Speech. 26, 101-116.
- Charman, T., Swettenham, J., Baren-Cohen, S., Cox, A., Baird, G., & Drew, A. (2000).
 An experimental investigation of social cognitive abilities in infants with
 Autism: Clinical implications. In D. Muir and A. Slater (Eds.) *Infant Development*: The Essential Readings. Malden, MA: Blackwell.
- Chen, G. M. (1995). Differences in self-discourse patterns among Americans versus Chinese: A comparative study. *Journal of cross-Cultural Psychology*, 26(1), 84-91.

- Doherty Sneddon, G. (2003). *Children's unspoken language*. London and New York: Jessica Kingsley publishers.
- Dolores E. Battle, (1998). *Communication disorders in multicultural populations*. 117-156.
- Ervin, S. (1964). Language and TAT content in bilinguals. Journal of Abnormal and Social Psychology, 68, 500-507.
- Fenson, L., Dale, P. S., Reznick, J. S., Bates, E., Thal, D. J., & Pethick, S. J. (1993). Macarthur communicative development inventories, user and technical manual. San Diego, CA: Singular.
- Fenson, L., Dale, P. S., Reznick, J. S., Bates, E., Thal, D. J., & Pethick, S. J. (1994). Variability in early communicative development. Monographs of the Society for Research in Child Development, 59 (5), 1-189.
- Frankenburg, William, K., & Dobbs, J.B. (1967). The Denver Developmental Screening Test. *The Journal of Pediatrics*,(71): 181–191.
- Freedman, D. G. (1974). Human infancy: an evolutionary perspective. Hillsdale, NJ.
- Hall, E. T. (1963). A system for the notation of proxemic behaviors. *American Anthropologist*, 65, 1003-1026.
- Harris, M., Barlow-Brown, F., & Chaisn, J. (1995). The emergence of referential understanding: Pointing and comprehension of object names. *First Language*, 15, 19-34.
- Herleker, G. (1986). *3- D Language Acquisition Test*. Unpublished masters dissertation. University of Mysore.
- Hulit, L. M., & Howard, M. R. (2002). *Born to talk: An introduction to speech and language development* (3rd ed.) Boston, Ma: Allyn & Bacon.
- Hull, P. (1987). *Bilingualism: two Languages, two personalities*? Ann Arbor, MI: University of Michigan Press.
- Indian high risk register (2001-2002) Dept. of Audiology, All India institute of speech and hearing, Mysore.
- Iverson, J. M., Caprici, O., Longobardi, E., & Caselli, M. C. (1999). Gesturing in motherchild interactions. *Cognitive Development*, 14, 57-75.
- Kamalini. P., (1986). *3D language acquisition test and Mentally retarded*. Unpublished Masters Dissertation, University of Mysore.

- Kathyayani, (1984). A language test in Kannada for Expression in Children, Unpublished Masters Dissertation, University of Mysore.
- Madhu, K., Deepa, M. S., Harshan, Suhas, K. & Shyamala Chengappa. (2009) Standaridation of Receptive Expressive Emergent Language Skills for Kannada speaking children. JAIISH, Vol 28, 96-102.
- Matsumoto, D. (2006). Culture and nonverbal behavior. In V. Manusov, & M. Patterson (Eds.). *Handbook of nonverbal communication* (pp. 219-235). Thousand Oaks, CA: Sage.
- Matsumoto, D., & Assar, M. (1992). The effects of language on judgment of universal facial expressions of emotions. *Journal of Nonverbal Behavior*, 16(2), 86-99.
- Mallikarjun B. (2002). Language in India; volume 2.
- Mc Neill, D. (1992). Hand and Mind. Chicago: University of Chicago Press.
- Minami, M., & McCabe, A. (1995). Rice balls and bear hunts: Japanese and North American family narrative patterns. *Journal of Child Language*, 22(2), 423-445.
- Moog, J. S. & Geers, A. E. (1975). Scales of Early Communication Skills for Hearing Impaired Children. St. Louis, MO: Central Institute for the Deaf.
- National research council & institute of Medicine. (2000). From neurons to neighborhoods: the science of early childhood development, Washington, DC
- Navitha, (2009). *Comprehensive language assessment tool for children (3-6 years),* Unpublished Masters Dissertation, University of Mysore.
- Nelson, K. (1973). Structure and strategy in learning to talk. *Monographs of the Society* for Research in Child Development, 38(1-2)
- Nicoladis, E., Mayberry, R., & Genesee, F. (1999). Gesture and early bilingual development. *Developmental Phonology*, 35(2), 514-526.
- Nomura, N., & Barnlund, D. (1983). Patterns of interpersonal criticism in Japan and the United States. *International Journal of Intercultural Relations*, 7(1), 1-18.
- Owens, R. E. (2005). *Language development: An introduction* (6th ed.). Boston, MA: Allyn & Bacon.
- Owens, R. E. (2008). *Language development: An introduction* (7th ed.). Boston, MA: Allyn & Bacon.
- Ozcaliskan, S. & Goldin-Meadow, S. (2005). Gesture is at the cutting edge of early language development. *Cognition*, 96, 101-113.

- Peshwaria, R., & Venkatesan, S., (1992). *Behavior assessment scale for Indian children with mental retardation*, Secunderabad. National Institute for Mentally Handicapped.
- Piaget, J. (1954). The construction of reality in the child. New York: Basic books.
- Prema, K. S. & Geetha, Y. V., (2005). *Language acquisition in multilingual children*. AIISH funded project.
- Rossetti, L. (1990). *The Rossetti Infant-Toddler Language Scale*. East Moline, II: Linguisystem.
- Shulman, B. B. & Capone, N. C. (2010). Language development; foundations, process, and clinical applications. Massachusetts.
- SPSS, Inc. (2001). SPSS *Base for windows* (version 10.0) [Computer software]. Chicago IL: SPSS, inc.
- Sreedevi, (1988). A Screening Picture Vocabulary Test in Kannada, Unpublished Masters Dissertation, University of Mysore
- Swati, C. S. (1993). Normalization of scales of early communication skills for hearing impaired on Indian population. Unpublished Masters Dissertation, University of Mysore.
- Usha, K. R. (1986). *3 dimensional language acquisition test (3D LAT) and Hearing Impaired children.* Unpublished Masters Dissertation, University of Mysore.
- Vaidyanatan, R. (1984). Verbal environment in early language acquisition: A pragmatic approach. Unpublished Doctoral Theses, University of Bombay.
- Venkatesan, S., (2002). Activity checklist for preschool children with developmental disabilities.
- Vijayalakshmi, (1981). A test for assessing syntax in Kannada. Unpublished Masters Dissertation, University of Mysore.
- Whetherby, A., & Prizant, B. (1993). *Communication and Symbolic Behavior Scales Manual: Normed Edition*. Baltimore: Paul H. Brooks.
- William & Josiah (1984), .Denver Developmental Screening Test II (DDST-II).
- World Health Organization Multicentre Growth Reference Study Group. (2006). World Health Organization motor development study: windows of achievement for six gross motor development milestones. Acta Paediatrica Supplement, 450, 86-95.

Zimmerman, Steiner, and Pond (2002). The Preschool Language Scale (4th ed.).

Appendix I

The MacArthur Communicative Development inventories:

Words and Gestures

PART I EARLY WORDS

A. First Signs of Understanding

Before children begin to speak, they show signs of understanding language by responding to familiar words and phrases. Below are some common examples. Does your child do any of these?

- 1. Respond when name is called. (e.g., by turning and looking at source).
- 2. Respond to "no no" (by stopping what he/she is doing, at least for a moment).
- 3. React to "there's mummy / daddy" by looking around for them.

B. Phrases

Will the child able understand these sentences.....?

Please mark (o) in front of the sentences which child seems to be understand

| 1. | Are you hungry? | 10. Give it to | 21. Throw the ball |
|----|-----------------|----------------------|-----------------------|
| 2. | Are you tired/ | mummy | 22. Give me a kiss |
| | sleepy? | 11. Give me a hug | 23. Daddy's/mummy |
| 3. | Be careful | 12. Go get | 's home |
| 4. | Clap your hands | 13. Good girl/boy | 24. Change diaper |
| 5. | Come on/ come | 14. Hold still | 25. Be Quite |
| | here | 15. Let's go bye bye | 26. Time to go night |
| 6. | Do you want | 16. Look / look here | night |
| | more? | 17. Open your | 27. This little piggy |
| 7. | Don't do that | mouth | 28. Want to go for a |
| 8. | Don't touch | 18. Sit down | ride? |
| 9. | Get up | 19. Spit it out | |
| | | 20. Stop it | |

C. Starting to talk

 Some children like to "parrot" or imitate things that they've just heard (including new words that they are just learning, and/ or parts of sentences, for example, repeating "work now" after mother says "mummy's is going to work now."). How often does your child imitate words?..... 2. Some children like to go around naming or labeling things, as though proud of knowing the names and wanting to show this. How often does your child do this?

D. Vocabulary check list.

If your child just understands the word mark (0) in front of the word. If your child understands as well as says the word then mark (\checkmark) in front of the word.

1. Sound effects and animal sounds

| Baa baa Choo choo cockadoodledoo mooo | ouch quack quack grrr meow | uh oh vroom woof woof yum yum |
|--|---|---|
| 2. Animal names | | |
| Animal Bear Bee Bird Bug Bunny Butterfly Cat Chicken Cow Deer Dog | Donkey Duck Elephant Fish Frog Giraffe Goose Hoarse Kitty Lamb Lion Monkey | Mouse Owl Penguin Pig Pony Puppy Sheep Squirrel Teddy bear Tiger Turtle Turtle Turkey |
| <u>3. Vehicles</u> Airplane Bicycle Bus | Car Firetruck Stroller | Motorcycle Train Truck |
| <u>4. Toys</u> | | |
| Ball Balloon Block | Book Bubbies Bubble | Doll Pen Toy |

5. Food and Drink

| Apple | Food | Candy |
|--------|-----------|-----------|
| Banana | Ice cream | Chicken |
| Bread | Juice | Cookie |
| Butter | Meet | Cracker |
| Cake | Milk | Cheese |
| Cereal | Noodles | Pizza |
| Coffee | Orange | Peas |
| Drink | Water | Spaghetti |
| Egg | Carrots | Toast |
| Fish | Cherrios | Rasin |

6. Clothing

| Beads | Diaper | Pants |
|--------|----------|---------|
| Bib | Dress | Shirt |
| Boots | Hat | Shoe |
| Button | Jacket | Socks |
| Coat | Necklace | Sweater |
| Dress | Pajamas | Zipper |

7. Body parts

| Arm | Foot | Leg |
|-------|--------|--------|
| Belly | Finger | Mouth |
| Cheek | Hair | Nose |
| Ear | Hand | Tooth |
| Eye | Head | Toe |
| Face | Knee | Tongue |

8. Furniture and Rooms

| Bathroom | Drawer | Refridgerator |
|----------|-------------|---------------|
| Bathtub | Garage | Rocking chair |
| Bed | High chair | Sink |
| Bedroom | Kitchen | Stove |
| Couch | Living room | Stairs |
| Crib | Oven | Table |
| Chair | Play pen | TV |
| Door | Potty | Window |
| | | |

9. Small House hold Items.

| Blanket | Hammer | Purse |
|---------|----------|------------|
| Bottle | Keys | Radio |
| Bowl | Lamp | Scissors |
| box | Light | Soap |
| Broom | Medicine | Spoon |
| Brush | Money | Telephone |
| Clock | Paper | Toothbrush |
| Comb | Penny | Towel |
| Cup | Pictures | Vaccum |
| Dish | Pillow | Watch |
| Fork | Plant | |
| Glass | Plate | |

10. Outside Things and places

| Backyard | Park | Snow |
|----------|--------|-------|
| Beach | Party | Star |
| Church | Pool | Store |
| Flower | Rain | Sun |
| Garden | Rock | Swinf |
| Home | School | Tree |
| House | Shovel | Water |
| Moon | Sky | Work |
| Outside | Side | Zoo |

<u>11. People</u>

| Aunty | Grandpa | Baby sister's name |
|---------|---------|--------------------|
| Boy | Mummy | Shopkeeper |
| Brother | People | Baby |
| Child | Person | Babysister |
| Daddy | Sister | Man |
| Girl | Teacher | Lady |
| Grandma | Uncle | Child's own name |

12. Games and routines

| Bath |
|----------------|
| Breakfast |
| Bye or Bye Bye |
| Dinner |
| Don't |
| Hello |
| Hi |

Lunch Night night Nap No Patty cake Peekaboo Please

Shh/Hush Thank you Wait Wanna/ Want to Yes

13. Action words

| Bite | Go | Say |
|--------|-------|--------|
| Blow | Help | See |
| Break | Hit | Show |
| Bump | Hug | Sing |
| Bring | Hurry | Sleep |
| Clean | Jump | Smile |
| Close | Kick | Splash |
| Cry | Kiss | Stop |
| Dance | Look | Swim |
| Draw | Love | Swing |
| Drink | Open | Take |
| Drive | Play | Throw |
| Eat | Pull | Touch |
| Fall | Push | Watch |
| Feed | Put | Walk |
| Finish | Read | Wash |
| Get | Ride | Wipe |
| Give | Run | Write |

14. Words about time

| Day | Night | Tomorrow |
|---------|-------|----------|
| Later | Now | Tonight |
| Morning | Today | |

15. Descriptive words

| All gone | Careful | Dry |
|----------|---------|--------|
| Asleep | Clean | Empty |
| Bad | Cold | Fast |
| Big | Cute | Fine |
| Blue | Dark | Gentle |
| Broken | Dirty | Good |
| Нарру | Nice | Tired |
| Hard | Old | Wet |
| Hot | Scared | Yucky |
| Hungry | Sick | Pretty |
| Hurt | Sleepy | Red |
| Little | Soft | |
| Naughty | Thirsty | |
| | | |

<u> 16. Pronouns</u>

| I It Her His | Me Mine My That | This You Your |
|---|----------------------------|----------------------|
| <u>17. Questions words</u> | | |
| How | When | Why |
| How many | Where | Which |
| What | Who | |
| <u>18. Prepositions</u> Away Back Down In | Inside Off On Out | There Under Up |
| <u>19. Quantifiers</u> | | |
| All | None | Same |
| Another | Not | Some |
| More | Other | |

Part II Actions and Gestures

A.First communicative features

When infants are first learning to communicate, they often use gestures to make their wishes known. For each item below, mark the line (\checkmark) that describes your childs actions right now

- 1. Extends arm to show you something he/she is holding.
- 2. Reaches out and gives you a toy or some objects that he/ she in holding.
- 3. Points (with arm and index finger extended) at some interesting object or event.
- 4. Waves bye-bye on his/her own when someone leaves.
- 5. Extends his/her upward to signal a wish to be picked up.

- 6. Shakes head "no"
- 7. Nods head "yes"
- 8. Gestures "hush" by placing finger to lips.
- 9. Requests something by extending arm and opening and closing hand.
- 10. Blows kisses from a distance.
- 11. Smacks lips in a "yum yum" gesture ti indicate that something taste good.
- 12. Shrugs to indicate "all gone" or "where'd it go".

B.Games and routines

Does your child do any of the following?

- 1. Play peekaboo
- 2. Play patty cake
- 3. Play "so big"
- 4. Play chasing games
- 5. Sing
- 6. Dance

C.Actions with objects

Does your child do/try any of the following?

- 1. Eat with a spoon or fork
- 2. Drink from a cup containing of liquid
- 3. Comb or brush his/her own hair.
- 4. Brush teeth.
- 5. Wipe face or hands with a towel or cloth.
- 6. Put on hat
- 7. Put on shoe/socks
- 8. Put on necklace, bracelet or watch
- 9. Lay head on hands and squeeze eyes shut as if sleeping.
- 10. Blow to indicate something is hot.
- 11. Hold vehicle object and make it move.
- 12. Put telephone to ear.
- 13. Throw ball
- 14. Pour pretend liquid from one container to another
- 15. Stir pretend liquid in a cup or pan with a spoon.
- 16. Shiff flowers
- 17. Talk to toy.

D. Pretending to be a Parent

How are some things that young children sometimes do with stuffed animals or dolls. Please mark the actions that you have seen your child to do.

- 1. Put to bed
- 2. Cover with blancket
- 3. Feed with bottle
- 4. Feed with spoon
- 5. Brush/comb its hair
- 6. Pat or burp it
- 7. Push in stroller/buggy
- 8. Rock it
- 9. Kiss or hug it
- 10. Try to put shoe/socks/hat on it
- 11. Talk to it
- 12. Try to put diaper on it.

E. Imitating other Adult actions (using real or toy implements).

Does your child do/try any of the following?

- 1. Sweep with broom or mop
- 2. Put key in door or lock
- 3. Pound with hammer or mallet
- 4. Attempt to use saw
- 5. "Type" at a typewriter or computer keyboard
- 6. Vaccum
- 7. Water plants
- 8. Play musical instruments
- 9. "Drive car by turning steering wheel
- 10. Wash dishes
- 11. Write with a pen, pencil, or marker
- 12. Clean with cloth or duster
- 13. Read
- 14. Dig with a showel
- 15. Put on glasses

F. Pretend objects

During play, children sometimes use an object as a replacement for other. For example, a child wishing to feed a teddy bear might pretend that a block is an apple. A child might pretend that a bowl is a hat. Have you seen your child make substitutions of this kind?

If yes, Please give several examples

Other comments

Appendix II

Communication Inventory for Infants - CII (6 – 12 months)

Name:

Date:

Age/sex:

DOB:

<u>Instructions:</u> Please tick skills which your children can able to do in section 1 A and in section 1 B please the phrases which your children able to understand. If the child is not able to do the activity keep it empty.

Section 1

A. Early skills

| Sl no | Skills | Comprehends |
|-------|--|-------------|
| 1. | Appears to be able to distinguish general meanings of warning, anger | |
| | and/or friendly voice pattern by facial and bodily gestures. | |
| 2. | Responds with appropriate gestures to words such as "come", "bye- | |
| | bye"etc. | |
| 3. | Gives some attention to music or singing. | |
| 4. | Frequently appears to listen to whole conversation around him/her. | |
| 5. | Regularly stops activity when his/her name called. | |
| 6. | Reacts to loudness changes in voice of a others. | |
| 7. | Regularly stops activity in response to "No". | |
| 8. | Reacts differently to familiar people and strangers. | |
| 9. | Appears to enjoy listening to new words. | |
| 10. | Generally able to listen to speech without being distracted by others. | |
| 11. | Mimes when action is named. Ex. When you ask "How to eat?" Child will | |
| | make action to show how to eat. | |
| 12. | Enjoys listening stories. | |
| 13. | Responds to rhythmic music by bodily or hand movements | |
| 14. | Understands words like up, down | |
| 15. | Feels happy when the child is praised for looks/ neat dress | |
| 16. | Child is possessive about his/her clothes, toys. | |
| 17. | Responds when name called. Ex. Turning back, searching for the person | |
| | who called etc. | |
| 18. | Child get angry when her objects are taken/used or broken by someone and | |
| | start fighting with them | |
| 19. | Child enjoy watching TV, looking at comics or listening to music. | |

| B. | Early phrase | S |
|----|--------------|---|
|----|--------------|---|

| Sl | Phrases | Comprehends |
|-----|--------------------|-------------|
| no | | |
| 1. | Are you hungry? | |
| 2. | Are you | |
| | tired/sleepy? | |
| 3. | Be quiet! | |
| 4. | Clap your hands | |
| 5. | Come on/ come | |
| | here | |
| 6. | Do you want more? | |
| 7. | Don't do that | |
| 8. | Don't touch | |
| 9. | Get up | |
| 10. | Give it to mummy | |
| 11. | Give me a hug/kiss | |
| 12. | Go get | |
| 13. | Good girl/boy! | |
| 14. | Let's go bye bye | |

| Sl | Phrases | Comprehends |
|-----|-------------------|-------------|
| no | | |
| 15. | Look / look here | |
| 16. | Open your mouth | |
| 17. | Sit down | |
| 18. | Stop it | |
| 19. | Throw the ball | |
| 20. | Want to go out? | |
| 21. | Do you want it? | |
| 22. | Say bye bye | |
| 23. | Sleep now? | |
| 24. | Don't cry | |
| 25. | Don't go outside. | |
| 26. | Walk slowly. | |
| 27. | This dress is not | |
| | nice | |
| 28. | Give me some | |

Part 2: Early vocabulary

Instructions: Please tick items which your children can able to do. If your child is able to understand mark in comprehends part and if child uses that word/tell that word mark in expresses part. If the child is not able to do the activity keep it empty.

1. Different sound effects

| Sl no | Items | Expresses |
|-------|-------------------|-----------|
| 1. | Ba ba | |
| 2. | Wa wa | |
| 3. | Ba ba va va ta ta | |
| 4. | Ta da va ma | |
| 5. | ambaa ambaa | |
| 6. | ko ko | |
| 7. | o ho | |
| 8. | Vroom | |
| 9. | woof woof | |
| 10. | umm | |
| 11. | Аууо | |
| 12. | amma | |

2. Family members

| Sl | Items | Comp | Exp |
|----|---------|------|-----|
| no | | | |
| 1. | Mummy | | |
| 2. | Daddy | | |
| 3. | Grandma | | |
| 4. | Grandpa | | |
| 5. | Brother | | |

| Sl | Items | Comp | Exp |
|-----|--------|------|-----|
| no | | | |
| 6. | Sister | | |
| 7. | Uncle | | |
| 8. | Aunty | | |
| 9. | Child | | |
| 10. | People | | |

3. Body parts

| Sl | Items | Comprehends | Expresses |
|----|-------|-------------|-----------|
| no | | | |
| 1. | Head | | |
| 2. | Eye | | |
| 3. | Mouth | | |
| 4. | Face | | |
| 5. | Hand | | |
| | | | |

| Sl | Items | Comprehends | Expresses |
|-----|--------|-------------|-----------|
| no | | | |
| 6. | Leg | | |
| 7. | Tummy | | |
| 8. | Cheek | | |
| 9. | Finger | | |
| 10. | Tongue | | |
| 11. | Hair | | |

4. Food items

| Sl | Items | Comp | Exp |
|-----|----------|------|-----|
| no | | | |
| 1. | Rice | | |
| 2. | Mudde | | |
| 3. | Sambar | | |
| 4. | idli | | |
| 5. | Dosa | | |
| 6. | Chappati | | |
| 7. | Water | | |
| 8. | Apple | | |
| 9. | Banana | | |
| 10. | Orange | | |
| 11. | Grapes | | |

| Sl | Items | Comp | Exp |
|-----|------------|------|-----|
| no | | | |
| 12. | Milk | | |
| 13. | Butter | | |
| 14. | Bread | | |
| 15. | Cake | | |
| 16. | Chocolates | | |
| 17. | Juice | | |
| 18. | Egg | | |
| 19. | Meat/ Fish | | |
| 20. | Coffee/tea | | |
| 21. | Food | | |

5. Animals

| Sl | Items | Comp | Exp |
|----|-----------|------|-----|
| no | | | |
| 1. | Cat | | |
| 2. | Dog | | |
| 3. | Cow | | |
| 4. | Chicken | | |
| 5. | Crow | | |
| 6. | Sheep | | |
| 7. | Butterfly | | |

| Sl | Items | Comp | Exp |
|-----|------------|------|-----|
| no | | | |
| 8. | Elephant | | |
| 9. | Animal | | |
| 10. | Monkey | | |
| 11. | Mouse | | |
| 12. | Fish | | |
| 13. | Snake | | |
| 14. | Tiger/Loin | | |

6. Vehicles

7. Toys

| Sl | Items | Comp | Exp |
|----|------------|------|-----|
| no | | | |
| | | | |
| 1. | Bus | | |
| 2. | Bicycle | | |
| 3. | Motorcycle | | |
| 4. | Car | | |
| 5. | Tempo | | |

| Sl | Items | Comp | Exp |
|----|---------|------|-----|
| no | | | |
| 1. | Ball | | |
| 2. | Balloon | | |
| 3. | Book | | |
| 4. | Doll | | |
| 5. | Pen | | |
| 6. | Тоу | | |

8. Clothing

| Sl | Items | Comp | Exp |
|----|-------------|------|-----|
| no | | | |
| 1. | Cloth/Dress | | |
| 2. | Shirt | | |
| 3. | Dothi | | |
| 4. | Pants | | |
| 5. | Nikker | | |
| 6. | Hat | | |
| 7. | Socks | | |
| 8. | Belt | | |
| 9. | Watch | | |

| Sl | Items | Comp | Exp |
|-----|------------|------|-----|
| no | | | |
| 10. | Ring | | |
| 11. | Necklace/C | | |
| | hain | | |
| 12. | Bangles | | |
| 13. | Ear rings | | |
| 14. | Saree | | |
| 15. | Skirt | | |
| 16. | Ankle lace | | |
| 17. | Sweater | | |

9. Furniture and Rooms.

| Sl | Items | Comp | Exp |
|----|----------|------|-----|
| no | | | |
| 1. | Kitchen | | |
| 2. | Bed | | |
| | Bedroom | | |
| 3. | Bathroom | | |
| 4. | Cot | | |

| S1 | Items | Comp | Exp |
|----|--------|------|-----|
| no | | | |
| 5. | Chair | | |
| 6. | Door | | |
| 7. | Stairs | | |
| 8. | Table | | |
| 9. | Window | | |

10. House hold objects

| S1 | Items | Comp | Exp |
|-----|----------|------|-----|
| no | | | |
| 1. | Blanket | | |
| 2. | Bottle | | |
| 3. | Bowl | | |
| 4. | box | | |
| 5. | Broom | | |
| 6. | Brush | | |
| 7. | Clock | | |
| 8. | Comb | | |
| 9. | Dish | | |
| 10. | Dustbin | | |
| 11. | Glass | | |
| 12. | Key | | |
| 13. | Lamp | | |
| 14. | Medicine | | |
| 15. | Money | | |
| 16. | Paper | | |

| Sl | Items | Comp | Exp |
|-----|-----------|------|-----|
| no | | | |
| 17. | Coins | | |
| 18. | Pillow | | |
| 19. | Bed | | |
| 20. | Plate | | |
| 21. | Purse | | |
| 22. | Scissors | | |
| 23. | Soap | | |
| 24. | Spoon | | |
| 25. | Towel | | |
| 26. | TV | | |
| 27. | Radio | | |
| 28. | Telephone | | |
| 29. | Fan | | |
| 30. | Plant | | |
| 31. | Umbrella | | |

11. Action words

| Sl no | Items | Comprehends | Expresses |
|-------|--------|-------------|-----------|
| 1. | Bite | | |
| 2. | Blow | | |
| 3. | Break | | |
| 4. | Bring | | |
| 5. | Clean | | |
| 6. | Close | | |
| 7. | Cry | | |
| 8. | Dance | | |
| 9. | Drink | | |
| 10. | Eat | | |
| 11. | Fall | | |
| 12. | Feed | | |
| 13. | Finish | | |
| 14. | Give | | |
| 15. | Go | | |
| 16. | Hit | | |
| 17. | Hug | | |
| 18. | Jump | | |
| 19. | Kick | | |
| 20. | Kiss | | |

| Sl no | Items | Comprehends | Expresses |
|-------|-------|-------------|-----------|
| 21. | Look | | |
| 22. | Open | | |
| 23. | Play | | |
| 24. | Pull | | |
| 25. | Push | | |
| 26. | Put | | |
| 27. | Read | | |
| 28. | Ride | | |
| 29. | Run | | |
| 30. | Say | | |
| 31. | Show | | |
| 32. | Sing | | |
| 33. | Sleep | | |
| 34. | Smile | | |
| 35. | Stop | | |
| 36. | Take | | |
| 37. | Throw | | |
| 38. | Touch | | |
| 39. | Walk | | |
| 40. | Write | | |

12. Descriptive words

| Sl | Items | Comp | Exp |
|-----|----------|------|-----|
| no | | | |
| 1. | All gone | | |
| 2. | Bad | | |
| 3. | Big | | |
| 4. | Broken | | |
| 5. | Careful | | |
| 6. | Cold | | |
| 7. | Cute | | |
| 8. | Dark | | |
| 9. | Dirty | | |
| 10. | Empty | | |
| 11. | Fast | | |
| 12. | Fine | | |
| 13. | Good | | |

| Sl | Items | Comp | Exp |
|-----|---------|------|-----|
| no | | | |
| 14. | Нарру | | |
| 15. | Hard | | |
| 16. | Hot | | |
| 17. | Hungry | | |
| 18. | Hurt | | |
| 19. | Little | | |
| 20. | Naughty | | |
| 21. | Scared | | |
| 22. | Sleepy | | |
| 23. | Soft | | |
| 24. | Thirsty | | |
| 25. | Tired | | |
| 26. | Wet | | |

13. Words about time

14. Prepositions

| Sl | Items | Comp | Exp |
|----|----------|------|-----|
| no | | | |
| 1. | Day | | |
| 2. | Later | | |
| 3. | Morning | | |
| 4. | Night | | |
| 5. | Now | | |
| 6. | Today | | |
| 7. | Tomorrow | | |

| Sl | Items | Comprehends | Expresses |
|----|---------|-------------|-----------|
| no | | | |
| 1. | Near | | |
| 2. | AwayFar | | |
| 3. | Back | | |
| 4. | Down | | |
| 5. | Up | | |
| 6. | Inside | | |
| 7. | Outside | | |

15. Pronouns

| Sl | Items | Comprehends | Expresses |
|----|-------|-------------|-----------|
| no | | | |
| 1. | Ι | | |
| 2. | Her | | |
| 3. | His | | |
| 4. | Me | | |
| 5. | Mine | | |

| Sl | Items | Comprehends | Expresses |
|-----|-------|-------------|-----------|
| no | | | |
| 6. | Му | | |
| 7. | That | | |
| 8. | This | | |
| 9. | You | | |
| 10. | Your | | |

16. Question words

| Sl no | Items | Comprehends | Expresses |
|-------|-------|-------------|-----------|
| 1. | How | | |
| 2. | What | | |
| 3. | Where | | |

| Sl no | Items | Comprehends | Expresses |
|-------|-------|-------------|-----------|
| 4. | Which | | |
| 5. | Who | | |
| 6. | Why | | |

17. Quantifiers

| Sl | Items | Comprehends | Expresses |
|----|---------|-------------|-----------|
| no | | | |
| 1. | All | | |
| 2. | Another | | |

| Sl | Items | Comprehends | Expresses |
|----|-------|-------------|-----------|
| no | | | |
| 3. | None | | |
| 4. | Same | | |

18. Others

| Sl | Items | Comprehends | Exp | Sl | Items | Comprehends | Exp |
|-----|--------|-------------|-----|-----|-----------|-------------|-----|
| no | | | | no | | | |
| 1. | Bath | | | 11. | Store | | |
| 2. | Flower | | | 12. | Sun | | |
| 3. | Garden | | | 13. | Swing | | |
| 4. | Home | | | 14. | Tree | | |
| 5. | Moon | | | 15. | Work | | |
| 6. | Pool | | | 16. | Mud | | |
| 7. | Rock | | | 17. | Wound/ | | |
| 8. | School | | | | Injury | | |
| 9. | Sky | | | 18. | Temple | | |
| 10. | Star | | | 19. | Hospital/ | | |
| | | | | | Doctor | | |
| | | | | | | | |

Section 3.

Actions and Gestures

<u>Instructions:</u> Please tick activity that your child can perform. If the child is not able to do the activity keep it empty.

a. First communicative features

| Sl | Skills | Performs the |
|-----|---|--------------|
| no | | activity |
| 1. | Extends arm to show you something he/she is holding. | |
| 2. | Reaches out and gives you a toy or some objects that he/ she in | |
| | holding. | |
| 3. | Points (with arm and index finger extended) at some interesting | |
| | object or event. | |
| 4. | Waves bye-bye on his/her own when someone leaves. | |
| 5. | Extends his/her upward to signal a wish to be picked up. | |
| 6. | Shakes head "no" | |
| 7. | Nods head " yes" | |
| 8. | Gestures "hush" by placing finger to lips. | |
| 9. | Requests something by extending arm and opening and closing | |
| | hand. | |
| 10. | Blows kisses from a distance. | |
| 11. | Smacks lips in a "yum yum" gesture ti indicate that something | |
| | taste good. | |

b. Games and routines

| Sl | Skills | Performs the |
|----|--------------------|--------------|
| no | | activity |
| 1. | Play peekaboo | |
| 2. | Play chasing games | |
| 3. | Play with a toys | |
| 4. | Sing | |
| 5. | Dance | |

c. Actions with objects

| Sl no | Skills | Performs the activity |
|-------|---|-----------------------|
| 1. | Eat with a spoon. | |
| 2. | Drink from a cup. | |
| 3. | Comb his/her own hair. | |
| 4. | Brush teeth. | |
| 5. | Put on hat | |
| 6. | Put on sandals | |
| 7. | Lay head on hands and squeeze eyes shut as if sleeping. | |
| 8. | Blow to indicate something is hot. | |
| 9. | Hold vehicle object and make it move. | |
| 10. | Put telephone to ear. | |
| 11. | Throw ball | |
| 12. | Pour liquid from one container to another | |
| 13. | Stir pretend liquid in a cup or pan with a spoon. | |
| 14. | Kiss or hug a toy. | |
| 15. | Put on glasses. | |

d. Imitating adult like actions

| Sl no | Skills | Performs the activity |
|----------|---------------------------------|-----------------------|
| 1. | Sweep with broom or mop | |
| 2. | Pound with hammer or mallet. | |
| 3. | Read (open book and turn pages) | |
| 4. | Try to ride bicycle. | |
| 5. | Clean with cloth | |
| 6. | Write with pen or pencil | |
| 7. | Dig with any object | |

$\underline{\dot{A}A^{a}A^{o}A \pm \dot{A} vA \mp \dot{A}^{2}A \otimes \ddot{A} \pm \dot{A}n \ddot{O} (6 - 12)}{\underline{WAU \dot{A}^{1} / \dot{A} \ddot{A}}}$

^{...}sÁUÀ 1: A. ªÀÄÄAa£À _.ÀA¥ÀPÀð P˱À®åUÀ¼ÀÄ

<u>ÀÆZÀ£ÉUÀ¼ÀÄ</u>: PɼÀUÉ ªÀÄPÀ̼ÀÄ ªÀiÁqÀ§°ÀÄzÁAvÀ°À PÉ®ªÀÅ P˱À®åUÀ¼À£ÀÄß ¤ÃqÀ⁻ÁVzÉ. "sÁUÀ 1 A gÀ°è, ¤ªÀÄä ªÀÄUÀÄ ªÀiÁqÀ§°ÀÄzÁAvÀ°À P˱À®åUÀ¼À ªÀÄÄAzÉ UÀÄgÀÄvÀÄ °ÁQ, "sÁUÀ gÀ°è ¤ªÀÄä ªÀÄUÀÄ CxÀðªÀiÁrPÉÆ¼ÀÄĩªÀ ªÁPÀåUÀ¼À ªÀÄÄAzÉ UÀÄgÀÄvÀÄ °ÁQ. ¤ªÀÄä ªÀÄUÀÄ ªÀiÁqÀ⁻ÁUÀ¢gÀĪÀ P˱À®åUÀ¼À ªÀÄÄA¢gÀĪÀ eÁUÀªÀ£ÀÄß SÁ° ©r.

| PÀæªÀ Ä ¸ÀASÉ å | *ÁPÀåUÀ¼ÀÄ | CxÀðªÀi Ár PÉÆ¼À ÄîvÀÛz É |
|--------------------------|--|---------------------------------------|
| 1. | ^a ÀÄÄR sÁ ^a À£ÀÄß CxÀð ^a ÀiÁrPÉÆ¼ÀÄîvÀÛzÉ. (PÉÆÃ¥À, ¸ÀAvÉÆÃµÀ) | |
| 2. | PÉ®ªÀÅ ¥ÀzÀUÀ¼À£ÀÄß CxÀðªÀiÁrPÉÆAqÀÄ ¸ÀÆPÀÛªÁzÀ ¥ÀæwQæAiÉÄAiÀÄ£ÀÄß ¤ÃqÀÄvÀÛªÉ. GzÀ: ¨Á, mÁ mÁ | |
| 3. | ,ÀAVÃvÀPÉÌ UÀªÀÄ£À PÉÆqÀĪÀÅzÀÄ. | |
| 4. | CªÀ£À/CªÀ¼À ¸ÀÄvÀÛªÀÄÄvÀÛ £ÀqÉAiÀÄĪÀ ¥ÀÇgÀ ¸ÀA¨sÁµÀuÉAiÀÄ£ÀÄß D°¹zÀAvÉ PÁtÄvÀÛzÉ. | |
| 5. | ĊªÀ£À/ĊªÀ¼À °É,ÀgÀ£ÀÄß PÀjzÁUÀ ªÀiÁqÀÄwÛgÀĪÀ PÉ®,ÀªÀ£ÀÄß ¤°è,ÀÄvÀÛzÉ. | |
| 6. | zsÀé¤AiÀİè£À ªÀåvÁå,ÀªÀ£ÀÄß CxÀðªÀiÁrPÉÆ¼ÀÄîvÀÛzÉ. | |
| 7. | ¨ÉÃqÀ JAzÀÄ °ÉýzÀgÉ ªÀiÁqÀĪÀ PÉ®¸ÀªÀ£ÀÄß ¤°è¸ÀÄvÀÛzÉ. | |
| 8. | ¥ÀjavÀgÀÄ ªÀÄvÀÄÛ C¥ÀjavÀgÉÆA¢UÉ ¨ÉÃgÉ ¨ÉÃgÉAiÀiÁV ¥ÀæwQæ¬Ä¸ÀÄvÀÛzÉ. | |
| 9. | °ÉÆ À ¥ÀzÀUÀ¼À£ÀÄß PÉüÀ®Ä GvÁì°À vÉÆÃjzÀAvÉ PÁtÄvÀÛzÉ. | |
| 10. | [¨] ÉgÉAiÉÄqÉUÉ UÀªÀÄ£À ºÀj¸ÀzÉ ªÀiÁvÀ£ÀÄß ¥ÀÇtðªÁV PÉüÀÄvÀÛzÉ. | |
| 11. | PÉ®,ÀªÀ£ÀÄß ºÉýzÁUÀ C©ü£À¬Ä¹ vÉÆÃj,ÀÄvÀÛzÉ. GzÀ; Hl ªÀiÁqÀĪÀÅzÀÄ ºÉÃUÉ? | |
| 12. | PÀvÉ PÉüÀ®Ä RĶ¥ÀqÀÄvÀÛzÉ. | |
| 13. | ¸ÀAVÃvÀPÉÌ ªÉÄÊ PĚÊ ZÀ°¹ ¥ÀæwQæ¬Ä¸ÀÄvÀÛzÉ. | |
| 14. | [•] ÉÄÃ ⁻ É,PɼÀUÉ (¸ÀܼÁzÁjvÀ) ¥ÀzÀUÀ¼À£ÀÄβ | |

| | CxÀðªÀiÁrPÉÆ¼ÀÄîvÀÛzÉ. | |
|-----|--|--|
| 15. | ZÉ£ÀßV PÁtÄw¢ÃAiÀÄ JAzÀÄ °ÉýzÁUÀ | |
| | RĶ¥ÀqÀÄvÀÛzÉ. | |
| 16. | vÀ£Àß ªÀ,ÀÄÛUÀ¼À£ÀÄß ¨ÉÃgÉAiÀĪÀjUÉ | |
| | ©lÄÖPÉÆqÀĪÀÅ¢®è. | |
| 17. | °É,ÀgÀÄ PÀgÉzÁUÀ ¥ÀæwQæ¬Ä,ÀÄvÀÛzÉ GzÀ: wgÀÄV | |
| | £ÉÆqÀĪÀÅzÀgÀ ªÀÄÆ®PÀ, PÀgÉzÀ ªÀåQÛUÁV | |
| | °ÀÄqÀÄPÀĪÀÅzÀgÀ ªÀÄÆ®PÀ | |
| 18. | "ÉÃgÉAiÀĪÀgÀÄ vÀ£Àß ªÀ,ÀÄÛUÀ¼À£ÀÄß | |
| | vÉUÉzÀÄPÉÆAqÁUÀ, G¥ÀAiÉÆV¹zÁUÀ CxÀªÁ | |
| | °Á¼ÀĪÀiÁrzÁUÀ PÉÆÃ¦¹PÉÆ¼ÀÄîvÀÛzÉ/ | |
| | dUÀ¼ÀªÁqÀÄvÀÛzÉ. | |
| 19. | °ÁqÀ£ÀÄβ PÉüÀ®Ä, n. «£ÉÆÃqÀ®Ä RÄ⅔ÀqÀÄvÀÛzÉ. | |

B: ªÉÆzÀ® ªÁPÀåUÀ¼ÀÄ

| PÀæ ^a | ªÁPÀåUÀ¼ÀÄ | CxÀðªÀiÁr- |
|------------------|-------------------------|------------------|
| ÀÄ | | PÉÆ¼ÀÄîv ÌŶ Ś |
| ,ÀAS | | ÀÛzÉ |
| Éå | | |
| 1. | °À¹ªÁUÀÄwÛzÉ | |
| | AiÉÄÃ? | |
| 2. | ¤zÉæ | |
| | §gÀÄwÛzÉAiÉ | |
| | Ä?/ | |
| | ,ÀÄ,ÁÛVzÉAiÀ | |
| | Ä? | |
| 3. | ±À§Ý | |
| | ªÀiẤqÀ ÉÃqÀ | |
| 4. | ZÀ¥Á¼É °ÉÆr | |
| 5. | Á E°è | |
| 6. | E£ÀÄß | |
| | ÉÃPÉÃ? | |
| 7. | CzÀ£ÀÄß | |
| | ªÀiÁqÀ¨ÉÃqÀ/ | |
| | , ÀĪÀÄä¤gÀÄ | |
| 8. | ªÀÄÄlÖ ÉÃqÀ | |
| 9. | K¼ÀÄ ªÉÄïÉ | |
| 10. | CªÀÄä¤UÉ | |
| | PÉÆqÀÄ | |
| 11. | £À£ÀUÉÆAzÀ | |
| | Ä ªÀÄÄvÀÄÛ | |

| | PÉÆqÀÄ | |
|------------------|---------------------------|------------|
| 12. | °ÉÆÃV | |
| | vÉUÉzÀÄPÉÆA | |
| | qÀÄ Á | |
| 13. | eÁt | |
| | °ÀÄqÀÄUÀ/°ÀÄ | |
| | qÀÄV | |
| PÀæ ^a | ^a ÁPÀåUÀ¼ÀÄ | CxÀðªÀiÁr- |
| ÀÄ | | ₽ÉÆ¼ÀÄîv |
| ှÀAS Éå | | ÀÛzÉ |
| Éå | | |
| 14. | £Ér °ÉÆUÉÆÃt | |
| | mÁ mÁ | |
| 15. | E°è £ÉÆqÀÄ | |
| 16. | Á¬Ä vÉV | |
| 17. | PÀÄ ¹ ⁄2vÀÄPÉÆ | |
| 18. | ¤°è,ÀÄ | |
| 19. | ZÉAqÀ£ÀÄß J ¹ | |
| 20. | ⁰ÉÆgÀUÉ | |
| | ⁰ÉÆÃUÀ | |
| | ÉÃPÁ? | |
| 21. | ¤£ÀUÉ "ÉÃPÁ? | |
| 22. | mÁ mÁ | |
| | °ÉüÀÄ | |
| 23. | FUÀ ªÀÄ®UÀÄ | |
| 24. | C¼À¨ÉÃqÀ | |

| 25. | °ÉÆgÀUÉ | |
|-----|--------------|--|
| | °ÉÆÃUÀ¨ÉÃqÀ | |
| 26. | ¤zÁ£ÀªÁV £Àr | |
| 27. | F §mÉÖ | |
| | ZÉ£ÁßV®è | |

| 28. | £À£ÀUÉ ¸Àé®à | |
|-----|--------------|--|
| | PÉÆqÀÄ | |

["]sÁUÀ 2 : ^aÀÄÄAa£À ¥ÀzÀ¥ÀnÖ

<u>ÀÆZÀ£ÉUÀ¼ÀÄ</u>: PɼÀUÉ PÉÆnÖgÀĪÀ ¥ÀzÀUÀ¼À£ÀÄß ¤ªÀÄä ªÀÄUÀÄ CxÀð ªÀiÁrPÉÆAqÀ°è, CxÀðªÀiÁrPÉÆ¼ÀÄîvÀÛzÉ JA§°èAiÀÄÄ; °ÉüÀÄwÛzÀÝgÉ, °ÉüÀÄvÀÛzÉ JA§°è UÀÄgÀÄvÀÄ °ÁQ. ¤ªÀÄä ªÀÄUÀÄ ªÀiÁqÀ⁻ÁUÀ¢gÀĪÀ P˱À®åUÀ¼À ªÀÄÄA¢gÀĪÀ eÁUÀªÀ£ÀÄß SÁ° ©r.

°ÉüÀÄvÀÛz PÀæ^aÀ ¥ÀzÀUÀ¼À É Ä Ä **ÀASÉ** å "Á "Á 1. ªÁ ªÁ 2. "Á "Á ªÁ ªÁ 3. vÀ vÀ vÀ zÀ ªÀ 4. ªÀÄ CA"Á CA"Á 5.

1. ««zÀ jÃwAiÀÄ ±À§ÝUÀ¼ÀÄ

| 9. | PÉÆ PÉÆ | |
|--------------|------------|-----------|
| PÀæªÀ | ¥ÀzÀUÀ¼À | °ÉüÀÄvÀÛz |
| Ä | Ä | É |
| ,ÀASÉ | | |
| å | | |
| 10. | M °ÉÆ | |
| 11. | qÀ gïæ gïæ | |
| | gïæ | |
| 12. | G¥sï G¥sï | |
| 13. | CªÀiï | |
| 14. | CAiÉÆÃ | |

2. PÀÄlÄA§ 'ÀzÀ 'ÀågÀÄ

| PÀæ ªÀÄ ¸ÀA SÉå | ¥ÀzÀUÀ¼À Ä | CxÀðªÀi Ár PÉÆ¼À ÄîvÀÛz É | ⁰ÉüÀ ÄvÀÛzÉ |
|--------------------------|--------------------------------------|---------------------------------------|----------------|
| 1. | CªÀÄä | | |
| 2. | C¥Àà | | |
| 3. | CfÓ | | |
| 4. | CdÓ/vÁvÀ | | |
| 5. | CtÚ/vÀªÀÄä | | |
| 6. | CPÀÌ/vÀAV | | |
| 7. | ^a ÀiÁ ^a À/aPÀÌ | | |
| | ¥Àà/ | | |
| | zÉÆqÀØ¥À | | |

| | à | |
|-----|-----------|--|
| 8. | CvÉÛ/aPÀ̪ | |
| | ÀÄä/ | |
| | zÉÆqÀتÀ | |
| | Ää | |
| 9. | ªÀÄUÀÄ/¥ | |
| | Á¥ÀÅ | |
| 10. | d£À | |

3. zÉðÀzÀ "sÁUÀUÀ¼ÀÄ

| PÀæªÀÄ ¸ÀASÉå | ¥ÀzÀUÀ¼ÀÄ | CxÀðªÀiÁr PÉÆ¼ÀÄîvÀÛzÉ | °ÉÃ |
|------------------|-----------|---------------------------|-----|
| 1 | vÀ⁻É | | |
| 2. | PÀtÄÚ | | |
| 3. | '″Á¬Ä | | |
| 4. | ªÀÄÄR | | |

| 5. | PÉÊ | 9. | "ÉgÀ | ⁄4ÀÄ | |
|----|--------|-----|------|------|--|
| 6. | P稀 | 10. | £Á°U | É | |
| 7. | °ÉÆmÉÖ | 11. | PÀÆ | zÀ®Ä | |
| 8. | PÉ£Éß | | | | |

4. Hl/wAr

| PÀæªÀÄ ¸ÀASÉå | ¥ÀzÀUÀ¼ÀÄ | CxÀð ªÀiÁrPÉÆ¼À | PÀæªÀÄ Ä į̀XÀŜǼa | ° ¥À½ÀÜÀ¼ÌÀĤ | | CxÀð ªÀiÁrPÉÆ¼ÀÄîvÀÛzI |
|------------------|----------------------|--------------------|----------------------------|-------------------------|-----|---------------------------|
| 1. | C£Àß | | 12. | °Á®Ä | | |
| 2. | ªÀÄÄzÉÝ | | 13. | ÉuÉÚ | | |
| 3. | <i></i> ,ÁA§gï/,ÁgÀÄ | | 14. | ÉæqÀÄØ | | |
| 4. | Erè | | 15. | PÉÃPï | | |
| 5. | zÉÆÃ¸É | | 16. | ZÉÆPÉÆÃ ⁻ ÉÂ | Ĺmï | |
| 6. | ZÀ¥Áw | | 17. | dÄå¸ï | | |
| 7. | ¤ÃgÀÄ | | 18. | ªÉÆmÉÖ | | |
| 8. | ,ÉçÄ | | 19. | ªÀiÁA,À | | |
| 9. | ¨Á¼É⁰ÀtÄÚ | | | /ǀ̣ˀ | | |
| 10. | QvÀۼɰÀtÄÚ | | 20. | PÁ¦ü∕ nÃ | | |
| 11. | zÁæQë °ÀtÄÚ | | 21. | Hl | | |

5. ¥Áæt ¥ÀQëUÀ¼ÀÄ

| PÀ æ ^a À Ä ¸ÀA SÉå | ¥ÀzÀU À¼ÀÄ | CxÀð ªÀiÁrPÉÆ¼ ÀÄîvÀÛzÉ | °ÉüÀ ÄvÀÛz É |
|---|-----------------|-------------------------------|--------------------|
| 1. | "ÉPÀÄ Ì | | |
| 2. | £Á¬Äª ÀÄj | | |
| 3. | °À¸ÀÄ | | |
| 3. 4. | PÉÆÃ ¹∕₂ªÀÄj | | |
| 5. | PÁUÉ | | |
| 6. | PÀÄj | | |
| 7. | amÉÖ | | |

| PÀ æ ^a À Ä ¸ÀA SÉå | ¥ÀzÀU À¼ÀÄ | CxÀð ªÀiÁrPÉÆ¼ ÀÄîvÀÛzÉ | °ÉüÀ ÄvÀÛz É |
|---|---------------|-------------------------------|--------------------|
| 8. | D£É | | |
| 9. | ¥ÁætÂ | | |
| 10. | PÉÆÃ | | |
| | W | | |
| 11. | E° | | |
| 12. | «ÄãÀ | | |
| | Ä | | |
| 13. | °ÁªÀÅ | | |
| 14. | °Àİ/1 | | |
| | A°À | | |

5. ªÁ°À£ÀUÀ¼ÀÄ

| | ¥ÀzÀUÀ¼ÀÄ | CxÀð | | ⁰Éù | 4ÀÄvÀÛzÉ | | | |
|---------------|---------------|----------------------------|--------------|------|----------|---|-------------------------------|----|
| ,ÀASÉå | | ^a ÀiÁrPÉÆ¼ÀÄîvÀ | Up Ka | eªÀÄ | ¥ÀzÀUÀ¼ | Ä | CxÀð | °É |
| 1. | § ¸ÀÄì | | | SÉå | | | ^a ÀiÁrPÉÆ¼ÀÄîvÀÛzÉ | |
| 2. | ,ÉÊPÀ⁻ï | | 4. | | PÁgÀÄ | | | |
| 3. | ¸ÀÆÌlgï∕¨ÉÊPï | | 5. | | mÉA¥ÉÇ | | | |

6. DlzÀ ,ÁªÀiÁ£ÀÄUÀ¼ÀÄ

| PÀæ ^a ÀÄ ¸ÀAS Éå | ¥ÀzÀU À¼ÀÄ | CxÀð ªÀiÁrPÉÆ¼ ÀÄîvÀÛzÉ | °ÉüÀ ÄvÀÛz É |
|--------------------------------------|--------------------|-------------------------------|--------------------|
| 1. | ZÉAqÀ Ä | | |
| 2. | ¦Ã¦∕ §®Æ£ ÀÄ | | |
| 3. | ¥ÀÅ,À | | |

| PÀæ ^a ÀÄ ¸ÀAS Éå | ÛPÀ ¥ÀzÀU À¼ÀÄ | CxÀð ªÀiÁrPÉÆ¼ ÀÄîvÀÛzÉ | °ÉüÀ ÄvÀÛz É |
|--------------------------------------|-----------------------|-------------------------------|--------------------|
| 4. | UÉÆA É | | |
| 5. | ¥É£ÀÄ ß | | |
| 6. | CnPÉ | | |

9. PÉÆoÀr *ÀÄvÀÄÛ ¦ÃmÉÆÃ¥ÀPÀgÀt

| PÀæ | ¥ÀzÀUÀ | CxÀðªÀiÁ | °ÉüÀÄ |
|-----------|---------|----------|-------|
| ªÀÄ | ¼ÀÄ | r | vÀÛzÉ |
| ÀA | | PÉÆ¼ÀÄ | |
| SÉå | | îvÀÛzÉ | |
| 1. | CqÀÄU | | |
| | ɪÀÄ£É | | |
| 2. | ªÀÄ®UÀ | | |
| | ĪÀ | | |
| | PÉÆÃuÉ | | |
| 3. | ÅߣÀz | | |
| | À ªÀÄ£É | | |
| 4. | ªÀÄAZÀ | | |

PÀÄað 5. °ÉüÀÄ vÀÛzÉ ¥ÀzÀUÀ CxÀðªÀiÁ PÀæ ªÀÄ ¼ÀÄ r PÉÆ¼ÀÄ ÀA ŚÉå îvÀÛzÉ ¨ÁV®Ä 6. ªÉÄnÖ® 7. Ä ªÉÄÃdÄ/ 8. mÉç⁻ï 9. QlQ

10. GqÀÄUÉ vÉÆqÀÄUÉ

| PÀ æ ^a À Ä | ¥ÀzÀUÀ ¼ÀÄ | CxÀðªÀiÁ r PÉÆ¼ÀÄ îvÀÛzÉ | °ÉüÀÄ vÀÛzÉ |
|-----------------------------|---------------|-----------------------------------|----------------|
| ÀA SÉå | | IVAULE | |
| 1. | §mÉÖ | | |
| 2. | µÀmïð | | |
| 3. | ¥ÀAZÉ | | |
| 4. | ¥ÁåAmï | | |
| 5. | ¤PÀÌgï | | |
| 6. | mÉÆÃ¦ | | |
| 7. | P稀 | | |
| | aî | | |
| 8. | ‴É⁻ïÖ | | |
| 9. | PÉÊUÀr | | |
| | AiÀiÁgÀ | | |
| | / ªÁZÀÄ | | |
| | | | |
| PÀ | ¥ÀzÀUÀ | CxÀðªÀiÁ | °ÉüÀÄ |

| æ ^a À Ä ¸ÀA SÉå | ¼ÀÄ | r PÉÆ¼ÀÄ îvÀÛzÉ | vÀÛzÉ |
|-------------------------------------|-------------|-----------------------|-------|
| 10. | GAUÀÄ gÀ | | |
| 11. | ,ÀgÀ | | |
| 12. | §¼É | | |
| 13. | Q«N⁻É | | |
| 14. | ¹ÃgÉ | | |
| 15. | ®AUÀ | | |
| 16. | PÁ⁻ÉÎeÉ | | |
| | Ó | | |
| 17. | ,Éélgï | | |

10. *ÀÄ£ÉAiÀİè EqÀ§°ÀÄzÁAvÀ°À *À,ÀÄÛUÀ¼ÀÄ

| PÀ | ¥ÀzÀUÀ¼À | CxÀðªÀi | °ÉüÀ |
|------------------------------------|---|---------|-------|
| æªÀ Ä | Ä | Ár | ÄvÀÛz |
| Ą | | PÉÆ¼À | É |
| ∫ÀA SÉå | | ÄîvÀÛzÉ | |
| | , | | |
| 1. | °ÉÆ¢PÉ/PÀ | | |
| | A§1⁄2 | | |
| 2. | A§½ ¹Ã,É/⁻ÉÆÃ mÉ⁻ï | | |
| | mÉ⁻ï | | |
| 3. | §lÖ®Ä | | |
| 4. | qÀ§â | | |
| 5. | ¥ÉÇgÀPÉ | | |
| 6. | §æµï | | |
| 7. | UÀrAiÀiÁg | | |
| | À | | |
| 8. | ÁZÀuÉUÉ | | |
| 9. | ¥ÁvÉæ | | |
| 10. | PÀ,ÀzÀ | | |
| | §ÄnÖ | | |
| PÀ | ¥ÀzÀUÀ¼À | CxÀðªÀi | °ÉüÀ |
| æ ^a À Ä ÅA SÉå | Ä | Ár | ÄvÀÛz |
| Ä | | PÉÆ¼À | É |
| ÀA | | ÄîvÀÛzÉ | |
| | , | | |
| 11. | UÁè,ï | | |
| 12. | ©ÃUÀzÀ | | |

| AUUA | | | |
|-----------------------------|--------------------|------------------------|--------------------|
| | PÉÊ | | |
| 13. | ¢Ã¥À | | |
| 14. | OµÀzÀ | | |
| 15. | zÀÄqÀÄØ | | |
| 16. | PÁUÀzÀ | | |
| 17. | PÁ,ÀÄ/£Át | | |
| | å | | |
| 18. | ¢A§Ä | | |
| 19. | °Á¹UÉ | | |
| 20. | vÀmÉÖ | | |
| PÀ | ¥ÀzÀUÀ¼À | CxÀðªÀi | °ÉüÀ |
| æªÀ | Ä | Ár | ÄvÀÛz |
| Ä | | PÉÆ¼À | É |
| JÀA | | ÄîvÀÛzÉ | |
| SÉå | | | |
| 21. | PÉÊaî/¥ | | |
| | À¸ïð | | |
| 22. | PÀwæ | | |
| 23. | ,ÉÆÃ¥ÀÅ | | |
| 24. | ZÀªÀÄZÀ | | |
| 25. | lªÀ ⁻ ï | | |
| | | | |
| | | 1 | 1 |
| | | | |
| PÀ | ¥ÀzÀUÀ¼À | CxÀðªÀi | °ÉüÀ |
| PÀ æ ^a À Ä | ¥ÀzÀUÀ¼À Ä | CxÀðªÀi Ár PÉÆ¼À | °ÉüÀ ÄvÀÛz É |

| ÀA SÉå | | ÄîvÀÛzÉ | |
|-----------|---------------|---------|--|
| 26. | n. « | | |
| 27. | gÉÃrAiÉÆ Ã | | |

| 28. | ¥ÉÇãÀÄ | |
|-----|---------|--|
| 29. | ¥sÁå£ï | |
| 30. | VqÀ/¸À¹ | |
| 31. | bÀwæ | |
| | | |

11. QæAiÀiÁ ¥ÀzÀUÀ¼ÀÄ

| PÀ m ^a à | ¥ÀzÀUÀ¼ ÀÄ | CxÀð ªÀiÁr | ⁰ÉüÀ ÄvÀÛz |
|------------------------|--|---------------|---------------|
| æ ^a À Ä | AA | AIAF PÉÆ¼À | AVAUZ É |
| ÀA | | ÄîvÀÛzÉ | Ľ |
| ÀA SÉå | | | |
| 1. 2. 3. 4. | PÀZÀÄÑ | | |
| 2. | HzÀÄ | | |
| 3. | ªÀÄÄj | | |
| 4. | vÉUÉzÀÄ | | |
| | PÉÆAqÀÄ | | |
| | "Á | | |
| 5. | ±ÀÄa | | |
| | ^a ÀiÁqÀÄ ^a ÀÄÄZÀÄ | | |
| 6. | | | |
| | Ñ | | |
| 7. | C¼ÀÄ | | |
| 8. | PÀÄtÂ | | |
| 9. | PÀÄr | | |
| 10. | w£ÀÄß | | |
| 11. | ©Ã¼ÀÄ | | |
| 12. | w¤ß¸ÀÄ | | |
| 13. | ªÀÄÄÄV¸À | | |
| | Ä | | |
| 14. | PÉÆqÀÄ | | |
| 15. | °ÉÆÂUÀÄ | | |
| 16. | °ÉÆr | | |
| 17. | vÀ©âPÉÆ | | |
| 18. | £ÉV | | |
| 19. | M¢ | | |

| [| | | |
|-----|-------------------------------|-------------------|-------|
| PÀ | ¥ÀzÀUÀ¼ | CxÀð | °ÉüÀ |
| æªÀ | ÀÄ | ^a ÀiÁr | ÄvÀÛz |
| Ä | | PÉÆ¼À | É |
| ,ÀA | | ÄîvÀÛzÉ | |
| SÉå | <u> </u> | | |
| 20. | ªÀÄÄwÛq | | |
| | ÀÄ | | |
| 21. | £ÉÆÃqÀÄ | | |
| 22. | vÉUÉ | | |
| 23. | DqÀÄ | | |
| 24. | J ¹ / ₂ | | |
| 25. | vÀ¼ÀÄî | | |
| 26. | EqÀÄ | | |
| 27. | NzÀÄ | | |
| 28. | Nr,ÀÄ | | |
| 29. | NqÀÄ | | |
| 30. | °ÉüÀÄ | | |
| 31. | vÉÆÃj¸ÀÄ | | |
| 32. | °ÁqÀÄ ªÀÄ®UÀÄ | | |
| 33. | ªÀÄ®UÀÄ | | |
| 34. | £ÀUÀÄ | | |
| 35. | ¤°è¸ÀÄ | | |
| 36. | vÉUÉ¢PÉ | | |
| | Æ | | |
| 37. | J1 | | |
| 38. | ªÀÄÄlÄÖ | | |
| 39. | £Àr | | |
| 40. | § j | | |

12. PÁ® ,ÀÆavÀ ¥ÀzÀUÀ¼ÀÄ

| PÀæ ªÀÄ ¸ÀA SÉå | ¥ÀzÀU À¼ÀÄ | CxÀð ªÀiÁrPÉÆ¼ ÀÄîvÀÛzÉ | ⁰ÉüÀ ÄvÀÛzÉ |
|--------------------------|----------------------|-------------------------------|----------------|
| 1. | °ÀUÀ ®Ä | | |
| 2. | gÁwæ | | |
| 3. | ɽUÉ Î | | |
| 4. | DªÉÄÃ ⁻É | | |

| | PÀæ ªÀÄ ¸ÀA SÉå | ¥ÀzÀU À¼ÀÄ | CxÀð ªÀiÁrPÉÆ¼ ÀÄîvÀÛzÉ | °ÉüÀ ÄvÀÛzÉ |
|---|--------------------------|---------------|-------------------------------|----------------|
| Γ | 5. | FUÀ | | |
| | 6. | EªÀvÀ ÄÛ | | |
| ſ | 7. | £Á¼É | | |

13. ¥Àæ±ÁßxÀðPÀ ¥ÀzÀUÀ¼ÀÄ

| PÀ æªÀ Ä ¸ÀA SÉå | ¥ÀzÀU À¼ÀÄ | CxÀð *ÀiÁrPÉÆ¼ ÀÄîvÀÛzÉ | °ÉüÀ ÄvÀÛz É |
|------------------------------|---------------|-------------------------------|--------------------|
| 1. | ⁰ÉÃUÉ | | |
| 2. | K£ÀÄ | | |
| 3. | J°è | | |
| PÀ | ¥ÀzÀU | CxÀð | °ÉüÀ |

| æ ^a À Ä ¸ÀA SÉå | À¼ÀÄ | ^a ÀiÁrPÉÆ¼ ÀÄîvÀÛzÉ | ÄvÀÛz É |
|-------------------------------------|--------|-----------------------------------|------------|
| 4. | AiÀiÁª | | |
| | ÀÅzÀÄ | | |
| 5. | AiÀiÁg | | |
| | ÀÄ | | |
| 6. | KPÉ | | |

14. ǻÀgÁtvÀäPÀ ¥ÀzÀUÀ¼ÀÄ

| PÀæ ^a | ¥ÀzÀUÀ¼ | CxÀðªÀiÁ | °ÉüÀ |
|------------------|---------|----------|-------|
| ÀÄ | ÀÄ | r | ÄvÀÛz |
| ÀAS Éå | | PÉÆ¼ÀÄ | É |
| | | îvÀÛzÉ | |
| 1. | J®è | | |
| | ⁰ÉÆAiÀÄ | | |
| | ÄÛ | | |
| | | | |
| 2. | PÉlÖzÀÄ | | |
| 3. | zÉÆqÀØ | | |
| 4. | ªÀÄÄjzÀ | | |
| 5. | °ÀĵÁgÀ | | |
| | Ä/ | | |
| | eÁUÀgÀ | | |
| | ÆPÀ | | |
| 6. | vÀtÚUÉ | | |
| 7. | ªÀÄÄZÁV | | |
| 8. | PÀvÀÛ® | | |
| | Ä | | |
| 9. | PÉÆ¼É | | |

| 10. | PÁ° | | |
|------------------------|-----------------|----------|-------|
| 11. | ªÉÃUÀªÁ | | |
| | V/ ÉÃUÀ | | |
| | £É | | |
| 12. | ZÉ£ÁßV | | |
| PÀæ^a | ¥ÀzÀUÀ¼ | CxÀðªÀiÁ | °ÉüÀ |
| ÀÄ | ÀÄ | r | ÄvÀÛz |
| ¸ÀAS Éå | | PÉÆ¼ÀÄ | É |
| | | îvÀÛzÉ | |
| 13. | M¼ÉîAiÀ | | |
| | Ä | | |
| 14. | RÄ ² | | |
| 15. | UÀnÖ | | |
| 16. | ©1 | | |
| 17. | °À¹ªÀÅ | | |
| 18. | £ÉÆÃªÀÅ | | |
| 19. | , Àé®à | | |
| 20. | vÀgÀ⁻É | | |
| 21. | °ÉzÀjzÀ | | |
| 22. | ¤zÉæAiÀ | | |

| | Ä ªÀÄA¥Àg ÀÄ | |
|-----|---------------------|--|
| 23. | ªÀÄÈzÀĪ | |
| | ÁV | |
| 24. | ÁAiÀÄjP | |

| | É | |
|-----|-----------------|--|
| 25. | , ÀÄ,ÀÄÛ | |
| 26. | °À1 | |

15. ¸ÀªÀð£ÁªÀÄ

| PÀæ ªÀÄ ÅA SÉå | ¥ÀzÀU À¼ÀÄ | CxÀð ªÀiÁrPÉÆ¼ ÀÄîvÀÛzÉ | ⁰ÉüÀ ÄvÀÛzÉ |
|-------------------------|---------------|-------------------------------|----------------|
| 1. | £Á£À Ä | | |
| 2. | À | | |
| 3. | CªÀ£À | | |
| 4. | £À£À UÉ | | |
| 5. | £À£Àß | | |

| | zÀÄ | | |
|--------------------------|---------------|-------------------------------|----------------|
| PÀæ ªÀÄ ¸ÀA SÉå | ¥ÀzÀU À¼ÀÄ | CxÀð ªÀiÁrPÉÆ¼ ÀÄîvÀÛzÉ | °ÉüÀ ÄvÀÛzÉ |
| 6. | £À£Àß | | |
| 7. | CzÀÄ | | |
| 8. | EzÀÄ | | |
| 9. | ¤Ã£À | | |
| | Ä | | |
| 10 | ¤£Àß | | |

16. ¥ÁæªÀiÁuÁzÀjvÀ ¥ÀzÀUÀ¼ÀÄ

| PÀæ ªÀÄ ¸ÀA SÉå | ¥ÀzÀU À¼ÀÄ | CxÀð ªÀiÁrPÉÆ¼ ÀÄîvÀÛzÉ | ⁰ÉüÀ ÄvÀÛzÉ |
|--------------------------|---------------|-------------------------------|----------------|
| 1. | J®è | | |
| 2. | E£ÉÆß | | |
| | AzÀÄ | | |
| PÀæ | ¥ÀzÀU | CxÀð | °ÉüÀ |

| ³ÀÄ ¸ÀA SÉå | À¼ÀÄ | ^ª ÀiÁrPÉÆ¼ ÀÄîvÀÛzÉ | ÄvÀÛzÉ |
|-------------------|------|-----------------------------------|--------|
| 3. | E®è | | |
| 4. | CzÉÃ | | |

17. ,ÀܼÁzÁjvÀ ¥ÀzÀUÀ¼ÀÄ

| PÀæ ªÀÄ ¸ÀA SÉå | ¥ÀzÀU À¼ÀÄ | CxÀð ªÀiÁrPÉÆ¼ ÀÄîvÀÛzÉ | ⁰ÉüÀ ÄvÀÛzÉ |
|--------------------------|---------------|-------------------------------|----------------|
| 1. | °ÀwÛg À | | |
| 2. | zÀÆg À | | |
| 3. | »AzÉ | | |
| 4. | PɼÀ | | |

| - ` | UÉ | | ~~~~ |
|------------------|---------------|-------------------|----------------|
| PÀæ ªÀÄ | ¥ÀzÀU À¼ÀÄ | CxÀð ªÀiÁrPÉÆ¼ | ⁰ÉüÀ ÄvÀÛzÉ |
| ĂĂ ĴĂĂ SÉå | A*⁄4AA | ÀÄîvÀÛzÉ | AVAUZE |
| | ªÉÄÃ⁻ | | |
| 5. | É | | |
| 6. | M¼À | | |
| | UÉ | | |
| 7. | ⁰ÉÆgÀ | | |

| UÉ | |
|----|--|

18. E¤ßvÀgÉ

| PÀæ | ¥ÀzÀUÀ¼ | CxÀðªÀi | °ÉüÀ |
|------------|---------|---------|--------|
| ªÀÄ | ÀÄ | Ár | ÄvÀÛzÉ |
| À A | | PÉÆ¼À | |
| SÉå | | ÄîvÀÛzÉ | |
| 1. | ,ÁߣÀ | | |
| 2. | °ÀƪÀÅ | | |
| 3. | vÉÆÃl | | |
| 4. | ªÀÄ£É | | |
| 5. | ZÀAzÀæ | | |
| 6. | ªÀļÉ | | |
| 7. | PÀ®Äè | | |
| 8. | ±Á⁻É | | |
| 9. | DPÁ±À | | |
| | | | |
| PÀæ | ¥ÀzÀUÀ¼ | CxÀðªÀi | °ÉüÀ |
| ªÀÄ | ÀÄ | Ár | ÄvÀÛzÉ |
| ÀÀ | | PÉÆ¼À | |

| SÉå | | ÄîvÀÛzÉ | |
|-----|----------------------|---------|--|
| 10. | £ÀPÀëvÀ | | |
| | æ | | |
| 11. | CAUÀr | | |
| 12. | <i>,</i> ÀÆAiÀÄ | | |
| | ð | | |
| 13. | GAiÀÄå ⁻ | | |
| | É | | |
| 14. | ªÀÄgÀ | | |
| 15. | PÉ®ĴÀ | | |
| 16. | ªÀÄtÄÚ | | |
| 17. | UÁAiÀÄ | | |
| 18. | zÉêÁ®A | | |
| | iÀÄ | | |
| 19. | qÁPÀÖgï/ D¸ÀàvÉæ | | |
| | D _, ÀàvÉæ | | |

[•]sÁUÀ 3: ¸À£Éß ªÀÄvÀÄÛ QæAiÉÄUÀ¼ÀÄ

<u>ÀÆZÀ£ÉUÀ¼ÀÄ:</u> PɼÀUÉ ªÀÄPÀ̼ÀÄ ªÀiÁqÀ§°ÀÄzÁAvÀ°À PÉ®ªÀÅ P˱À®åUÀ¼À£ÀÄß ¤ÃqÀ⁻ÁVzÉ. ¤ªÀää ªÀÄUÀÄ ªÀiÁqÀ§°ÀÄzÁAvÀ°À P˱À®åUÀ¼À ªÀÄÄAzÉ UÀÄgÀÄvÀÄ °ÁQ. ¤ªÀää ªÀÄUÀÄ ªÀiÁqÀ⁻ÁUÀ¢gÀĪÀ P˱À®åUÀ¼À ªÀÄÄA¢gÀĪÀ eÁUÀªÀ£ÀÄß SÁ° ©r.

| | | | | | |
|----|--|-------------------------------|-------------|-------------------------------------|---------------------|
| 9 | $\Lambda \Lambda \Psi \Lambda D \Lambda \Lambda Z \Lambda$ | $\alpha \Lambda 4H + \Lambda$ | $(\mu) \nu$ | $\Delta f I \perp / \Lambda I/_{4}$ | Λ Λ |
| а. | AA¥APAðzA | $\gamma A A + A$ | | 15LU/A74 | AA |
| | | | | | |
| | | | | | |

| | ^a ÁPÀåUÀ¼ÀÄ | ªÀiÁqÀÄvÀÛzÉ |
|---------------|--|--------------|
| ,ÀASÉå | | |
| 1. | CªÀ¼ÀÄ/CªÀ£ÀÄ »r¢gÀĪÀ ªÀ¸ÀÄÛªÀ£ÀÄß PÉÊ | |
| | ZÁa vÉÆÃj ÀĪÀÅzÀÄ. | |
| 2. | CªÀ¼ÀÄ/CªÀ£ÀÄ »r¢gÀĪÀ CnPÉ/ªÀ¸ÀÄÛªÀ£ÀÄß | |
| | PÉÆqÀ®Ä ¤*ÉÄäqÉUÉ §gÀÄ*ÀÅzÀÄ | |
| 3. | CªÀ½UÉ/CªÀ¤UÉ C,ÀQÛ¬ÄgÀĪÀ ªÀ,ÀÄÛ«£ÉqÉUÉ ¨ÉgÀ¼ÀÄ ªÀiÁr | |
| | ªÀ,ÀÄÛ«£ÉqÉUÉ ¨ÉgÀ¼ÀÄ ªÀiÁr | |
| | vÉÆÃj,ÀĪĂÅzÀÄ. | |
| 4. | CªÀ¼À/CªÀ£À PÉÊ ªÉÄÃ⁻É JwÛ | |
| | CªÀ¼À£ÀÄ₿/CªÀ£À£ÀÄ₿ JwÛPÉÆ¼ÀÄîªÀAvÉ | |
| | ,ÀÆa,ÀĪÀÅzÀÄ. | |
| 5. | "E®è" JA§AvÉ vÀ⁻É C⁻Áèr,ऄĪÀÅzÀÄ. | |
| 6. | "°ËzÀÄ" JA§AvÉ vÀ⁻É Dr¸ÀĪÀÅzÀÄ. | |
| 7. | ÉgÀ¼À£ÀÄβ vÀÄnAiÀÄ ªÉÄÃ⁻É ElÄÖ | |

| | "±ï(¤±Àå§Ý)" JA§AvÉ vÉÆÃj¸ÀĪÀÅzÀÄ. | |
|-----|--|--|
| 8. | J£À£ÁßzÀgÀÄ PÉüÀ®Ä PÉÊAiÀÄ£ÀÄß °ÉÆgÀ | |
| | ZÁa vÉUÉzÀÄ ªÀÄÄaÑ ªÀiÁqÀĪÀÅzÀÄ. | |
| 9. | zÀÆgÀzÀ°ègÀĪÀ ªÀåQÛUÉ ªÀÄÄvÀÛ£ÀÄß | |
| | UÁ½AiÀİè HzÀĪÀÅzÀÄ. | |
| 10. | C ªÀ,ÀÄÛ gÀÄaAiÀiÁVzÉ JAzÀÄ vÀÄnAiÀÄ£ÀÄß | |
| | »AzÉ ªÀÄÄAzÉ ªÀiÁr vÉÆÃj¸ÀĪÀÅzÀÄ. | |

b. DlUÀ¼ÀÄ ªÀÄvÀÄÛ ¢£ÀZÀj

| | DIUÀ¼ÀÄ | ªÀiÁqÀÄvÀÛzÉ |
|---------------|----------------------------------|--------------|
| ,ÀASÉå | | |
| 1. | PÀ¼Àî §AzÀ PÀ¼Àî | |
| 2. | ¨É£ÀβnÖ ⁰ÉÆÃUÀĪÀ DIUÀ¼ÀÄ | |
| 3. | UÉÆA¨É E¤ßvÀgÀ ªÀ ¸ÀÄÛUÀ¼À eÉÆvÉ | |
| | DqÀĪÀÅzÀÄ | |
| 4. | °ÁqÀĪÀÅzÀÄ | |
| 5. | °ÁrUÉ °ÉeÉÓ °ÁPÀĪÀÅzÀÄ | |

c. ^aÀ,ÀÄÛUÀ¼ÉÆA¢UÉ ^aÀiÁqÀÄ^aÀ PÉ®,ÀUÀ¼ÀÄ

| PÀæªÀÄ | ^a ÁPÀåUÀ¼ÀÄ | *ÀiÁqÀÄvÀÛzÉ |
|---------------|---|--------------------------|
| ,ÀASÉå | | - |
| 1. | PÉʬÄAzÀ/ZÀªÀÄZÀ¢AzÀ w£ÀÄߪÀÅzÀÄ | |
| 2. | UÁè ¹ ¤AzÀ PÀÄrAiÀÄĪÀÅzÀÄ | |
| 3. | ¨ÁZÀtÂUɬÄAzÀ vÀ⁻É ¨ÁZÀĪÀÅzÀÄ | |
| 4. | §æ¶¤AzÀ °À®Äè GdÄÓªÀÅzÀÄ | |
| 5. | mÉÆÃ¦°ÁQ PÉÆ¼ÀÄîªÀÅzÀÄ | |
| 6. | ZÀ¥Àà° °ÁQPÉÆ¼ÀÄîªÀÅzÀÄ | |
| 7. | PÀtÄÚ ^ª ÀÄÄaÑ ¤zÉæ §AzÀªÀgÀAvÉ | |
| | <u>ªÀÄ®UÀĪÀÅzÀÄ</u> | |
| PÀæªÀÄ | ^a ÁPÀåUÀ¼ÀÄ | ^a ÀiÁqÀÄvÀÛzÉ |
| _ÀASÉå | | |
| 8. | ^a ÁºÀ£ÀUÀ¼À£ÀÄß »rzÀÄPÉÆ¼ÀÄîªÀÅzÀÄ | |
| | ^a ÀÄvÀÄÛ ZÀ°,ÀĪÀAvÉ ªÀiÁqÀĪÀÅzÀÄ. | |
| 9. | ¥ÉÇãÀ£ÀÄß Q«AiÀÄ §½ »rzÀÄ | |
| | ^a ÀiÁvÀ£ÁqÀÄ ^a ÀªÀgÀAvÉ £Àn,ÀÄ ^a ÀÅzÀÄ | |
| 10. | ©¹AiÀiÁVzÉ JAzÀÄ ¸ÀÆa¸À®Ä HzÀĪÀÅzÀÄ | |
| 11. | ZÉAqÀ£ÀÄßJ,ÉAiÀÄĪÀÅzÀÄ | |
| 12. | MAzÀÄ ¥ÁvÉæ¬ÄAzÀ ªÀÄvÉÆÛAzÀÄ ¥ÁvÉæUÉ | |
| | ¤ÃgÀÄ ¸ÀÄjAiÀÄĪÀÅzÀÄ | |
| 13. | ¥ÁvÉæAiÀİè CxÀªÀ ⁻ ÉÆÃlzÀ°è ¤ÃgÀ£ÀÄß | |
| | ZÀªÀÄZÀ¢AzÀ wgÀÄV,ÀÄzÀÄ | |
| 14. | UÉÆA ÉUÉ ÀÄÄvÀÄŮ PÉÆqÀÄ ÀÅzÀÄ CxÀA | |
| | vÀ©âPÉÆ¼ÀÄîªÀÅzÀÄ | |
| 15. | PÀ£ÀßqÀPÀ °ÁQ PÉÆ¼ÀÄîªÀÅzÀÄ | |

| | ^a ÁPÀåUÀ¼ÀÄ | ^a ÀiÁqÀÄvÀÛzÉ |
|---------------|---|--------------------------|
| `ÀASÉå | | |
| 1. | ¥ÉÇgÀPɬÄAzÀ £É® UÀÄr¸ÀĪÀÅzÀÄ CxÀªÀ | |
| | PÀ,Ă °ÉÆqÉAiÀÄĪÀÅzÀÄ | |
| 2. | PÀ®Äè CxÀªÀ ¸ÀÄwÛUɬÄAzÀ | |
| | ZÀZÀÄѪÀÅzÅÄ | |
| 3. | NzÀĪÀÅzÀÄ (¥ÀŸÀÛPÀªÀ£ÀÄß vÉgÉzÀÄ ¥ÀÅIUÀ¼À£ÀÄß wgÀĪÁPÀĪÀÅzÀÄ) | |
| | ¥ÀÅlUÀ¼À£ÀÄß wgÀĪÁPÀĪÀÅzÀÄ) | |
| 4. | ͺÉÊPÀ⁻ï ⁰ÉÆqÉAiÀÄ®Ä ¥ÀæAiÀÄvÀβ | |
| | ^a ÀiÁqÀÄ ^a ÀÅzÀÄ | |
| 5. | §mÉÖ¬ÄAzÀ ªÀgɸÀĪÀÅzÀÄ | |
| 6. | ¥É£ï/¥É¤ì⁻ï/E¤ßvÀgÉ ªÀ¸ÀÄÛ«¤AzÀ | |
| | §gÉAiÀÄÄ ^a ÀÅzÀÄ | |
| 7. | AiÀiÁªÀÅzÁzÀgÀÄ ªÀ¸ÀÄÛªÀŤAzÀ UÀÄAr | |
| | vÉUÉAiÀĮĥÀæAiĂÄw߸ÀĪÀÅzÀÄ | |

d. zÉÆqÀتÀgÀ jÃwAiÀÄ PÉ®¸ÀUÀ¼À£ÀÄß C£ÀĸÀj¸ÀĪÀÅzÀÄ

Appendix III

Content validity Scoring sheet

Communication Inventory for Infants ÀAªÀºÀ£À vÀ¥À²Ã®Ä ¥ÀnÖ

Instructions: Please compare communication inventory of Kannada language with Inventory if English and tick in appropriate column. If the translation work is proper mark in $\hat{A}j E z \hat{E}$ column, if the translation is not proper please mark it $\hat{A}j E \otimes \hat{e}$ and if you think translation is happened properly and changes need please mark in $\hat{s}AU\hat{A}\pm\hat{A}B$ $\hat{A}j$

| | ªÁPÀåUÀ¼ÀÄ | _Aj | ,Àj | sÁUÀ±ÀB |
|---------------|---|------------|------------|---------------------|
| ,ÀASÉå | | EzÉ | E®è | , Àj |
| 1. | ^a ÀÄÄR ¨sÁ ^a À ^a À£ÀÄß CxÀð | | | |
| | ^a ÀiÁrPÉÆ¼ÀÄîvÀÛzÉ. (PÉÆÃ¥À, | | | |
| | ,ÀAvÉÆÃµÀ) | | | |
| 2. | PÉ®ªÀÅ ¥ÀzÀUÀ¼À£ÀÄβ | | | |
| | CxÀðªÀiÁrPÉÆAqÀÄ ¸ÀÆPÀÛªÁzÀ | | | |
| | ¥ÀæwQæAiÉÄAiÀÄ£ÀÄß ¤ÃqÀÄvÀÛªÉ. | | | |
| | GzÀ: ¨Á, mÁ mÁ | | | |
| 3. | ÀAVÃvÀPÉÌ UÀªÀÄ£À PÉÆqÀĪÀÅzÀÄ. | | | |
| 4. | ĊªÀ£À/ĊªÀ¼À ¸ÀÄvÀÛªÀÄÄvÀÛ | | | |
| | £ÀqÉAiÀÄĪÀ¥ÀÇgÀ | | | |
| | ÀĂ sÁµÀuÉAiÀÄ£ÅÄß D°¹zÀAvÉ | | | |
| | PÁtÄvÁÛzÉ. | | | |
| 5. | CªÀ£À/CªÀ¼À ºÉ ÀgÀ£ÀÄß PÀjzÁUÀ | | | |
| | ^a ÀiÁqÀÄwÛgÀĪÀ PÉ® ÀªÀ£ÀÄß | | | |
| | ¤°è ÀÄvÀÛzÉ. | | | |
| 6. | zsÀé¤AiÀİè£À ªÀåvÁå ÀªÀ£ÀÄß | | | |
| | CxÀðªÀiÁrPÉÆ¼ÀÄîvÀÛzÉ. | | | |
| 7. | ¨ÉÃqÀ JAzÀÄ °ÉýzÀgÉ ªÀiÁqÀĪÀ | | | |
| | PÉ® ŪÀ£ÀÄβ ¤°è ÀÄvÀÛzÉ. | | | |
| 8. | avÀæzÀ(¥sÉÇÃmÉÆ)°ègÀĪÀ | | | |
| | ^a ÀåQÛAiÀÄ£ÀÄß ºÉ Àj¹zÁUÀ MAzÀÄ | | | |
| | ¤«ÄµÀUÀ¼À PÁ® D avÀæzÉqÉUÉ | | | |
| | UÀªÀÄ£À ºÀj,ÀÄvÀÛzÉ. GzÀ; EzÀÄ | | | |
| | C¥Àà£À ¨sÁªÀavÀæ (¥sÉÇÃmÉÆ) | | | |
| 9. | ¥ÀjavÀgÀÄ ªÀÄvÀÄÛ C¥ÀjavÀgÉÆA¢UÉ | | | |
| | ÉĂgÉ ÉÃgÉAiÀiÁV | | | |
| | ¥ÀæwQæ¬Ä¸ÀÄvÀÛzÉ. | | | |
| 10. | °ÉÆ À ¥ÀzÀUÀ¼À£ÀÄß PÉüÀ®Ä | | | |
| | GvÁiºÀ vÉÆÃjzÀAvÉ PÁtÄvÀÛzÉ. | | | |
| 11. | ÉgÉAiÉÄqÉUÉ UÀªÀÄ£À ºÀj ÀzÉ | | 1 | |
| | ^a ÀiÁvÀ£ÀÄ̈́ߥÀÇtð ^a ÁV PÉÃ ¹ ⁄́₄ÀÄvÀÛzÉ. | | | |
| 12. | PÉ® ÀªÀ£ÀÄß °ÉýzÁUÀ C©ü£À¬Ä¹ | | | |
| | vÉÆĂj,ÀÄvÀÛzÉ. GzÀ; Hl | | | |

¨sÁUÀ 1: A. ªÀÄÄAa£À ¸ÀA¥ÀPÀð P˱À®åUÀ¼ÀÄ

| | ^a ÀiÁqÀÄ ^a ÀÅzÀÄ °ÉÃUÉ? | | |
|-----|--|--|--|
| 13. | PÀvÉ PÉüÀ®Ä RĶ¥ÀqÀÄvÀÛzÉ. | | |
| 14. | ÀAVÃvÀPÉÌ *ÉÄÊ PÉÊ ZÀ°1 | | |
| | ¥ÀæwQæ¬Ä、ÀÄvÀÛzÉ. | | |
| 15. | ^a ÉÄÃ ⁻ É,PɼÀUÉ (¸ÀܼÁzÁjvÀ) | | |
| | ¥ÀzÀUÀ¼À£ÀÄß | | |
| | CxÀðªÀiÁrPÉÆ¼ÀÄîvÀÛzÉ. | | |
| 16. | ZÉ£ÀßV PÁtÄw¢ÃAiÀÄ JAzÀÄ °ÉýzÁUÀ | | |
| | RĶ¥ÀqÀÄvÀÛzÉ. | | |
| 17. | vÀ£Àß ªÀ,ÀÄÛUÀ¼À£ÀÄß | | |
| | ÉÃgÉAiÀĪÀjUÉ ©lÄÖPÉÆqÀĪÀÅ¢®è. | | |
| 18. | °É,ÀgÀÄ PÀgÉzÁUÀ | | |
| | ¥ÀæwQæ¬Ä,ÀÄvÀÛzÉ GzÀ: wgÀÄV | | |
| | £ÉÆqÀĪÀÅzÀgÀ ªÀÄÆ®PÀ, PÀgÉzÀ | | |
| | ^a ÀåQÛUÁV °ÀÄqÀÄPÀÄ ^a ÀÅzÀgÀ | | |
| | ^a ÀÄÆ®PÀ | | |
| 19. | ÉÃgÉAiÀĪÀgÀÄ vÀ£Àß | | |
| | ^a À¸ÀÄÛUÀ¼À£ÀÄß vÉUÉzÀÄPÉÆAqÁUÀ, | | |
| | G¥ÀAiÉÆV¹zÁUÀ CxÀªÁ | | |
| | °Á¼ÀĪÀiÁrzÁUÀ | | |
| | PÉÆÃ¦'PÉÆ¼ÀÄîvÀÛzÉ/ | | |
| | dUÀ¼ÀªÁqÀÄvÀÛzÉ. | | |
| 20. | °ÁqÀ£ÀÄß PÉüÀ®Ä, n. « £ÉÆÃqÀ®Ä | | |
| | RÄ ² ¥ÀqÀÄvÀÛzÉ. | | |

B. ªÉÆzÀ® ªÁPÀåUÀ¼ÀÄ

| PÀæªÀÄ | ^a ÁPÀåUÀ¼ÀÄ | `Àj | `Àj | sÁUÀ±ÀB |
|----------------|--------------------------------|------------|------------|---------------------|
| ,ÀASÉ å | | EzÉ | E®è | ,Àj |
| 1. | °À¹ªÁUÀÄwÛzÉAiÉÄÃ? | | | |
| 2. | ¤zÉæ | | | |
| | §gÀÄwÛzÉAiÉÄ?/¸ÀĸÁÛVzÉAiÀÄ? | | | |
| 3. | ±À§Ý ªÀiÁqÀ¨ÉÃqÀ | | | |
| 4. | ZÀ¥Á¼É °ÉÆr | | | |
| 5. | [™] Á E°è | | | |
| 6. | E£ÀÄß "ÉÃPÉÃ? | | | |
| 7. | CzÀ£ÀÄß ªÀiÁqÀ¨ÉÃqÀ/¸ÀĪÀÄä¤gÀÄ | | | |
| 8. | *ÀÄÄlÖ¨ÉÃqÀ | | | |
| 9. | K¼ÀÄ ªÉÄïÉ | | | |
| 10. | CªÀÄä¤UÉ PÉÆqÀÄ | | | |
| 11. | £À£ÀUÉÆAzÀÄ ªÀÄÄvÀÄÛ PÉÆqÀÄ | | | |
| 12. | °ÉÆÃV vÉUÉzÀÄPÉÆAqÀÄ ¨Á | | | |
| 13. | eÁt °ÀÄqÀÄUÀ/°ÀÄqÀÄV | | | |
| 14. | E£ÀÄß Åé®à°ÉÆvÀÄÛ °ÁUÉ »r¢PÉÆ | | | |
| 15. | £Ér °ÉÆUÉÆÃt mÁ mÁ | | | |

| 16. | E°è £ÉÆqÀÄ |
|-----|---------------------------|
| 17. | ¨Á¬Ä νÉV |
| 18. | PÀÄ ¹ ⁄2vÀÄPÉÆ |
| 19. | °ÉÆgÀUÉ GV |
| 20. | ¤°è,ĂÄ |
| 21. | ZÉAqÀ£ÀÄß J¹ |
| 22. | F aPÀÌ UÉÆA É |
| 23. | °ÉÆgÀUÉ °ÉÆÃUÀ ¨ÉÃPÁ? |
| 24. | ¤£ÀUÉ "ÉÃPÁ? |
| 25. | mÁ mÁ °ÉüÀÄ |
| 26. | FUÀ ªÀÄ®UÀÄ |
| 27. | C¼À¨ÉÃqÀ |
| 28. | °ÉÆgÀUÉ °ÉÆÃUÀ¨ÉÃqÀ |
| 29. | ¤zÁ£ÀªÁV £Àr |
| 30. | F §mÉÖ ZÉ£ÁßV®è |
| 31. | £À£ÀUÉ ¸Àé®à PÉÆqÀÄ |

^{..}sÁUÀ 2 : ªÀÄÄAa£À ¥ÀzÀ¥ÀnÖ

1. ««zÀ jÃwAiÀÄ ±À§ÝUÀ¼ÀÄ

2. PÀÄlÄA§ ,ÀzÀ ,ÀågÀÄ

| PÀæ ^a | ¥ÀzÀUÀ | À | À j | sÁUÀ |
|------------------|----------------------|--------------------|--------|------------------|
| ÀÄ | ¼ÀÄ | j | j | ±ÀB |
| ∫ÀAS Éå | | Ĕz | Ĕ | , Àj |
| Éå | | ∫À j Ez É | ®è | - |
| 1. | "Á "Á | | | |
| 2. | ªÁ ªÁ | | | |
| 3. | "Á "Á ªÁ | | | |
| | ^a Á vÀ vÀ | | | |
| 4. | vÀ zÀ ªÀ | | | |
| | ªÀÄ | | | |
| 5. | CA Á | | | |
| | CA Á | | | |
| 6. | ZÀÆ | | | |
| | ZÀÆ | | | |
| 7. | UÀgïæ | | | |
| 8. | «ÄAiÀÄ | | | |
| | Aªï | | | |
| 9. | PÉÆ | | | |
| | PÉÆ | | | |
| 10. | M ⁰ÉÆ | | | |

| 11. | qÀ gïæ | | |
|-----|-----------|--|--|
| | gïæ gïæ | | |
| 12. | G¥sï G¥sï | | |
| 13. | CªÀiï | | |
| 14. | CAiÉÆÃ | | |

| PÀæ ªÀÄ ¸ÀAS Éå | ¥ÀzÀUÀ¼ ÀÄ | Å j E z É | À j E ® è | ¨sÁUÀ ±ÀB ¸Àj |
|--------------------------|---------------|-----------------------|-----------------------|---------------------|
| 1. | CªÀÄä | | | |
| 2. | C¥Àà | | | |
| 3. | CfÓ | | | |
| 4. | CdÓ/vÁvÀ | | | |
| 5. | CtÚ/vÀªÀÄ | | | |
| | ä | | | |
| 6. | CPÀÌ/vÀAV | | | |
| 7. | ªÀiÁªÀ/aPÀ | | | |

| | Ì¥Àà/ zÉÆqÀØ¥À à | | |
|----|------------------------------|--|--|
| 8. | CvÉÛ/aPÀ̪ ÀÄä/ zÉÆqÀتÀ | | |
| | Aä | | |

| 9. | °ÀÄqÀÄUÀ | |
|-----|----------|--|
| | °ÀÄqÀÄV | |
| 11. | ªÀÄUÀÄ/¥ | |
| | Á¥ÀÅ | |
| 12. | ªÀÄ£ÀĵÀ | |
| | å/ªÀåQÛ | |
| 13. | d£À | |

3. zÉðÀzÀ ^{..}sÁUÀUÀ¼ÀÄ

| PÀæªÀÄ ¸ÀASÉå | ¥ÀzÀU À¼ÀÄ | ∫À j E z É | ∫À j E ℝ è | ∵sÁUÀ ±ÀB ¸Àj |
|-------------------------------|-------------------|------------------------|------------------------|---------------------|
| 1. | vÀ-É | | | |
| 2. | PÀtÄÚ | | | |
| 3. | Q« | | | |
| 4. | Q« ªÀÄÆU ÀÄ | | | |
| 5. | 'nÁ¬Ä | | | |
| 6. | ªÀÄÄR | | | |
| 7. | PÉÊ | | | |
| P À æ ^a À | ¥ÀzÀU À¼ÀÄ | À j E z | ∫À j E ® | ∵sÁUÀ ±ÀB ¸Àj |

| Ä JÀ A S É å | | É | è | |
|-----------------------------|------------|---|---|--|
| 8. | P稀 | | | |
| 9. | °ÉÆmÉ | | | |
| | Ö | | | |
| 10. | °À®Äè | | | |
| 11. | PÉ£Éß | | | |
| 12. | ¨ÉgÀ¼À | | | |
| | ËgÀ¼À Ä | | | |
| 13. | £Á°UÉ | | | |
| 14. | PÀÆzÀ | | | |
| | ®Ä | | | |

| 4. Hl/wAr | l/wAr |
|-----------|-------|
|-----------|-------|

| ¬. III/ W/I | | | | | |
|--------------------|------------|---------|----------|------------------|--|
| PÀæ ^a | ¥ÀzÀUÀ¼ | ٦À | <u>م</u> | sÁUÀ | |
| ÀÄ | ÀÄ | j | j | ±ÀB | |
| ÀAS | | Ez É | Ε | , Àj | |
| ֻÀAS Éå | | É | ®è | | |
| 1. | C£Àß | | | | |
| 2. | ªÀÄÄzÉÝ | | | | |
| 3. | ,ÁA§gï∕,Ág | | | | |
| | ÀÄ | | | | |
| 4. | Erè | | | | |
| 5. | zÉÆÃ¸É | | | | |
| 6. | ZÀ¥Áw | | | | |

| r | |
|-----|-----------------------------|
| 7. | ¤ÃgÀÄ |
| 8. | ÉçÄ ¨Á¼É°ÀtÄ |
| 9. | Á¼É°ÀtÄ |
| | Ú |
| 10. | QvÀۼɰ |
| | ÀtÄÚ |
| 11. | zÁæQë |
| | °ÀtÄÚ |
| 12. | °Á®Ä |
| 13. | ªÉƸÀgÀÄ |
| 14. | "ÉuÉÚ |
| 15. | ¨ÉæqÀÄØ |
| 16. | PÉÃPï |
| 17. | ZÉÆPÉÆÃ |
| | -ÉÃmï |
| 18. | L _s ï QæÃªÀiï |
| | QæÃªÀiï |

| 19. | dÄå,ï |
|-----|----------|
| 20. | ªÉÆmÉÖ |
| 21. | ªÀiÁA,À |
| | /ǀ̣ˀ |
| 22. | PÁ¦ü/ nÃ |
| 23. | HI |

6. ¥Áæt ¥ÀQëUÀ¼ÀÄ

| PÀæ ^a ÀÄ ¸ÀAS Éå | ¥ÀzÀUÀ¼ ÀÄ | ∫À j Ez É | ∫À j E ®è | ∵sÁUÀ ±ÀB ¸Àj |
|--------------------------------------|-------------------|--------------------|--------------------|---------------------|
| 1. | ÉPÀÄÌ | | | |
| 2. | £Á¬ÄªÀÄj | | | |
| 3. | °À¸ÀÄ | | | |
| 4. | PÉÆÃ½ªÀ | | | |
| | Äj | | | |
| 5. | PÁUÉ | | | |

5. ªÁºÀ£ÀUÀ¼ÀÄ

| PÀæ | ¥ÀzÀUÀ¼ | ∫Àj Ez É | ,Àj | "sÁU |
|------------------------|---------------|----------------|------------|-------------|
| ªÀÄ | ÀÄ | Ez | E® | À±À |
| _, ÀA SÉå | | É | è | B |
| SÉå | | | | , Àj |
| 1. | § ,ÀÄì | | | |
| 2. | ţÉÊPÀ⁻ï | | | |
| 3. | ÀÆÌlgï/ É | | | |
| | ÊPï | | | |
| 4. | PÁgÀÄ | | | |
| 5. | gÉÊ®Ä | | | |
| 6. | «ªÀiÁ£À/K | | | |
| | gÉÆÃ¥ÉèÃ | | | |
| | £ï | | | |
| 7. | mÉA¥ÉÇ | | | |

7. DlzÀ ,ÁªÀiÁ£ÀÄUÀ¼ÀÄ

| PÀæ ^a ÀÄ ¸ÀAS Éå | | ∫À j Ez É | Å j E ®è | [∵] sÁUÀ ±ÀB ¸Àj |
|--------------------------------------|----------------|--------------------|-------------------|---------------------------------|
| 1. | ZÉAqÀÄ | | | |
| 2. | ¦Ã¦∕§®Æ£À Ä | | | |
| 3. | ¥ÀŸÀÛP | | | |

| 6. | UÀħâaÑ |
|-----|---------------------|
| 7. | PÀÄj |
| 8. | amÉÖ |
| 9. | C ¹ /2®Ä |
| 10. | D£É |
| 11. | ¥ÀQë/°ÀQÌ |
| 12. | ¥ÁætÂ |
| 13. | PÀvÉÛ |
| 14. | PÀ¥Éà |
| 15. | PÉÆÃw |
| 16. | E° |
| 17. | ǀ̣ˀ |
| 18. | eÉãÀİÀ |
| | ļÀÄ |
| | |
| 19. | °ÁªÀÅ |
| 20. | °Àİ/¹A°À |

| | À | | |
|----|--------------------|--|--|
| 4. | ªÉÆmïÖ/U | | |
| | ÀļÉî | | |
| 5. | UÉÆA É | | |
| 6. | ¥É£ÀÄß | | |
| 7. | CnPÉ | | |

9. GqÀÄUÉ vÉÆqÀÄUÉ

| PÀ m ^a À | ¥ÀzÀUÀ¼À Ä | À | ∫Àj E®è | ¨sÁU À±À |
|------------------------|---------------|--------------|------------|--------------|
| æªÀ Ä | A | J Ez É | LGe | A±A B ֻÀj |
| ÀA ÀA SÉå | | É | | |
| ŚÉå | | | | |
| 1. | μÀmïð | | | |
| 2. | ¥ÀAZÉ | | | |
| 3. | ¥ÁåAmï | | | |
| 4. | ¤PÀÌgï | | | |
| 5. | PÉÆÃIÄ | | | |
| 6. | mÉÆÃ¦ | | | |
| 7. | P稀 ą | | | |
| 8. | §Æmïî | | | |
| 9. | ″É⁻ïÖ | | | |
| 10. | PÉÊUÀrAiÀ | | | |
| | iÁgÀ/ | | | |

| | ^a ÁZÀÄ |
|-----|--|
| 11. | GAUÀÄgÀ |
| 12. | ,ÀgÀ |
| 13. | _AgA |
| 14. | Q«N ⁻ É ¹ ÃgÉ |
| 15. | 1ÃgÉ |
| 16. | ®AUÀ |
| 17. | PÁ ⁻ ÉÎeÉÓ |
| 18. | ,Éélgï |
| 19. | §mÉÖ |

9. PÉÆoÀr ªÀÄvÀÄÛ ¦ÃmÉÆÃ¥ÀPÀgÀt

| PÀæ ^a | ¥ÀzÀUÀ¼ | À | À | ¨sÁUÀ |
|------------------|-----------------|---------|---------|-------|
| ÀÄ | ÀÄ | À j | ှÅ j | ±ÀB |
| ∫ÀAS Éå | | Ez É | E | ,Àj |
| Éå | | É | ®è | |
| 1. | CqÀÄUɪ | | | |
| | ÀÄ£É | | | |
| 2. | ªÀÄ®UÀ | | | |
| | ĪÀ | | | |
| | PÉÆÃuÉ | | | |
| 3. | Ă₿£ÀzÀ ªÀÄ£É | | | |
| | ªÀÄ£É | | | |
| 4. | ªÀÄAZÀ | | | |
| 5. | PÀÄað | | | |
| 6. | ″ÁV®Ä | | | |
| 7. | ªÉÄnÖ®Ä | | | |
| 8. | ªÉÄÃdÄ/ | | | |
| | mÉç⁻ï | | | |
| 9. | QlQ | | | |

| - | |
|-----|----------------------------|
| 2. | 1Ã,É/ ÉÆ |
| | ÃmÉ⁻ï |
| 3. | §lÖ®Ä |
| 4. | qÀ§â |
| 5. | qÀ§â ¥ÉÇgÀPÉ |
| 6. | 8æuï |
| 7. | UÀrAiÀiÁ |
| | gÀ |
| 8. | gÀ "ÁZÀuÉU É |
| | É |
| 9. | ¥ÁvÉæ |
| 10. | PÀ,ÀzÀ |
| | §ÄnÖ |
| 11. | UÁÈ,ï ©ÃUÀzÀ |
| 12. | ©ÃUÀzÀ |
| | PÉÊ |
| 13. | ¢Ã¥À |
| 14. | OµÀzÀ zÀÄqÀÄØ PÁUÀzÀ |
| 15. | zÀÄqÀÄØ |
| 16. | PÁUÀzÀ |
| 17. | PÁ,ÀÄ/£Á |
| | tå |
| 18. | avÀæUÀ¼ |
| | ÀÄ |
| 19. | ¢A§Ä °Á¹UÉ |
| 20. | °Á¹UÉ |
| 21. | vÁmĚÔ |
| 22. | PÉÊaî/¥ |
| | À,ïð |
| 23. | PÀwæ |
| 24. | ,ÉÆÃ¥ÀÅ |
| 25. | ZÀªÀÄZÀ |
| 26. | lªÀ-ï |
| 27. | n. « |
| 28. | n. « gÉÃrAiÉÆ Ã |
| | Ã |
| 29. | ¥ÉÇãÀÄ |
| 30. | ¥sÁå£ï |
| 31. | VqÀ/¸À ¹ |
| 32. | bÀwæ |
| | |

10. ªÀÄ£ÉAiÀİè EqÀ§°ÀÄzÁAvÀ°À ªÀ¸ÀÄÛUÀ¼ÀÄ

| PÀæ ^a ÀÄ ¸ÀAS Éå | ¥ÀzÀUÀ¼ ÀÄ | ∫À j Ez É | ∫À j E ®è | ∵sÁUÀ ±ÀB ¸Àj |
|--------------------------------------|------------------|--------------------|--------------------|---------------------|
| 1. | °ÉÆ¢PÉ/P ÀA§½ | | | |

12. QæAiÀiÁ ¥ÀzÀUÀ¼ÀÄ

| PÀæ | ¥ÀzÀUÀ¼À | Å | Å | ¨sÁUÀ |
|-----|----------------------|--------|----------|-------------|
| ªÀÄ | Ä | j | j | ±ÀΒ |
| JÀA | | Ē | E | <u>,</u> Àj |
| SÉå | | z É | ® è | |
| | | É | è | |
| 1. | PÀZÀÄÑ | | | |
| 2. | HzÀÄ | | | |
| 3. | ªÀÄÄj | | | |
| 4. | vÉUÉzÀÄP | | | |
| | ÉÆAqÀÄ Á | | | |
| 5. | ±ÀÄa | | | |
| | ^a ÀiÁqÀÄ | | | |
| 6. | ^a AAAZAAN | | | |
| 7. | C¼ÀÄ | | | |
| 8. | PÀÄtÂ | | | |
| 9. | awæ¸ÀÄ | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | ©Ã¼ÀÄ | | | |
| 13. | w¤ß¸ÀÄ | | | |
| 14. | | | | |
| 15. | PÉÆqÀÄ | | | |
| 16. | °ÉÆÃUÀÄ | | | |
| 17. | À°ÁAiÀÄ ªÀiÁqÀÄ | | | |
| | *ÀiÁqÀÄ | | | |
| 18. | °ÉÆr | | | |
| 19. | | | | |
| 20. | £ÉV | | | |

12. PÁ® ,ÀÆavÀ ¥ÀzÀUÀ¼ÀÄ

| PÀæ ^a ÀÄ ¸ÀAS Éå | ¥ÀzÀUÀ ¼ÀÄ | ∫À j Ez É | À j E ®è | ∵sÁUÀ ±ÀB ¸Àj |
|--------------------------------------|----------------------|--------------------|-------------------|---------------------|
| 1. | °ÀUÀ®Ä | | | |
| 2. | gÁwæ | | | |
| 3. | "ɹ∕₂UÉÎ | | | |
| 4. | DªÉÄÃ ⁻ É | | | |
| 5. | FUÀ | | | |
| 6. | EªÀvÀÄ Û | | | |
| | £Á¼É | | | |
| 7. | | | | |
| 8. | £É£Éß | | | |

| PÀæ | ¥ÀzÀUÀ¼À | JÀ J E | À | sÁUÀ |
|-----|---------------------------|--------------|---|------------------|
| ªÀÄ | Ä | j | Ĵ | ±ÀB ¸Àj |
| ÀA | | E | E | "Aj |
| SÉå | | z É | ® | |
| | | E | è | |
| 21. | M¢ | | | |
| 22. | ^a ÀÄÄwÛqÀ Ä | | | |
| | A | | | |
| 23. | £ÉÆÂqÀÂ | | | |
| 24. | £ÉÆÃqÀÄ vÉUÉ | | | |
| 25. | DqAA | | | |
| 26. | J ¹ /2 | | | |
| 27. | vÀ¼ÀÄî | | | |
| 28. | EqÀÄ NzÀÄ | | | |
| 29. | NzÀÄ | | | |
| 30. | Nr,ÀÄ | | | |
| 31. | NqÀÄ °ÉüÀÄ | | | |
| 32. | °ÉüÀÄ | | | |
| 33. | vÉÆÃj¸ÀÄ | | | |
| 34. | °ÁqÀÄ | | | |
| 35. | ªÀÄ®UÀÄ | | | |
| 36. | | | | |
| | ¤°è,ÀÄ | | | |
| 38. | vÉUÉ¢PÉÆ | | | |
| 39. | | | | |
| 40. | | | | |
| - | £Àr | | | |
| 42. | §j æ+ÁßxÀðPÀ ¥ | | | |

13. ¥Àæ±ÁßxÀðPÀ ¥ÀzÀUÀ¼ÀÄ

| PÀæ ^a | ¥ÀzÀUÀ | À ٍ | ٫À | sÁUÀ |
|------------------|---------|--------------|--------------------|------------------|
| ÀÄ | ¼ÀÄ | j Ez É | j | ±ÀB ¸Àj |
| ÀAS Éå | | Ez | E | <u>,</u> Àj |
| Éå | | É | ૃΑ j E ®è | |
| 1. | °ÉÃUÉ | | | |
| 2. | KµÀÄÖ | | | |
| 3. | K£ÀÄ | | | |
| 4. | AiÀiÁªÁ | | | |
| | UÀ | | | |
| 5. | J°è | | | |
| 6. | AiÀiÁªÀ | | | |
| | ÅzÀÄ | | | |
| 7. | AiÀiÁgÀ | | | |
| | Ä | | | |
| 8. | KPÉ | | | |

14. «^aÀgÁtvÀäPÀ ¥ÀzÀUÀ¼ÀÄ

| PÀæ | ¥ÀzÀUÀ¼À | <u>م</u> | ۣÀ | sÁUÀ |
|------------|-------------------------------|----------|----|------------------|
| ªÀÄ | Ä | i | i | ±ÀB |
| ∫ÀA SÉå | | E | Ε | <u>`</u> Àj |
| SÉå | | z É | ® | |
| | | E | è | |
| 1. | J®è | | | |
| | °ÉÆAiÀÄÄ Û | | | |
| | | | | |
| 2. | PÉlÖzÀÄ | | | |
| 3. | zÉÆqÀØ ªÀÄÄjzÀ °ÀĵÁgÀÄ/ | | | |
| 4. | AAAJZA | | | |
| 5. | •AAµAgAA/ eÁUÀgÀÆP | | | |
| | à | | | |
| 6. | vÀtÚUÉ | | | |
| 7. | vÀtÚUÉ ªÀÄÄzÁV | | | |
| 8. | PÀvÀÛ®Ä | | | |
| 9. | PÉÆ¼É | | | |
| 10. | MtV | | | |
| 11. | | | | |
| 12. | | | | |
| | ÉÃUÀ£É | | | |
| 13. | ZÉ£ÁßV | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | vÀgÀ ⁻ É | | ļ | |
| 22. | °À¼ÉAiÀÄ | | | |
| 23. | °ÉzÀjzÀ | | ļ | |
| 24. | ¤zÉæAiÀÄ | | | |
| | ªÀÄA¥ÀgÀ ï | | | |
| | Ä | | | |
| 25. | ªÀÄÈzÀĪÁ V | | | |
| 26 | v "ÁAiÀÄjPÉ | | | |
| 26. | ÀÄ ÀÄÛ | | | |
| 27. 28. | JAAJAAU °À1 | | | |
| 28. | Λ^- | 1 | | |

15. ¸ÀªÀð£ÁªÀÄ

| PÀæ ^a ÀÄ ¸ÀAS Éå | ¥ÀZÀUÀ ¼ÀÄ | ∫À j Ez É | Å j E ®è | ∵sÁUÀ ±ÀB ¸Àj |
|--------------------------------------|---------------|--------------------|-------------------|---------------------|
| 1. | £Á£ÀÄ | | | |
| 2. | CªÀ¼À | | | |
| 3. | CªÀ£À | | | |
| 4. | £À£ÀUÉ | | | |
| 5. | £À£ÀßzÀ | | | |
| | Ä | | | |
| 6. | £À£Àß | | | |
| 7. | CzÀÄ | | | |
| 8. | EzÀÄ | | | |
| 9. | ¤Ã£ÀÄ | | | |
| 10. | ¤£Àß | | | |

16. ¥ÁæªÀiÁuÁzÀjvÀ ¥ÀzÀUÀ¼ÀÄ

| PÀæ ^a ÀÄ | ¥ÀzÀUÀ ¼ÀÄ | ∫À j Ez É | À i | ∵sÁUÀ ±ÀB |
|------------------------|------------------|--------------------|--------|--------------|
| ¸ÀAS Éå | | J Ez | Б Е | ` Àj |
| Éå | | É | ®è | |
| 1. | J®è | | | |
| 2. | E£ÉÆßA | | | |
| | zÀÄ | | | |
| 3. | eÁ¹Û | | | |
| 4. | E®è | | | |
| 5. | ÉÃgÉ | | | |
| 6. | CzÉÃ | | | |
| 7. | PÉ®ªÀÅ | | | |

17. ,ÀܼÁzÁjvÀ ¥ÀzÀUÀ¼ÀÄ

| PÀæ ^a | ¥ÀzÀUÀ | ۣÀ | ٫À | sÁUÀ |
|------------------|--------|----|----|------------------|
| ÀÄ | ¹∕₄ÀÄ | j | j | ±ÀB |
| JÀAS | | Ez | Ε | , Àj |

| Éå | | É | ®è | |
|----|--------|---|----|--|
| 1. | °ÀwÛgÀ | | | |
| 2. | zÀÆgÀ | | | |
| 3. | »AzÉ | | | |
| 4. | PɼÀUÉ | | | |

| 5. | ªÉÄÃ⁻É | | |
|----|--------|--|--|
| 6. | M¼ÀUÉ | | |
| 7. | ⁰ÉÆgÀU | | |
| | É | | |

18. E¤ßvÀgÉ

| PÀæ ^a | ¥ÀzÀUÀ¼ | ٦À | ٦À | ¨sÁUÀ |
|------------------|-------------------|--------------------|--------------|------------|
| ÀÄ | ÀÄ | ∫À j Ez É | ∫A j | ±ÀB ,Àj |
| ÀAS Éå | | Éz | \mathbf{E} | `Àj |
| Eå | | Е | ® | |
| | | | è | |
| 1. | ֻÁߣÀ ⁰ÉÆ®/UÀz | | | |
| 2. | °ÉÆ®/UÀz | | | |
| | ÉÝ | | | |
| | | | | |
| 3. | °ÀƪÀÅ | | | |
| 4. | vÉÆÃl | | | |
| 5. | ªÀÄ£É | | | |
| 6. | ZÀAzÀæ | | | |
| 7. | £À¢/PÉÆ¼ | | | |
| | À | | | |
| 8. | ªÀļÉ | | _ | |
| 9. | PÀ®Äè | | | |
| 10. | ±Á ⁻ É | | | |

| PÀæ ^a | ¥ÀzÀUÀ¼ | ۣÀ | ۣÀ | ¨sÁUÀ |
|------------------------|------------------|---------|---------|------------|
| ÀÄ | ÀÄ | Å j | ∫A j | ±ÀB |
| _, ÀAS Éå | | Ez É | E | `Àj |
| Éå | | É | R | |
| | | | è | |
| 11. | DPÁ±À | | | |
| 12. | £ÀPÀëvÀæ | | | |
| 13. | CAUÀr | | | |
| 14. | <i></i> ,ÀÆAiÀÄð | | | |
| 15. | GAiÀÄå⁻É | | | |
| 16. | ªÀÄgÀ | | | |
| 17. | PÉ®¸À | | | |
| 18. | ªÀÄtÄÚ | | | |
| 19. | UÁAiÀÄ | | | |
| 20. | zÉêÁ®Ai | | | |
| | ÀÄ | | | |
| 21. | qÁPÀÖgï/D | | | |
| | ÀàvÉæ | | | |

[¨]sÁUÀ 3: ¸À£Éß ªÀÄvÀÄÛ QæAiÉÄUÀ¼ÀÄ ªÉÆzÀ® ¸ÀA¥ÀPÀðzÀ gÀÆ¥À/®PÀëtUÀ¼ÀÄ

| | ^a ÁPÀåUÀ¼ÀÄ | ,Àj | _Àj | ¨sÁUÀ±ÀB |
|---------------|--|-----|------------|-------------|
| ,ÀASÉå | | EzÉ | E®è | , Àj |
| 1. | CªÀ¼ÀÄ/CªÀ£ÀÄ »r¢gÀĪÀ | | | |
| | ^a À,ÀÄÛ ^a À£ÀÄß PÉÊ ZÁa | | | |
| | vÉÆÃj,ÀĪÀÅzÀÄ. | | | |
| 2. | CªÀ¼ÀÄ/CªÀ£ÀÄ »r¢gÀĪÀ | | | |
| | CnPÉ/ªÀ,ÀÄÛªÀ£ÀÄß PÉÆqÀ®Ä | | | |
| | ¤ ^ª ÉÄäqÉUÉ §gÀĪÀÅzÀÄ | | | |
| 3. | CªÀ½UÉ/CªÀ¤UÉ C,ÀQÛ¬ÄgÀĪÀ ªÀ,ÀÄÛ«£ÉqÉUÉ ¨ÉgÀ¼ÀÄ ªÀiÁr | | | |
| | ^a À¸ÀÄÛ«£ÉqÉUÉ ¨ÉgÀ¼ÀÄ ^a ÀiÁr | | | |
| | vÉÆÃj,ÀĪĂÅzÀÄ. | | | |
| 4. | CªÀ¼Ă/CªÀ£À PÉÊ ªÉÄÃ ⁻ É JwÛ | | | |
| | CªÀ¼À£ÀÄ₿/CªÀ£À£ÀÄ₿ | | | |
| | JwÛPÉÆ¼ÀÄîªÀAvÉ ¸ÀÆa¸ÀĪÀÅzÀÄ. | | | |
| 5. | "E®è" JA§AvÉ vÀ⁻É C⁻Áèr,ÀĪÀÅzÀÄ. | | | |

| 6. | "°ËzÀÄ" JA§AvÉ vÀ ⁻ É Dr¸ÀĪÀÅzÀÄ. | |
|-----|--|--|
| 7. | ¨ÉgÀ¼À£ÀÄβ vÀÄnAiÀÄ ªÉÄÃ¯É ElÄÖ | |
| | "±ï(¤±Àå§Ý)" JA§AvÉ vÉÆÃj ÅĪÀÅzÀÄ. | |
| 8. | J£À£ÁßzÀgÀÄ PÉüÀ®Ä PÉÊAiÀÄ£ÀÄß | |
| | °ÉÆgÀ ZÁa vÉUÉzÀÄ ªÀÄÄaÑ | |
| | ^a ÀiÁqÀÄ ^a ÀÅzÀÄ. | |
| 9. | zÀÆgÀzÀ°ègÀĪÀ ªÀåQÛUÉ | |
| | ^a ÀÄÄvÀÛ£ÀÄß UÁ½AiÀİè | |
| | HzÀĪÀÅzÀÄ. | |
| 10. | C ªÀ,ÀÄÛ gÀÄaAiÀiÁVzÉ JAzÀÄ | |
| | vÀÄnAiÀÄ£ÀÄß »AzÉ ªÀÄÄAzÉ ªÀiÁr | |
| | vÉÆÃj¸ÀĪÀÅzÀÄ. | |

DIUÀ¼ÀÄ ªÀÄvÀÄÛ ¢£ÀZÀj

| PÀæªÀÄ ¸ÀASÉå | DIUÀ¼ÀÄ | _, Àj EzÉ | ¸Àj E®è | ¨sÁUÀ±ÀB ¸Àj |
|------------------|--|---------------------|---------|-----------------|
| 6. | PÀ¼Àî §AzÀ PÀ¼Àî | | | |
| 7. | "É£ÀβnÖ ⁰ÉÆÃUÀĪÀ DlUÀ¼ÀÄ | | | |
| 8. | UÉÆA¨É E¤ßvÀgÀ ªÀ¸ÀÄÛUÀ¼À eÉÆvÉ DqÀĪÀÅzÀÄ | | | |
| 9. | °ÁqÀĪÀÅzÀÄ | | | |
| 10. | °ÁrUÉ °ÉeÉÓ °ÁPÀĪÀÅzÀÄ | | | |

^aÀ,ÀÄÛUÀ¼ÉÆA¢UÉ ^aÀiÁqÀÄ^aÀ PÉ®,ÀUÀ¼ÀÄ

| PÀæªÀÄ | ^a ÁPÀåUÀ¼ÀÄ | <u>`</u> Àj | ,Àj | ¨sÁUÀ±ÀB |
|---------------|--------------------------------------|-------------|------------|-------------|
| ,ÀASÉå | | EzÉ | E®è | , Àj |
| 1. | PÉʬÄAzÀ/ZÀªÀÄZÀ¢AzÀ w£ÀÄߪÀÅzÀÄ | | | |
| 2. | UÁè ¹ ¤AzÀ PÀÄrAiÀÄĪÀÅzÀÄ | | | |
| 3. | ¨ÁZÀtÂUɬÄAzÀ vÀ⁻É ¨ÁZÀĪÀÅzÀÄ | | | |
| 4. | §æ¶¤AzÀ °À®Äè GdÄÓªÀÅzÀÄ | | | |
| 5. | PÉÊ PÁ®Ä/ªÀÄÄRªÀ£ÀÄβ lªÀ⁻ï¤AzÀ | | | |
| | MgɸÀĪÀÅzÀÄ | | | |
| 6. | mÉÆÃ¦°ÁQ PÉÆ¼ÀÄîªÀÅzÀÄ | | | |
| 7. | ZÀ¥Àà° °ÁQPÉÆ¼ÀÄîªÀÅzÀÄ | | | |
| 8. | ,ÀgÀ, PÉÊ UÀrAiÀiÁgÀ | | | |
| | °ÁQPÉÆ¼ÀÄîªÀÅzÀÄ | | | |
| 9. | PÀtÄÚ ªÀÄÄaÑ ¤zÉæ §AzÀªÀgÀAvÉ | | | |
| | ªÀÄ®UÀĪÀÅzÀÄ | | | |
| 10. | ©¹AiÀiÁVzÉ JAzÀÄ ¸ÀÆa¸À®Ä | | | |
| | HzÀĪÀÅzÀÄ | | | |
| 11. | ªÁºÀ£ÀUÀ¼À£ÀÄß | | | |
| | »rzÀÄPÉÆ¼ÀÄîªÀÅzÀÄ ªÀÄvÀÄÛ | | | |
| | ZÀ°,ÀĪÀAvÉ ªÀiÁqÀĪÀÅzÀÄ. | | | |
| 12. | ¥ÉÇãÀ£ÀÄß Q«AiÀÄ §½ »rzÀÄ | | | |

| | ªÀiÁvÀ£ÁqÀĪÀªÀgÀAvÉ £Àn¸ÀĪÀÅzÀÄ | |
|-----|--|--|
| 13. | ZÉAqÀ£ÀÄ̈́ß J ֲÉAiĂÄÄĪÀÅzÀÄ̈́ | |
| 14. | MAzÀÄ ¥ÁvÉæ¬ÄAzÀ ªÀÄvÉÆÛAzÀÄ | |
| | ¥ÁvÉæUÉ ¤ÃgÀÄ ¸ÀÄjAiÀÄĪÀÅzÀÄ | |
| 15. | ¥ÁvÉæAiÀİè CxÀªÀ [–] ÉÆÃlzÀ°è | |
| | ¤ÃgÀ£ÀÄß ZÀªÀÄZÀ¢AzÀ | |
| | wgĂÄV,ÀÄzÀÄ | |
| 16. | UÉÆA¨ÉUÉ ªÀÄÄvÀÄÛ PÉÆqÀĪÀÅzÀÄ | |
| | CxÀªÀ vÀ©âPÉÆ¼ÀÄîªÀÅzÀÄ | |
| 17. | UÉÆA ÉAiÉÆA¢UÉ | |
| | ^a ÀiÁvÀ£ÁqÀÄ ^a ÀÅzÀÄ | |
| 18. | PÀ£ÀßqÀPÀ °ÁQ PÉÆ¼ÀÄîªÀÅzÀÄ | |

zÉÆqÀتÀgÀ jÃwAiÀÄ PÉ®¸ÀUÀ¼À£ÀÄß C£ÀĸÀj¸ÀĪÀÅzÀÄ

| | ^a ÁPÀåUÀ¼ÀÄ | <u>,</u> Àj | ,Àj | sÁUÀ±ÀB |
|---------------|--|-------------|------------|---------------------|
| ,ÀASÉå | | EzÉ | E®è | , Àj |
| 1. | ¥ÉÇgÀPɬÄAzÀ £É® UÀÄr ÀĪÀÅzÀÄ CxÀªÀ PÀ À °ÉÆqÉAiÀÄĪÀÅzÀÄ | | | |
| | CxÀªÀ PÀ¸À ºÉÆqÉAiÀÄĪÀÅzÀÄ | | | |
| 2. | PÀ®Äè CxÀªÀ ¸ÀÄwÛUɬÄAzÀ | | | |
| | ZÀZÀÄѪÀÅzÀÄ | | | |
| 3. | ©ÃUÀzÀ PÉÊAiÀÄ£ÀÄß ©ÃUÀPÉÌ | | | |
| | °ÁPÀĪÀÅzÀÄ | | | |
| 4. | NzÀĪÀÅzÀÄ (¥ÀŸÀÛPÀªÀ£ÀÄß | | | |
| | vÉgÉzÀÄ ¥ÀÅlUÀ¼À£ÀÄß | | | |
| | wgÀĪÁPÀĪÀÅzÀÄ) | | | |
| 5. | VqÀUÀ½UÉ ¤ÃgÀÄ °ÁPÀĪÀÅzÀÄ | | | |
| 6. | ͺÉÊPÀ⁻ï ⁰ÉÆqÉAiÀÄ®Ä ¥ÀæAiÀÄvÀß | | | |
| | ^a ÀiÁqÀÄ ^a ÀÅzÀÄ | | | |
| 7. | ¥ÁvÉæ vÉÆ¼ÉAiÀÄĪÀÅzÀÄ | | | |
| 8. | §mÉÖ¬ÄAzÀ ªÀgɸÀĪÀÅzÀÄ | | | |
| 9. | ¥É£ï/¥É¤ì⁻ï/E¤ßvÀgÉ ªÀ¸ÀÄÛ«¤AzÀ | | | |
| | §gÉAiÀÄĪÀÅzÀÄ | | | |
| 10. | AiÀiÁªÀÅzÁzÀgÀÄ ªÀ¸ÀÄÛªÀŤAzÀ | | | |
| | UÀÄAr vÉUÉAiÀÄ®Ä | | | |
| | ¥ÀæAiÀÄw߸ÀĪÀÅzÀÄ | | | |

Appendix IV

Demographic information form

Name of the child:

age/sex:

Date of birth:

| | Name | Age | Education | Occupation |
|----------|------|-----|-----------|------------|
| Father's | | | | |
| Mother's | | | | |

Annual income of the family:

Consanguinity:

Family status:

Total no of persons in the family:

Family history: (of Mental retardation, psychological problem, congenital deformity, handicapped, and any neurological problem):

Speech and language stimulation at home:

Sibling history

no. of siblings:

| | Name | Age/Sex | Education |
|------------|------|---------|-----------|
| I sibling | | | |
| II sibling | | | |

Prenatal complications:

Perinatal complications:

Postnatal complications:

Developmental pattern:

Motor:

Speech and language:

Any congenital abnormalities:

Any sensory abnormalities:

Vision:

Hearing:

Screening result:

Hearing:

Vision:

Psychological test:

Appendix V

Communication inventory for 6 – 8 months infants

Section 1 Early Communication Skills

Section 1 A, Prelinguistic skills

- 1. Appears to be able to distinguish general meanings of warning, anger and/or friendly voice pattern by facial and bodily gestures.
- 2. Responds with appropriate gestures to words such as "come", "bye-bye".....etc.
- 3. Gives some attention to music or singing.
- 4. Frequently appears to listen to whole conversation around him/her.
- 5. Regularly stops activity when his/her name called.
- 6. Reacts to loudness changes in voice of a others.
- 7. Sustain interest for up to a full minute in looking at person or picture, if they are named. Ex "look this is your daddy's picture"
- 8. Reacts differently to familiar people and strangers.
- 9. Appears to enjoy listening to new words.
- 10. Responds to rhythmic music by bodily or hand movements
- 11. Understands words like up, down.....
- 12. Responds when name called. Ex. Turning back, searching for the person who called... etc.
- 13. Child enjoys watching TV, looking at comics or listening to music.

Section 1 B, Early Phrases

- 1. Are you hungry?
- 2. Clap your hands
- 3. Come on/ come here
- 4. Get up
- 5. Look / look here
- 6. Want to go out?

Section 2 vocabulary

Comprehension

Family members: Mummy, Daddy, Grandma and Grandpa Food items: Rice, Mudde, Water, Apple and Milk Vehicles: Motorcycle and Car Toys: Doll and Toy Rooms and Furniture: Kitchen, Bedroom, Bathroom and Cot Dress: Cloth/Dress Common objects: Blanket, Bottle, Bowl, Lamp, Medicine, TV, Telephone and Fan Action verbs: Bite, Drink and Eat Other words: Bath and Home Expression:

Different sound effects: Ba ba, Wa wa, Ba ba va va ta ta, Ta da va ma, ambaa ambaa, choo choo and amma.

Family members: mummy

Section 3 nonverbal communication

First communicative features

- 1. Waves bye-bye on his/her own when someone leaves.
- 2. Blows kisses from a distance

Games and routines

- 1. Play peekaboo
- 2. Play chasing games
- 3. Play with a toys
- 4. Sing
- 5. Dance

Actions with objects

- 1. Drink from a cup.
- 2. Hold vehicle object and make it move.
- 3. Kiss or hug a toy.

Communication inventory for 8-10 months infants

Section 1 Early Communication Skills

Section 1 A, Prelinguistic skills

1. Appears to be able to distinguish general meanings of warning, anger and/or friendly voice pattern by facial and bodily gestures.

- 2. Responds with appropriate gestures to words such as "come", "bye-bye".....etc.
- 3. Gives some attention to music or singing.
- 4. Frequently appears to listen to whole conversation around him/her.
- 5. Regularly stops activity when his/her name called.
- 6. Reacts to loudness changes in voice of a others.
- 7. Regularly stops activity in response to "No".
- 8. Reacts differently to familiar people and strangers.
- 9. Appears to enjoy listening to new words.
- 10. Generally able to listen to speech without being distracted by others.
- 11. Enjoys listening stories.
- 12. Responds to rhythmic music by bodily or hand movements
- 13. Child is possessive about his/her clothes, toys.
- 14. Responds when name called. Ex. Turning back, searching for the person who called... etc.
- 15. Child enjoys watching TV, looking at comics or listening to music.

Section 1 B, Early Phrases

- 1. Are you hungry?
- 2. Are you tired/ sleepy?
- 3. Be quiet!
- 4. Clap your hands
- 5. Come on/ come here
- 6. Don't do that
- 7. Don't touch
- 8. Give me a hug/kiss
- 9. Let's go bye bye

- 10. Look / look here
- 11. Open your mouth
- 12. Sit down
- 13. Stop it
- 14. Want to go out?
- 15. Say bye bye
- 16. Sleep now?
- 17. Don't cry
- 18. Don't go outside

Section 2 vocabulary

Comprehension

Family members: Mummy, Daddy, Grandma and Aunty

Body parts: Eye and Hand

Food items: Water and Milk.

Animals: Dog

Vehicles: Bicycle, Motorcycle and Car

Toys: Ball, Book, Doll, Pen and Toy.

Clothing: Cloth/Dress, Hat and Bangles.

Rooms and furniture: Kitchen, Bedroom, Bathroom and Cot.

Common objects: Broom, Medicine, Money, Paper, Bed, Plate, Spoon, Telephone and Fan.

Action verbs: Dance, Drink, Eat, Go, Hug, Kiss, Look and Take.

Descriptive words: All gone, Hot, Hungry, and Tired.

Others: Bath, Flower, and Hospital/ Doctor

Expression

Different sound effects: Ba ba, Wa wa, Ba ba va va ta ta, Ta da va ma, Choo choo, Vroom, woof woof and umm

Family members: Mummy and Daddy.

Section 3 Nonverbal communication

First communicative features

- 1. Reaches out and gives you a toy or some objects that he/ she in holding.
- 2. Points (with arm and index finger extended) at some interesting object or event.
- 3. Waves bye-bye on his/her own when someone leaves.
- 4. Extends his/her upward to signal a wish to be picked up.
- 5. Shakes head "no"
- 6. Blows kisses from a distance.

Games and routines

- 6. Play peekaboo
- 7. Play chasing games
- 8. Play with a toys
- 9. Sing
- 10. Dance

Actions with objects

- 1. Eat with a spoon.
- 2. Drink from a cup.
- 3. Put on hat
- 4. Hold vehicle object and make it move.
- 5. Put telephone to ear.
- 6. Throw ball
- 7. Pour liquid from one container to another

8. Kiss or hug a toy.

Imitating adult like actions

- 1. Sweep with broom or mop
- 2. Read (open book and turn pages)
- 3. Write with pen or pencil

Communication inventory for 10-12 months infants

Section 1 Early Communication Skills

Section 1 A, Prelinguistic skills

- 16. Appears to be able to distinguish general meanings of warning, anger and/or friendly voice pattern by facial and bodily gestures.
- 17. Responds with appropriate gestures to words such as "come", "bye-bye".....etc.
- 18. Gives some attention to music or singing.
- 19. Frequently appears to listen to whole conversation around him/her.
- 20. Regularly stops activity when his/her name called.
- 21. Reacts to loudness changes in voice of a others.
- 22. Regularly stops activity in response to "No".
- 23. Reacts differently to familiar people and strangers.
- 24. Appears to enjoy listening to new words.
- 25. Generally able to listen to speech without being distracted by others.
- 26. Mimes when action is named. Ex. When you ask "How to eat?" Child will make action to show how to eat.
- 27. Enjoys listening stories.
- 28. Responds to rhythmic music by bodily or hand movements
- 29. Feels happy when the child is praised for looks/ neat dress
- 30. Child is possessive about his/her clothes, toys.
- 31. Responds when name called. Ex. Turning back, searching for the person who called... etc.
- 32. Child enjoys watching TV, looking at comics or listening to music.

Section 1 B, Early Phrases

- 19. Are you hungry?
- 20. Are you tired/sleepy?
- 21. Be quiet!
- 22. Clap your hands
- 23. Come on/ come here
- 24. Do you want more?
- 25. Don't do that
- 26. Don't touch
- 27. Get up
- 28. Give it to mummy
- 29. Give me a hug/kiss
- 30. Go get
- 31. Good girl/boy
- 32. Let's go bye bye
- 33. Look / look here
- 34. Open your mouth
- 35. Sit down
- 36. Stop it
- 37. Throw the ball
- 38. Want to go out?
- 39. Do you want it?
- 40. Say bye bye
- 41. Sleep now?

- 42. Don't cry
- 43. Don't go outside.
- 44. Give me some???

Comprehension

Family members: Mummy, Daddy, Grandma, Grandpa, Sister, Aunty and Child.

Body parts: Head, Eye, Mouth, Hand and Leg.

Food items: Rice, Idli, Dosa, Chappati, Water, Apple, Banana, Milk and Food items.

Animals: Cat, Dog, Cow, Crow and Animal

Vehicles: Bus, Bicycle, Motorcycle, Car and Auto

Toys: Ball, Balloon, Book, Doll, Pen and Toy.

Clothing: Cloth/Dress, Nikker, Hat, Necklace/Chain, Bangles, Ear rings, Ankle lace and Sweater.

Rooms and furniture: Kitchen, Bedroom, Bathroom, Cot, Chair, Door and Stairs.

Common objects: Blanket, Bottle, Bowl, Box, Broom, Comb, Dish, Glass, Key, Lamp, Medicine, Money, Paper, Bed, Plate, Purse, Soap, Spoon, TV, Telephone, Fan and Plant.

Action verbs: Bite, Bring, Close, Cry, Dance, Drink, Eat, Fall, Feed, Finish, Give, Go, Hit, Hug, Kiss, Look, Open, Play, Pull, Push, Put, Say, Show, Sing, Sleep, Smile, Take, Throw, Touch and Walk.

Question words: what, who and why.

Descriptive words: All gone, Dark, Empty, Fast, Fine, Happy, Hard, Hungry, Hurt, Sleepy and Tired.

Pronouns: I, Me, That, This and You.

Quantifiers: none

Others: Bath, Flower, Home, Moon, Store, Mud, Temple and Hospital/ Doctor

Expression

Different sound effects: Ba ba, Wa wa, Ba ba va va ta ta, Ta da va ma, ko ko, woof woof and umm

Family members: mommy, daddy, grandpa.

Section 3 Nonverbal communication

First communicative features

- 1. Extends arm to show you something he/she is holding.
- 2. Reaches out and gives you a toy or some objects that he/ she in holding.
- 3. Points (with arm and index finger extended) at some interesting object or event.
- 4. Waves bye-bye on his/her own when someone leaves.
- 5. Extends his/her upward to signal a wish to be picked up.
- 6. Shakes head "no"
- 7. Nods head "yes"
- 8. Blows kisses from a distance.

Games and routines

- 1. Play peekaboo
- 2. Play chasing games
- 3. Play with a toys
- 4. Sing
- 5. Dance

Actions with objects

- 1. Eat with a spoon.
- 2. Drink from a cup.
- 3. Comb his/her own hair.
- 4. Brush teeth.
- 5. Put on hat
- 6. Hold vehicle object and make it move.
- 7. Put telephone to ear.
- 8. Throw ball
- 9. Pour liquid from one container to another
- 10. Kiss or hug a toy.

Imitating adult like actions

- 1. Sweep with broom or mop
- 2. Read (open book and turn pages)
- 3. Try to ride bicycle.
- 4. Clean with cloth
- 5. Write with pen or pencil

REFERENCE

- Abel, T., & Goodwyn, S. (1998). Positive and negative regulatory mechanisms that mediate long term memory storage. *Brian Research Reviews*, 26(2-3), 360-378.
- Acredolo, L., & Goodwyn, S. (1988). Symbolic gesturing in normal infants. *Child development*, 59, 450-466.
- Angel, C. A. (2010). *Language development and disorders*. *A case study approach*. Jones and Bartlett Publishers, Canada.
- Argyle, M. (1996). *Bodily communication*. London: Routledge.
- Bates, E., Benigi, L., Bretherton, I., Camaioni, L., & Volterra, V. (1979). In E. Bated (Ed.), *The emergence of symbols: Cognition and Communication in Infancy*. New York and London: Academic Press.
- Bates, E., Camaioni, L., & Volterra, V. (1975). The Acquisition of Performatives Proir to Speech. *Merill-Palmer Quarterly*, 21, 205-226.
- Bernstein, D. K. & Tiegerman, E. (1997). Language and Communication Disorders in Children. USA.
- Bhuvaneshwari, (1993). A Screening Picture Vocabulary Test in Kannada, Unpublished Masters Dissertation, University of Mysore.
- Burner, J. (1981). *The social context of langue acquisition. Language and Communication*, 1, 155-178.
- Bzoch, K. & League, R. (1971). *Receptive Expressive Emergent Language Scale*. Baltimore, MD: University Park Press.
- Capirci, O., Iverson, J., Pizzuto, E., & Volterra, V. (1996). Gestures and words during the transition to two-word speech. *Journal of Child Language*, 23, 645-673.
- Carroll, J. (1956). *Language, thought, and reality: selected writings of Benjamin Lee Whorf.* Cambridge, MA: MIT Press.
- Carpenter, R. L., Mastergeorge, A. M. & Coggins, T. E. (1983). The acquisition of communicative intentions in infants of eight to fifteen months of age. *Language and Speech.* 26, 101-116.
- Charman, T., Swettenham, J., Baren-Cohen, S., Cox, A., Baird, G., & Drew, A. (2000). An experimental investigation of social – cognitive abilities in infants with Autism: Clinical implications. In D. Muir and A. Slater (Eds.) *Infant Development*: The Essential Readings. Malden, MA: Blackwell.
- Chen, G. M. (1995). Differences in self-discourse patterns among Americans versus Chinese: A comparative study. *Journal of cross-Cultural Psychology*, 26(1), 84-91.

- Doherty Sneddon, G. (2003). *Children's unspoken language*. London and New York: Jessica Kingsley publishers.
- Dolores E. Battle, (1998). Communication disorders in multicultural populations. 117-156.
- Ervin, S. (1964). Language and TAT content in bilinguals. Journal of Abnormal and Social Psychology, 68, 500-507.
- Fenson, L., Dale, P. S., Reznick, J. S., Bates, E., Thal, D. J., & Pethick, S. J. (1993). Macarthur communicative development inventories, user and technical manual. San Diego, CA: Singular.
- Fenson, L., Dale, P. S., Reznick, J. S., Bates, E., Thal, D. J., & Pethick, S. J. (1994). Variability in early communicative development. Monographs of the Society for Research in Child Development, 59 (5), 1-189.
- Frankenburg, William, K., & Dobbs, J.B. (1967). The Denver Developmental Screening Test. *The Journal of Pediatrics*,(71): 181–191.
- Freedman, D. G. (1974). Human infancy: an evolutionary perspective. Hillsdale, NJ.
- Hall, E. T. (1963). A system for the notation of proxemic behaviors. *American Anthropologist*, 65, 1003-1026.
- Harris, M., Barlow-Brown, F., & Chaisn, J. (1995). The emergence of referential understanding: Pointing and comprehension of object names. *First Language*, 15, 19-34.
- Herleker, G. (1986). *3- D Language Acquisition Test*. Unpublished masters dissertation. University of Mysore.
- Hulit, L. M., & Howard, M. R. (2002). *Born to talk: An introduction to speech and language development* (3rd ed.) Boston, Ma: Allyn & Bacon.
- Hull, P. (1987). *Bilingualism: two Languages, two personalities*? Ann Arbor, MI: University of Michigan Press.
- Indian high risk register (2001-2002) Dept. of Audiology, All India institute of speech and hearing, Mysore.
- Iverson, J. M., Caprici, O., Longobardi, E., & Caselli, M. C. (1999). Gesturing in mother-child interactions. *Cognitive Development*, 14, 57-75.
- Kamalini. P., (1986). *3D language acquisition test and Mentally retarded*. Unpublished Masters Dissertation, University of Mysore.
- Kathyayani, (1984). *A language test in Kannada for Expression in Children*, Unpublished Masters Dissertation, University of Mysore.

- Madhu, K., Deepa, M. S., Harshan, Suhas, K. & Shyamala Chengappa. (2009) *Standaridation of Receptive Expressive Emergent Language Skills for Kannada speaking children.* JAIISH, Vol 28, 96-102.
- Matsumoto, D. (2006). Culture and nonverbal behavior. In V. Manusov, & M. Patterson (Eds.). *Handbook of nonverbal communication* (pp. 219-235). Thousand Oaks, CA: Sage.
- Matsumoto, D., & Assar, M. (1992). The effects of language on judgment of universal facial expressions of emotions. *Journal of Nonverbal Behavior*, 16(2), 86-99.
- Mallikarjun B. (2002). Language in India; volume 2.
- Mc Neill, D. (1992). Hand and Mind. Chicago: University of Chicago Press.
- Minami, M., & McCabe, A. (1995). Rice balls and bear hunts: Japanese and North American family narrative patterns. *Journal of Child Language*, 22(2), 423-445.
- Moog, J. S. & Geers, A. E. (1975). Scales of Early Communication Skills for Hearing Impaired Children. St. Louis, MO: Central Institute for the Deaf.
- National research council & institute of Medicine. (2000). From neurons to neighborhoods: the science of early childhood development, Washington, DC
- Navitha, (2009). *Comprehensive language assessment tool for children (3-6 years)*, Unpublished Masters Dissertation, University of Mysore.
- Nelson, K. (1973). Structure and strategy in learning to talk. *Monographs of the Society for Research in Child Development*, 38(1-2)
- Nicoladis, E., Mayberry, R., & Genesee, F. (1999). Gesture and early bilingual development. *Developmental Phonology*, 35(2), 514-526.
- Nomura, N., & Barnlund, D. (1983). Patterns of interpersonal criticism in Japan and the United States. *International Journal of Intercultural Relations*, 7(1), 1-18.
- Owens, R. E. (2005). *Language development: An introduction* (6th ed.). Boston, MA: Allyn & Bacon.
- Owens, R. E. (2008). Language development: An introduction (7th ed.). Boston, MA: Allyn & Bacon.
- Ozcaliskan, S. & Goldin-Meadow, S. (2005). Gesture is at the cutting edge of early language development. *Cognition*, 96, 101-113.
- Peshwaria, R., & Venkatesan, S., (1992). *Behavior assessment scale for Indian children with mental retardation*, Secunderabad. National Institute for Mentally Handicapped.
- Piaget, J. (1954). The construction of reality in the child. New York: Basic books.

- Prema, K. S. & Geetha, Y. V., (2005). *Language acquisition in multilingual children*. AIISH funded project.
- Rossetti, L. (1990). The Rossetti Infant-Toddler Language Scale. East Moline, II: Linguisystem.
- Shulman, B. B. & Capone, N. C. (2010). Language development; foundations, process, and clinical applications. Massachusetts.
- SPSS, Inc. (2001). SPSS *Base for windows* (version 10.0) [Computer software]. Chicago IL: SPSS, inc.
- Sreedevi, (1988). A Screening Picture Vocabulary Test in Kannada, Unpublished Masters Dissertation, University of Mysore
- Swati, C. S. (1993). Normalization of scales of early communication skills for hearing impaired on Indian population. Unpublished Masters Dissertation, University of Mysore.
- Usha, K. R. (1986). *3 dimensional language acquisition test (3D LAT) and Hearing Impaired children.* Unpublished Masters Dissertation, University of Mysore.
- Vaidyanatan, R. (1984). Verbal environment in early language acquisition: A pragmatic approach. Unpublished Doctoral Theses, University of Bombay.
- Venkatesan, S., (2002). Activity checklist for preschool children with developmental disabilities.
- Vijayalakshmi, (1981). A test for assessing syntax in Kannada. Unpublished Masters Dissertation, University of Mysore.
- Whetherby, A., & Prizant, B. (1993). *Communication and Symbolic Behavior Scales Manual: Normed Edition*. Baltimore: Paul H. Brooks.

William & Josiah (1984), .Denver Developmental Screening Test II (DDST-II).

World Health Organization Multicentre Growth Reference Study Group. (2006). World Health Organization motor development study: windows of achievement for six gross motor development milestones. Acta Paediatrica Supplement, 450, 86-95.

Zimmerman, Steiner, and Pond (2002). The Preschool Language Scale (4th ed.).

Appendix I

The MacArthur Communicative Development inventories:

Words and Gestures

PART I EARLY WORDS

A. First Signs of Understanding

Before children begin to speak, they show signs of understanding language by responding to familiar words and phrases. Below are some common examples. Does your child do any of these?

- 1. Respond when name is called. (e.g., by turning and looking at source).
- 2. Respond to "no no" (by stopping what he/she is doing, at least for a moment).
- 3. React to "there's mummy / daddy" by looking around for them.

B. Phrases

Will the child able understand these sentences.....?

Please mark (o) in front of the sentences which child seems to be understand

| 1. | Are you hungry? | 10. Give it to | 21. Throw the ball |
|----|-----------------|----------------------|-----------------------|
| 2. | Are you tired/ | mummy | 22. Give me a kiss |
| | sleepy? | 11. Give me a hug | 23. Daddy's/mummy |
| 3. | Be careful | 12. Go get | 's home |
| 4. | Clap your hands | 13. Good girl/boy | 24. Change diaper |
| 5. | Come on/ come | 14. Hold still | 25. Be Quite |
| | here | 15. Let's go bye bye | 26. Time to go night |
| 6. | Do you want | 16. Look / look here | night |
| | more? | 17. Open your | 27. This little piggy |
| 7. | Don't do that | mouth | 28. Want to go for a |
| 8. | Don't touch | 18. Sit down | ride? |
| 9. | Get up | 19. Spit it out | |
| | | 20. Stop it | |

C. Starting to talk

 Some children like to "parrot" or imitate things that they've just heard (including new words that they are just learning, and/ or parts of sentences, for example, repeating "work now" after mother says "mummy's is going to work now."). How often does your child imitate words?..... 2. Some children like to go around naming or labeling things, as though proud of knowing the names and wanting to show this. How often does your child do this?

D. Vocabulary check list.

If your child just understands the word mark (0) in front of the word. If your child understands as well as says the word then mark (\checkmark) in front of the word.

1. Sound effects and animal sounds

| Baa baa | ouch | uh oh |
|--|------------------------------|------------------------------|
| Choo choo | quack quack | vroom |
| cockadoodledoo | grrr | woof woof |
| mooo | meow | yum yum |
| 2. Animal names | | |
| Animal | Donkey | Mouse |
| Bear | Duck | Owl |
| Bee | Elephant | Penguin |
| Bird | Fish | Pig |
| Bug | Frog | Pony |
| Bunny | Giraffe | Puppy |
| Butterfly | Goose | Sheep |
| Cat | Hoarse | Squirrel |
| Chicken | Kitty | Teddy bear |
| Cow | Lamb | Tiger |
| Deer | Lion | Turtle |
| Dog | Monkey | Turtle |
| <u>3. Vehicles</u> Airplane Bicycle Bus | Car Firetruck Stroller | Motorcycle Train Truck |
| <u>4. Toys</u> | | |
| Ball | Book | Doll |
| Balloon | Bubbies | Pen |
| Block | Bubble | Toy |

5. Food and Drink

| Food | Candy |
|-----------|---|
| Ice cream | Chicken |
| Juice | Cookie |
| Meet | Cracker |
| Milk | Cheese |
| Noodles | Pizza |
| Orange | Peas |
| Water | Spaghetti |
| Carrots | Toast |
| Cherrios | Rasin |
| | Ice cream Juice Meet Milk Noodles Orange Water Carrots |

6. Clothing

| Beads | Diaper | Pants |
|--------|----------|---------|
| Bib | Dress | Shirt |
| Boots | Hat | Shoe |
| Button | Jacket | Socks |
| Coat | Necklace | Sweater |
| Dress | Pajamas | Zipper |

7. Body parts

| Arm | Foot | Leg |
|-------|--------|--------|
| Belly | Finger | Mouth |
| Cheek | Hair | Nose |
| Ear | Hand | Tooth |
| Eye | Head | Toe |
| Face | Knee | Tongue |

8. Furniture and Rooms

| Bathroom | Drawer | Refridgerator |
|----------|-------------|---------------|
| Bathtub | Garage | Rocking chair |
| Bed | High chair | Sink |
| Bedroom | Kitchen | Stove |
| Couch | Living room | Stairs |
| Crib | Oven | Table |
| Chair | Play pen | TV |
| Door | Potty | Window |
| | | |

9. Small House hold Items.

| Blanket | Hammer | Purse |
|---------|----------|------------|
| Bottle | Keys | Radio |
| Bowl | Lamp | Scissors |
| box | Light | Soap |
| Broom | Medicine | Spoon |
| Brush | Money | Telephone |
| Clock | Paper | Toothbrush |
| Comb | Penny | Towel |
| Cup | Pictures | Vaccum |
| Dish | Pillow | Watch |
| Fork | Plant | |
| Glass | Plate | |

10. Outside Things and places

| Backyard | Park | Snow |
|----------|--------|-------|
| Beach | Party | Star |
| Church | Pool | Store |
| Flower | Rain | Sun |
| Garden | Rock | Swinf |
| Home | School | Tree |
| House | Shovel | Water |
| Moon | Sky | Work |
| Outside | Side | Zoo |

<u>11. People</u>

| Aunty | Grandpa | Baby sister's name |
|---------|---------|--------------------|
| Boy | Mummy | Shopkeeper |
| Brother | People | Baby |
| Child | Person | Babysister |
| Daddy | Sister | Man |
| Girl | Teacher | Lady |
| Grandma | Uncle | Child's own name |

12. Games and routines

Bath Breakfast Bye or Bye Bye Dinner Don't Hello Hi

Lunch Night night Nap No Patty cake Peekaboo Please

Shh/Hush Thank you Wait Wanna/ Want to Yes

13. Action words

| Bite | Go | Say |
|--------|-------|--------|
| Blow | Help | See |
| Break | Hit | Show |
| Bump | Hug | Sing |
| Bring | Hurry | Sleep |
| Clean | Jump | Smile |
| Close | Kick | Splash |
| Cry | Kiss | Stop |
| Dance | Look | Swim |
| Draw | Love | Swing |
| Drink | Open | Take |
| Drive | Play | Throw |
| Eat | Pull | Touch |
| Fall | Push | Watch |
| Feed | Put | Walk |
| Finish | Read | Wash |
| Get | Ride | Wipe |
| Give | Run | Write |

14. Words about time

| Day | Night | Tomorrow |
|---------|-------|----------|
| Later | Now | Tonight |
| Morning | Today | |

15. Descriptive words

| All gone | Careful | Dry |
|----------|---------|--------|
| Asleep | Clean | Empty |
| Bad | Cold | Fast |
| Big | Cute | Fine |
| Blue | Dark | Gentle |
| Broken | Dirty | Good |
| Нарру | Nice | Tired |
| Hard | Old | Wet |
| Hot | Scared | Yucky |
| Hungry | Sick | Pretty |
| Hurt | Sleepy | Red |
| Little | Soft | |
| Naughty | Thirsty | |
| | | |

16. Pronouns

| I It Her His | Me Mine My That | This You Your |
|---|----------------------------|----------------------|
| <u>17. Questions words</u> | | |
| How | When | Why |
| How many | Where | Which |
| What | Who | |
| <u>18. Prepositions</u> Away Back Down In | Inside Off On Out | There Under Up |
| <u>19. Quantifiers</u> | | |
| All | None | Same |
| Another | Not | Some |
| More | Other | |

Part II Actions and Gestures

A.First communicative features

When infants are first learning to communicate, they often use gestures to make their wishes known. For each item below, mark the line (\checkmark) that describes your childs actions right now

- 1. Extends arm to show you something he/she is holding.
- 2. Reaches out and gives you a toy or some objects that he/ she in holding.
- 3. Points (with arm and index finger extended) at some interesting object or event.
- 4. Waves bye-bye on his/her own when someone leaves.
- 5. Extends his/her upward to signal a wish to be picked up.

- 6. Shakes head "no"
- 7. Nods head "yes"
- 8. Gestures "hush" by placing finger to lips.
- 9. Requests something by extending arm and opening and closing hand.
- 10. Blows kisses from a distance.
- 11. Smacks lips in a "yum yum" gesture ti indicate that something taste good.
- 12. Shrugs to indicate "all gone" or "where'd it go".

B.Games and routines

Does your child do any of the following?

- 1. Play peekaboo
- 2. Play patty cake
- 3. Play "so big"
- 4. Play chasing games
- 5. Sing
- 6. Dance

C.Actions with objects

Does your child do/try any of the following?

- 1. Eat with a spoon or fork
- 2. Drink from a cup containing of liquid
- 3. Comb or brush his/her own hair.
- 4. Brush teeth.
- 5. Wipe face or hands with a towel or cloth.
- 6. Put on hat
- 7. Put on shoe/socks
- 8. Put on necklace, bracelet or watch
- 9. Lay head on hands and squeeze eyes shut as if sleeping.
- 10. Blow to indicate something is hot.
- 11. Hold vehicle object and make it move.
- 12. Put telephone to ear.
- 13. Throw ball
- 14. Pour pretend liquid from one container to another
- 15. Stir pretend liquid in a cup or pan with a spoon.
- 16. Shiff flowers
- 17. Talk to toy.

D. Pretending to be a Parent

How are some things that young children sometimes do with stuffed animals or dolls. Please mark the actions that you have seen your child to do.

- 1. Put to bed
- 2. Cover with blancket
- 3. Feed with bottle
- 4. Feed with spoon
- 5. Brush/comb its hair
- 6. Pat or burp it
- 7. Push in stroller/buggy
- 8. Rock it
- 9. Kiss or hug it
- 10. Try to put shoe/socks/hat on it
- 11. Talk to it
- 12. Try to put diaper on it.

E. Imitating other Adult actions (using real or toy implements).

Does your child do/try any of the following?

- 1. Sweep with broom or mop
- 2. Put key in door or lock
- 3. Pound with hammer or mallet
- 4. Attempt to use saw
- 5. "Type" at a typewriter or computer keyboard
- 6. Vaccum
- 7. Water plants
- 8. Play musical instruments
- 9. "Drive car by turning steering wheel
- 10. Wash dishes
- 11. Write with a pen, pencil, or marker
- 12. Clean with cloth or duster
- 13. Read
- 14. Dig with a showel
- 15. Put on glasses

F. Pretend objects

During play, children sometimes use an object as a replacement for other. For example, a child wishing to feed a teddy bear might pretend that a block is an apple. A child might pretend that a bowl is a hat. Have you seen your child make substitutions of this kind?

If yes, Please give several examples

Other comments

Appendix II

Communication Inventory for Infants - CII (6 – 12 months)

Name:

Date:

DOB:

Age/sex:

<u>Instructions:</u> Please tick skills which your children can able to do in section 1 A and in section 1 B please the phrases which your children able to understand. If the child is not able to do the activity keep it empty.

Section 1

A. Early skills

| Sl no | Skills | Comprehends |
|-------|--|-------------|
| 1. | Appears to be able to distinguish general meanings of warning, anger | |
| | and/or friendly voice pattern by facial and bodily gestures. | |
| 2. | Responds with appropriate gestures to words such as "come", "bye- | |
| | bye"etc. | |
| 3. | Gives some attention to music or singing. | |
| 4. | Frequently appears to listen to whole conversation around him/her. | |
| 5. | Regularly stops activity when his/her name called. | |
| 6. | Reacts to loudness changes in voice of a others. | |
| 7. | Regularly stops activity in response to "No". | |
| 8. | Reacts differently to familiar people and strangers. | |
| 9. | Appears to enjoy listening to new words. | |
| 10. | Generally able to listen to speech without being distracted by others. | |
| 11. | Mimes when action is named. Ex. When you ask "How to eat?" Child will | |
| | make action to show how to eat. | |
| 12. | Enjoys listening stories. | |
| 13. | Responds to rhythmic music by bodily or hand movements | |
| 14. | Understands words like up, down | |
| 15. | Feels happy when the child is praised for looks/ neat dress | |
| 16. | Child is possessive about his/her clothes, toys. | |
| 17. | Responds when name called. Ex. Turning back, searching for the person | |
| | who called etc. | |
| 18. | Child get angry when her objects are taken/used or broken by someone and | |
| | start fighting with them | |
| 19. | Child enjoy watching TV, looking at comics or listening to music. | |

| B. | Early phrases |
|----|---------------|
|----|---------------|

| Sl | Phrases | Comprehends |
|-----|--------------------|-------------|
| no | | |
| 1. | Are you hungry? | |
| 2. | Are you | |
| | tired/sleepy? | |
| 3. | Be quiet! | |
| 4. | Clap your hands | |
| 5. | Come on/ come | |
| | here | |
| 6. | Do you want more? | |
| 7. | Don't do that | |
| 8. | Don't touch | |
| 9. | Get up | |
| 10. | Give it to mummy | |
| 11. | Give me a hug/kiss | |
| 12. | Go get | |
| 13. | Good girl/boy! | |
| 14. | Let's go bye bye | |

| Sl | Phrases | Comprehends |
|-----|-------------------|-------------|
| no | | |
| 15. | Look / look here | |
| 16. | Open your mouth | |
| 17. | Sit down | |
| 18. | Stop it | |
| 19. | Throw the ball | |
| 20. | Want to go out? | |
| 21. | Do you want it? | |
| 22. | Say bye bye | |
| 23. | Sleep now? | |
| 24. | Don't cry | |
| 25. | Don't go outside. | |
| 26. | Walk slowly. | |
| 27. | This dress is not | |
| | nice | |
| 28. | Give me some | |

Part 2: Early vocabulary

Instructions: Please tick items which your children can able to do. If your child is able to understand mark in comprehends part and if child uses that word/tell that word mark in expresses part. If the child is not able to do the activity keep it empty.

1. Different sound effects

| Sl no | Items | Expresses |
|-------|-------------------|-----------|
| 1. | Ba ba | |
| 2. | Wa wa | |
| 3. | Ba ba va va ta ta | |
| 4. | Ta da va ma | |
| 5. | ambaa ambaa | |
| 6. | ko ko | |
| 7. | o ho | |
| 8. | vroom | |
| 9. | woof woof | |
| 10. | umm | |
| 11. | аууо | |
| 12. | amma | |

2. Family members

| Sl | Items | Comp | Exp |
|----|---------|------|-----|
| no | | | |
| 1. | Mummy | | |
| 2. | Daddy | | |
| 3. | Grandma | | |
| 4. | Grandpa | | |
| 5. | Brother | | |

| Sl | Items | Comp | Exp |
|-----|--------|------|-----|
| no | | | |
| 6. | Sister | | |
| 7. | Uncle | | |
| 8. | Aunty | | |
| 9. | Child | | |
| 10. | People | | |

3. Body parts

| Sl | Items | Comprehends | Expresses |
|----|-------|-------------|-----------|
| no | | | |
| 1. | Head | | |
| 2. | Eye | | |
| 3. | Mouth | | |
| 4. | Face | | |
| 5. | Hand | | |
| | | | |

| Sl | Items | Comprehends | Expresses |
|-----|--------|-------------|-----------|
| no | | | |
| 6. | Leg | | |
| 7. | Tummy | | |
| 8. | Cheek | | |
| 9. | Finger | | |
| 10. | Tongue | | |
| 11. | Hair | | |

4. Food items

| Sl | Items | Comp | Exp |
|-----|----------|------|-----|
| no | | | |
| 1. | Rice | | |
| 2. | Mudde | | |
| 3. | Sambar | | |
| 4. | idli | | |
| 5. | Dosa | | |
| 6. | Chappati | | |
| 7. | Water | | |
| 8. | Apple | | |
| 9. | Banana | | |
| 10. | Orange | | |
| 11. | Grapes | | |

| Sl | Items | Comp | Exp |
|-----|------------|------|-----|
| no | | | |
| 12. | Milk | | |
| 13. | Butter | | |
| 14. | Bread | | |
| 15. | Cake | | |
| 16. | Chocolates | | |
| 17. | Juice | | |
| 18. | Egg | | |
| 19. | Meat/ Fish | | |
| 20. | Coffee/tea | | |
| 21. | Food | | |

5. Animals

| Sl | Items | Comp | Exp |
|----|-----------|------|-----|
| no | | | |
| 1. | Cat | | |
| 2. | Dog | | |
| 3. | Cow | | |
| 4. | Chicken | | |
| 5. | Crow | | |
| 6. | Sheep | | |
| 7. | Butterfly | | |

6. Vehicles

| Sl | Items | Comp | Exp |
|-----|------------|------|-----|
| no | | | |
| 8. | Elephant | | |
| 9. | Animal | | |
| 10. | Monkey | | |
| 11. | Mouse | | |
| 12. | Fish | | |
| 13. | Snake | | |
| 14. | Tiger/Loin | | |

7. Toys

| Sl | Items | Comp | Exp |
|----|------------|------|-----|
| no | | | |
| | | | |
| 1. | Bus | | |
| 2. | Bicycle | | |
| 3. | Motorcycle | | |
| 4. | Car | | |
| 5. | Tempo | | |

| Sl | Items | Comp | Exp |
|----|---------|------|-----|
| no | | | |
| 1. | Ball | | |
| 2. | Balloon | | |
| 3. | Book | | |
| 4. | Doll | | |
| 5. | Pen | | |
| 6. | Тоу | | |

8. Clothing

| Sl | Items | Comp | Exp |
|----|-------------|------|-----|
| no | | | |
| 1. | Cloth/Dress | | |
| 2. | Shirt | | |
| 3. | Dothi | | |
| 4. | Pants | | |
| 5. | Nikker | | |
| 6. | Hat | | |
| 7. | Socks | | |
| 8. | Belt | | |
| 9. | Watch | | |

| Sl | Items | Comp | Exp |
|-----|------------|------|-----|
| no | | | |
| 10. | Ring | | |
| 11. | Necklace/C | | |
| | hain | | |
| 12. | Bangles | | |
| 13. | Ear rings | | |
| 14. | Saree | | |
| 15. | Skirt | | |
| 16. | Ankle lace | | |
| 17. | Sweater | | |

9. Furniture and Rooms.

| Sl | Items | Comp | Exp |
|----|----------|------|-----|
| no | | | |
| 1. | Kitchen | | |
| 2. | Bed | | |
| | Bedroom | | |
| 3. | Bathroom | | |
| 4. | Cot | | |

| Sl | Items | Comp | Exp |
|----|--------|------|-----|
| no | | | |
| 5. | Chair | | |
| 6. | Door | | |
| 7. | Stairs | | |
| 8. | Table | | |
| 9. | Window | | |

10. House hold objects

| Sl | Items | Comp | Exp |
|-----|----------|------|-----|
| no | | | |
| 1. | Blanket | | |
| 2. | Bottle | | |
| 3. | Bowl | | |
| 4. | box | | |
| 5. | Broom | | |
| 6. | Brush | | |
| 7. | Clock | | |
| 8. | Comb | | |
| 9. | Dish | | |
| 10. | Dustbin | | |
| 11. | Glass | | |
| 12. | Key | | |
| 13. | Lamp | | |
| 14. | Medicine | | |
| 15. | Money | | |
| 16. | Paper | | |

| Sl | Items | Comp | Exp |
|-----|-----------|------|-----|
| no | | | |
| 17. | Coins | | |
| 18. | Pillow | | |
| 19. | Bed | | |
| 20. | Plate | | |
| 21. | Purse | | |
| 22. | Scissors | | |
| 23. | Soap | | |
| 24. | Spoon | | |
| 25. | Towel | | |
| 26. | TV | | |
| 27. | Radio | | |
| 28. | Telephone | | |
| 29. | Fan | | |
| 30. | Plant | | |
| 31. | Umbrella | | |

11. Action words

| Sl no | Items | Comprehends | Expresses |
|-------|--------|-------------|-----------|
| 1. | Bite | | |
| 2. | Blow | | |
| 3. | Break | | |
| 4. | Bring | | |
| 5. | Clean | | |
| 6. | Close | | |
| 7. | Cry | | |
| 8. | Dance | | |
| 9. | Drink | | |
| 10. | Eat | | |
| 11. | Fall | | |
| 12. | Feed | | |
| 13. | Finish | | |
| 14. | Give | | |
| 15. | Go | | |
| 16. | Hit | | |
| 17. | Hug | | |
| 18. | Jump | | |
| 19. | Kick | | |
| 20. | Kiss | | |

| Sl no | Items | Comprehends | Expresses |
|-------|-------|-------------|-----------|
| 21. | Look | | |
| 22. | Open | | |
| 23. | Play | | |
| 24. | Pull | | |
| 25. | Push | | |
| 26. | Put | | |
| 27. | Read | | |
| 28. | Ride | | |
| 29. | Run | | |
| 30. | Say | | |
| 31. | Show | | |
| 32. | Sing | | |
| 33. | Sleep | | |
| 34. | Smile | | |
| 35. | Stop | | |
| 36. | Take | | |
| 37. | Throw | | |
| 38. | Touch | | |
| 39. | Walk | | |
| 40. | Write | | |

12. Descriptive words

| Sl | Items | Comp | Exp |
|-----|----------|------|-----|
| no | | | |
| 1. | All gone | | |
| 2. | Bad | | |
| 3. | Big | | |
| 4. | Broken | | |
| 5. | Careful | | |
| 6. | Cold | | |
| 7. | Cute | | |
| 8. | Dark | | |
| 9. | Dirty | | |
| 10. | Empty | | |
| 11. | Fast | | |
| 12. | Fine | | |
| 13. | Good | | |

| Sl | Items | Comp | Exp |
|-----|---------|------|-----|
| no | | | |
| 14. | Нарру | | |
| 15. | Hard | | |
| 16. | Hot | | |
| 17. | Hungry | | |
| 18. | Hurt | | |
| 19. | Little | | |
| 20. | Naughty | | |
| 21. | Scared | | |
| 22. | Sleepy | | |
| 23. | Soft | | |
| 24. | Thirsty | | |
| 25. | Tired | | |
| 26. | Wet | | |

13. Words about time

14. Prepositions

| S1 | Items | Comp | Exp |
|----|----------|------|-----|
| no | | | |
| 1. | Day | | |
| 2. | Later | | |
| 3. | Morning | | |
| 4. | Night | | |
| 5. | Now | | |
| 6. | Today | | |
| 7. | Tomorrow | | |

| Sl | Items | Comprehends | Expresses |
|----|---------|-------------|-----------|
| no | | | |
| 1. | Near | | |
| 2. | AwayFar | | |
| 3. | Back | | |
| 4. | Down | | |
| 5. | Up | | |
| 6. | Inside | | |
| 7. | Outside | | |

15. Pronouns

| Sl | Items | Comprehends | Expresses |
|----|-------|-------------|-----------|
| no | | | |
| 1. | Ι | | |
| 2. | Her | | |
| 3. | His | | |
| 4. | Me | | |
| 5. | Mine | | |

| Sl | Items | Comprehends | Expresses |
|-----|-------|-------------|-----------|
| no | | | |
| 6. | Му | | |
| 7. | That | | |
| 8. | This | | |
| 9. | You | | |
| 10. | Your | | |

16. Question words

| Sl no | Items | Comprehends | Expresses |
|-------|-------|-------------|-----------|
| 1. | How | | |
| 2. | What | | |
| 3. | Where | | |

| Sl no | Items | Comprehends | Expresses |
|-------|-------|-------------|-----------|
| 4. | Which | | |
| 5. | Who | | |
| 6. | Why | | |

17. Quantifiers

| Sl | Items | Comprehends | Expresses |
|----|---------|-------------|-----------|
| no | | | |
| 1. | All | | |
| 2. | Another | | |

| Sl | Items | Comprehends | Expresses |
|----|-------|-------------|-----------|
| no | | | |
| 3. | None | | |
| 4. | Same | | |

18. Others

| Sl | Items | Comprehends | Exp | Sl | Items | Comprehends | Exp |
|-----|--------|-------------|-----|-----|-----------|-------------|-----|
| no | | | | no | | | |
| 1. | Bath | | | 11. | Store | | |
| 2. | Flower | | | 12. | Sun | | |
| 3. | Garden | | | 13. | Swing | | |
| 4. | Home | | | 14. | Tree | | |
| 5. | Moon | | | 15. | Work | | |
| 6. | Pool | | | 16. | Mud | | |
| 7. | Rock | | | 17. | Wound/ | | |
| 8. | School | | | | Injury | | |
| 9. | Sky | | | 18. | Temple | | |
| 10. | Star | | | 19. | Hospital/ | | |
| | | | | | Doctor | | |

Section 3.

Actions And Gestures

<u>Instructions:</u> Please tick activity that your child can perform. If the child is not able to do the activity keep it empty.

a. First communicative features

| S1 | Skills | Performs the |
|----|---|--------------|
| no | | activity |
| 1 | . Extends arm to show you something he/she is holding. | |
| 2 | . Reaches out and gives you a toy or some objects that he/ she in | |
| | holding. | |
| 3 | Points (with arm and index finger extended) at some interesting | |
| | object or event. | |
| 4 | . Waves bye-bye on his/her own when someone leaves. | |
| 5 | . Extends his/her upward to signal a wish to be picked up. | |
| 6 | . Shakes head "no" | |
| 7 | . Nods head " yes" | |
| 8 | Gestures "hush" by placing finger to lips. | |
| 9 | Requests something by extending arm and opening and closing | |
| | hand. | |
| 1 | Blows kisses from a distance. | |
| 1 | Smacks lips in a "yum yum" gesture ti indicate that something | |
| | taste good. | |

b. Games and routines

| Sl | Skills | Performs the |
|----|--------------------|--------------|
| no | | activity |
| 1. | Play peekaboo | |
| 2. | Play chasing games | |
| 3. | Play with a toys | |
| 4. | Sing | |
| 5. | Dance | |

c. Actions with objects

| Sl no | Skills | Performs the activity |
|-------|---|-----------------------|
| 1. | Eat with a spoon. | |
| 2. | Drink from a cup. | |
| 3. | Comb his/her own hair. | |
| 4. | Brush teeth. | |
| 5. | Put on hat | |
| 6. | Put on sandals | |
| 7. | Lay head on hands and squeeze eyes shut as if sleeping. | |
| 8. | Blow to indicate something is hot. | |
| 9. | Hold vehicle object and make it move. | |
| 10. | Put telephone to ear. | |
| 11. | Throw ball | |
| 12. | Pour liquid from one container to another | |
| 13. | Stir pretend liquid in a cup or pan with a spoon. | |
| 14. | Kiss or hug a toy. | |
| 15. | Put on glasses. | |

d. Imitating adult like actions

| Sl no | Skills | Performs the activity |
|----------|---------------------------------|-----------------------|
| 1. | Sweep with broom or mop | |
| 2. | Pound with hammer or mallet. | |
| 3. | Read (open book and turn pages) | |
| 4. | Try to ride bicycle. | |
| 5. | Clean with cloth | |
| 6. | Write with pen or pencil | |
| 7. | Dig with any object | |

<u>,ÀAªÀºÀ£À vÀ¥À²Ã®Ä ¥ÀnÖ (6 – 12</u> <u>wAUÀ¼ÀÄ)</u>

["]sÁUÀ 1: A. ^aÀÄÄAa£À ¸ÀA¥ÀPÀð P˱À®åUÀ¼ÀÄ

<u>ÀÆZÀ£ÉUÀ¼ÀÄ</u>: PɼÀUÉ ªÀÄPÀ̼ÀÄ ªÀiÁqÀ§°ÀÄzÁAvÀ°À PÉ®ªÀÅ P˱À®åUÀ¼À£ÀÄß ¤ÃqÀ⁻ÁVzÉ. "sÁUÀ 1 A gÀ°è, ¤ªÀÄä ªÀÄUÀÄ ªÀiÁqÀ§°ÀÄzÁAvÀ°À P˱À®åUÀ¼À ªÀÄÄAzÉ UÀÄgÀÄvÀÄ °ÁQ, "sÁUÀ gÀ°è ¤ªÀÄä ªÀÄUÀÄ CxÀðªÀiÁrPÉÆ¼ÀÄĩªÀ ªÁPÀåUÀ¼À ªÀÄÄAzÉ UÀÄgÀÄvÀÄ °ÁQ. ¤ªÀÄä ªÀÄUÀÄ ªÀiÁqÀ⁻ÁUÀ¢gÀĪÀ P˱À®åUÀ¼À ªÀÄÄA¢gÀĪÀ eÁUÀªÀ£ÀÄß SÁ° ©r.

| PÀæªÀÄ ¸ÀASÉå | ªÁPÀåUÀ¼ÀÄ | CxÀðªÀiÁrPÉÆ¼ÀÄîvÀÛzÉ |
|------------------|---|-----------------------|
| 1. | ^a ÀÄÄR ¨sÁªÀªÀ£ÀÄß CxÀð ªÀiÁrPÉÆ¼ÀÄîvÀÛzÉ. | |
| | (PÉÆÃ¥À, ÀAvÉÆÃµÀ) | |
| 2. | PÉ®ªÀÅ ¥ÀzÀUÀ¼À£ÀÄß CxÀðªÀiÁrPÉÆAqÀÄ | |
| | ¸ÀÆPÀÛªÁzÀ ¥ÀæwQæAiÉÄAiÀÄ£ÀÄß ¤ÃqÀÄvÀÛªÉ. | |
| | GzÀ: "Á, mÁ mÁ | |
| 3. | ,ÀAVÃvÀPÉÌ UÀªÀÄ£À PÉÆqÀĪÀÅzÀÄ. | |
| 4. | CªÀ£À/CªÀ¼À ¸ÀÄvÀÛªÀÄÄvÀÛ £ÀqÉAiÀÄĪÀ ¥ÀÇgÀ | |
| | ÀA sÁµÀuÉAiÀÄ£ÀÄß D°¹zÀAvÉ PÁtÄvÀÛzÉ. | |
| 5. | CªÀ£À/CªÀ¼À ºÉ,ÀgÀ£ÀÄß PÀjzÁUÀ | |
| | ^a ÀiÁqÀÄwÛgÀÄ ^a À PÉ®,À ^a À£ÀÄß ¤°è,ÀÄvÀÛzÉ. | |
| 6. | zsÀé¤AiÀİè£À ªÀåvÁå,ÀªÀ£ÀÄß | |
| | CxÀðªÀiÁrPÉÆ¼ÀÄîvÀÛzÉ. | |
| 7. | ĔÃąÀ JAzÀÄ °ÉýzÀgÉ ªÀiÁqÀĪÀ PÉ®¸ÀªÀ£ÀÄß | |
| | ¤°è,ÀÄvÀÛzÉ. | |
| 8. | ¥ÀjavÀgÀÄ ªÀÄvÀÄÛ C¥ÀjavÀgÉÆA¢UÉ ¨ÉÃgÉ | |
| | ÉÃgÉAiÀiÁV ¥ÀæwQæ¬Ä,ÀÄvÀÛzÉ. | |
| 9. | °ÉƸÀ ¥ÀzÀUÀ¼À£ÀÄß PÉüÀ®Ä GvÁì°À | |
| | vÉÆÃjzÀAvÉ PÁtÄvÀÛzÉ. | |
| 10. | ¨ÉgÉAiÉÄqÉUÉ UÀªÀÄ£À ºÀj¸ÀzÉ ªÀiÁvÀ£ÀÄβ | |
| | ¥ÀÇtðªÁV PÉüÀÄvÀÛzÉ. | |
| 11. | PÉ®,ÀªÀ£ÀÄß ºÉüzÁUÀ C©ü£À¬Ä¹ vÉÆÃj,ÀÄvÀÛzÉ. | |
| | GzÀ; HI *ÀiÁqÀÄ*ÀÅzÀÄ °ÉÃUÉ? | |
| 12. | PÀvÉ PÉüÀ®Ä RĶ¥ÀqÀÄvÀÛzÉ. | |
| 13. | <u>,</u> ÀAVÃvÀPÉÌ *ÉÄÊ PÉÊ ZÀ°1 ¥ÀæwQæ¬Ä,ÀÄvÀÛzÉ. | |
| 14. | *ÉÄÃ ⁻ É,PɼÀUÉ (¸ÀܼÁzÁjvÀ) ¥ÀzÀUÀ¼À£ÀÄß | |
| | CxÀðªÀiÁrPÉÆ¼ÀÄîvÀÛzÉ. | |
| 15. | ZÉ£ÀßV PÁtÄw¢ÃAiÀÄ JAzÀÄ °ÉýzÁUÀ | |

| | RĶ¥ÀqÀÄvÀÛzÉ. | |
|-----|--|--|
| 16. | vÀ£Àß ªÀ¸ÀÄÛUÀ¼À£ÀÄß ¨ÉÃgÉAiÀĪÀjUÉ | |
| | ©lÄÖPÉÆqÀĪÀÅ¢®è. | |
| 17. | °É,ÀgÀÄ PÀgÉzÁUÀ ¥ÀæwQæ¬Ä,ÀÄvÀÛzÉ GzÀ: | |
| | wgÀÄV £ÉÆqÀĪÀÅzÀgÀ ªÀÄÆ®PÀ, PÀgÉzÀ | |
| | ^a ÀåQÛUÁV °ĂÄqÀÄPÀÄ ^a ÀÅzÀgÀ ^a ÀÄÆ®PÀ | |
| 18. | ĽÉÃgÉAiÀĪÀgÀÄ vÀ£Àß ªÀ¸ÀÄÛUÀ¼À£ÀÄß | |
| | vÉUÉZÀÄPÉÆAqÁUÀ, G¥ÀAiÉÆV¹ZÁUÀ CxÀªÁ | |
| | °Á¼ÀĪÀiÁrzÁUÀ PÉÆÃ¦¹PÉÆ¼ÀÄîvÀÛzÉ/ | |
| | dUÀ¼ÀªÁqÀÄvÀÛzÉ. | |
| 19. | °ÁqÀ£ÀÄß PÉüÀ®Ä, n. «£ÉÆÃqÀ®Ä | |
| | RIJ¥ÀqÀÄvÀÛzÉ. | |

B: ªÉÆzÀ® ªÁPÀåUÀ¼ÀÄ

| PÀæ ^a ÀÄ ¸ÀAS Éå | *ÁPÀåUÀ¼ÀÄ | CxÀðªÀiÁr- PÉÆ¼ÀÄîv ÀÛzÉ |
|--------------------------------------|--|--------------------------------|
| 1. | °À¹ªÁUÀÄwÛzÉ AiÉÄÃ? | |
| 2. | ¤zÉæ §gÀÄwÛzÉAiÉÄ ?/ ,ÀÄ,ÁÛVzÉAiÀ Ä? | |
| 3. | ±À§Ý ªÀiÁqÀ¨ÉÃqÀ | |
| 4. | ZÀ¥Á¼É °ÉÆr | |
| 5. | Á E°è | |
| 6. | E£ÀÄß "ÉÃPÉÃ? | |
| 7. | CzÀ£ÀÄß ªÀiÁqÀ¨ÉÃqÀ/ ¸ÀĪÀÄä¤gÀÄ | |
| 8. | ªÀÄÄlÖ ÉÃqÀ | |
| 9. | K¼ÀÄ ªÉÄïÉ | |
| 10. | CªÀÄä¤UÉ PÉÆqÀÄ | |
| 11. | £À£ÀUÉÆAzÀÄ ªÀÄÄvÀÄÛ PÉÆqÀÄ | |
| 12. | ⁰ÉÆÃV | |

| | | |
|------------------|---------------------------|------------|
| | vÉUÉzÀÄPÉÆA | |
| | qÀÄ "Á | |
| 13. | eÁt | |
| | °ÀÄqÀÄUÀ/°ÀÄ | |
| | qÀÄV | |
| PÀæ ^a | ^a ÁPÀåUÀ¼ÀÄ | CxÀðªÀiÁr- |
| ÀÄ | 111 11a 011 /4/111 | PÉÆ¼ÀÄîv |
| ÀAS | | ÀÛzÉ |
| ,AAS Éå | | |
| | | |
| 14. | £Ér °ÉÆUÉÆÃt | |
| | mÁ mÁ | |
| 15. | E°è £ÉÆqÀÄ | |
| 16. | Á¬Ä vÉV | |
| 17. | PÀÄ ¹ ⁄2vÀÄPÉÆ | |
| 18. | ¤°è¸ÀÄ | |
| 19. | ZÉAqÀ£ÀÄß J¹ | |
| 20. | °ÉÆgÀUÉ | |
| | °ÉÆÃUÀ | |
| | ÉÃPÁ? | |
| 21. | ¤£ÀUÉ ÉÃPÁ? | |
| 22. | mÁ mÁ °ÉüÀÄ | |
| 23. | FUÀ ªÀÄ®UÀÄ | |
| 24. | C¼À¨ÉÃqÀ | |
| 25. | °ÉÆgÀUÉ | |
| | °ÉÆÃUÀ¨ÉÃqÀ | |
| 26. | ¤zÁ£ÀªÁV £Àr | |
| 27. | F §mÉÖ | |

| | ZÉ£ÁßV®è | |
|-----|--------------|--|
| 28. | £À£ÀUÉ ¸Àé®à | |

PÉÆqÀÄ

^{..}sÁUÀ 2 : ªÀÄÄAa£À ¥ÀzÀ¥ÀnÖ

<u>ÀÆZÀ£ÉUÀ¼ÀÄ:</u> PɼÀUÉ PÉÆnÖgÀĪÀ ¥ÀzÀUÀ¼À£ÀÄß ¤ªÀÄä ªÀÄUÀÄ CxÀð ªÀiÁrPÉÆAqÀ°è, CxÀðªÀiÁrPÉÆ¼ÀÄîvÀÛzÉ JA§°èAiÀÄÄ; °ÉüÀÄwÛzÀÝgÉ, °ÉüÀÄvÀÛzÉ JA§°è UÀÄgÀÄvÀÄ °ÁQ. ¤ªÀÄä ªÀÄUÀÄ ªÀiÁqÀ⁻ÁUÀ¢gÀĪÀ P˱À®åUÀ¼À ªÀÄÄA¢gÀĪÀ eÁUÀªÀ£ÀÄß SÁ° ©r.

1. ««zÀ jÃwAiÀÄ ±À§ÝUÀ¼ÀÄ

| PÀæªÀ | ¥ÀzÀUÀ¼À | °ÉüÀÄvÀÛz |
|---------------|-------------|-----------|
| Ä | Ä | É |
| ,ÀASÉå | | |
| 1. | "Á "Á | |
| 2. | ªÁ ªÁ | |
| 3. | "Á "Á ªÁ ªÁ | |
| | vÀ vÀ | |
| 4. | vÀ zÀ ªÀ | |
| | ªÀÄ | |
| 5. | CA"Á CA"Á | |

| 9. | PÉÆ PÉÆ | |
|---------------|------------|-----------|
| PÀæªÀ | ¥ÀzÀUÀ¼À | °ÉüÀÄvÀÛz |
| Ä | Ä | É |
| ,ÀASÉå | | |
| 10. | M ⁰ÉÆ | |
| 11. | qÀ gïæ gïæ | |
| | gïæ | |
| 12. | G¥sï G¥sï | |
| 13. | CªÀiï | |
| 14. | CAiÉÆÃ | |

2. PÀÄlÄA§ 'ÀzÀ 'ÀågÀÄ

| PÀæ ªÀÄ ¸ÀA SÉå | ¥ÀzÀUÀ¼À Ä | CxÀðªÀi Ár PÉÆ¼À ÄîvÀÛzÉ | °ÉüÀÄ vÀÛzÉ |
|--------------------------|--------------------------------------|-----------------------------------|----------------|
| 1. | CªÀÄä | | |
| 2. | C¥Àà | | |
| 3. | CfÓ | | |
| 4. | CdÓ/vÁvÀ | | |
| 5. | CtÚ/vÀªÀÄä | | |
| 6. | CPÀÌ/vÀAV | | |
| 7. | ªÀiÁªÀ/aPÀÌ ¥Àà∕ zÉÆqÀØ¥À à | | |
| 8. | CvÉÛ/aPÀ̪ ÀÄä/ zÉÆqÀتÀ | | |

| | Ää | |
|-----|----------|--|
| 9. | ªÀÄUÀÄ∕¥ | |
| | Á¥ÀÅ | |
| 10. | d£À | |

3. zÉðÀzÀ "sÁUÀUÀ¼ÀÄ

| PÀæªÀÄ ¸ÀASÉå | ¥ÀzÀUÀ¼ÀÄ | CxÀðªÀiÁr PÉÆ¼ÀÄîvÀÛzÉ | °Éü |
|------------------|--------------------|---------------------------|-----|
| 1 | vÀ⁻É | | |
| 2. | PÀtÄÚ | | |
| 3. | '″Á¬Ä | | |
| 4. | ªÀÄÄR | | |
| 5. | PÉÊ | | |
| 6. | P稀 | | |
| 7. | °ÉÆmÉÖ | | |
| 8. | PÉ£Éß | | |
| 9. | ÉgÀ¼ÀÄ | | |
| 10. | £Á°UÉ | | |
| 11. | PÀÆzÀ®Ä | | |

4. Hl/wAr

| PÀæªÀÄ ¸ÀASÉå | ¥ÀzÀUÀ¼ÀÄ | CxÀð ªÀiÁrPÉÆ¼ÀÄ | PÀæªÀÄ îv ÀÚzÉÉ å | ÉÃ ¥ÀŻÀÙĺÀÉ | ÀÄ | CxÀð ªÀiÁrPÉÆ¼ÀÄîvÀÛzÉ |
|------------------|----------------------|---------------------|-----------------------------|--------------------|------|---------------------------|
| 1. | C£Àß | | 12. | °Á®Ä | | |
| 2. | ªÀÄÄzÉÝ | | 13. | ÉuÉÚ | | |
| 3. | <i></i> ,ÁA§gï/,ÁgÀÄ | | 14. | "ÉæqÀÄØ | | |
| 4. | Erè | | 15. | PÉÃPï | | |
| 5. | zÉÆÃ¸É | | 16. | ZÉÆPÉÆÃ | ĔÃmï | |
| 6. | ZÀ¥Áw | | 17. | dÄå¸ï | | |
| 7. | ¤ÃgÀÄ | | 18. | ªÉÆmÉÖ | | |
| 8. | ,ÉçÄ | | 19. | ªÀiÁA,À | | |
| 9. | ¨Á¼É°ÀtÄÚ | | | /ǀ̣ˀ | | |
| 10. | QvÀۼɰÀtÄÚ | | 20. | PÁ¦ü∕ nÃ | | |
| 11. | zÁæQë °ÀtÄÚ | | 21. | Hl | | |

5. ¥Áæt ¥ÀQëUÀ¼ÀÄ

| PÀæ ^a ÀÄ _, ÀA SÉå | ¥ÀzÀU À¼ÀÄ | CxÀð ªÀiÁrPÉÆ¼ ÀÄîvÀÛzÉ | °ÉüÀÄ vÀÛzÉ |
|--|---------------|-------------------------------|----------------|
| 1. | "ÉPÀÄÌ | | |
| 2. | £Á¬Äª | | |
| | ÀÄj | | |
| 3. | °À¸ÀÄ | | |
| 4. | PÉÆÃ | | |
| | ¹∕₂ªÀÄj | | |
| 5. | PÁUÉ | | |
| 6. | PÀÄj | | |
| 7. | amÉÖ | | |
| PÀæ | ¥ÀzÀU | CxÀð | °ÉüÀÄ |
| ªÀÄ | À¼ÀÄ | ^a ÀiÁrPÉÆ¼ | vÀÛzÉ |

| ÀA | | ÀÄîvÀÛzÉ | |
|------------|-------|----------|--|
| ͺΑΑ SÉå | | | |
| 8. | D£É | | |
| 9. | ¥ÁætÂ | | |
| 10. | PÉÆÃ | | |
| | W | | |
| 11. | E° | | |
| 12. | «ÄãÀ | | |
| | Ä | | |
| 13. | °ÁªÀÅ | | |
| 14. | °Àİ/1 | | |
| | A°À | | |

5. ªÁºÀ£ÀUÀ¼ÀÄ

| | $C_{\rm ex}\lambda$ 3 1 of $\tilde{\lambda}$ 1/ λ $ \lambda $ $\hat{\lambda}$ $\hat{\nu}$ $\lambda\lambda$ $\hat{\mu}$ $\hat{\lambda}$ |
|-------------------------------|--|
| PAæ ^a AA ¥AzAUA¼AA | CXAð 11. °EA ¹ /4AA§AUAE |
| ì tate | |
| ÁASÉå | $^{\text{a}}\text{AiArPE}\underline{\mathcal{A}}^{1}_{4}\text{AAîvAUzE}_{2}$ |
| Juniona | |
| | |

| 3. | ÀÆÌlgï/¨ÉÊPï | | JÀASÉå | ^a ÀiÁrPÉÆ¼ÀÄîvÀÛzÉ |
|--------|--------------|------|----------------|-------------------------------|
| | 3 | | 4. PÁgÀÄ | |
| PÀæªÀA | Á ¥ÀzÀUÀ¼ÀÄ | CxÀð | 5. °ÉüÀÄMÁĤÆÉÇ | |

6. DlzÀ ,ÁªÀiÁ£ÀÄUÀ¼ÀÄ

| PÀæ ªÀÄ ¸ÀA SÉå | ¥ÀzÀUÀ ¼ÀÄ | CxÀð ªÀiÁrPÉÆ¼ ÀÄîvÀÛzÉ | °ÉüÀÄ vÀÛzÉ |
|--------------------------|----------------|-------------------------------|----------------|
| 1. | ZÉAqÀ Ä | | |
| 2. | ¦Ã¦/§® Æ£ÀÄ | | |
| 3. | ¥ÀÅ À ÛPÀ | | |
| PÀæ ªÀÄ | ¥ÀzÀUÀ ¼ÀÄ | CxÀð ªÀiÁrPÉÆ¼ | °ÉüÀÄ vÀÛzÉ |

| ¸ÀA SÉå | | ÀÄîvÀÛzÉ | |
|------------|-------|----------|--|
| 4. | UÉÆA" | | |
| | É | | |
| 5. | ¥É£ÀÄ | | |
| | ß | | |
| 6. | CnPÉ | | |

9. PÉÆoÀr ªÀÄvÀÄÛ ¦ÃmÉÆÃ¥ÀPÀgÀt

| PÀæª ÀÄ | ¥ÀzÀUÀ¼ ÀÄ | CxÀðªÀiÁ | °ÉüÀÄ vÀÛzÉ |
|------------|---------------|--------------|----------------|
| ÀAS | AA | r PÉÆ¼ÀÄî | VAUZE |
| Éå | | vÀÛzÉ | |
| 1. | CqÀÄUÉ | | |
| | ªÀÄ£É | | |
| 2. | ªÀÄ®UÀ | | |
| | ĪÀ | | |
| | PÉÆÃuÉ | | |
| 3. | ,ÁߣÀzÀ | | |
| | ªÀÄ£É | | |
| 4. | ªÀÄAZÀ | | |

| 5. | PÀÄað | | |
|------------------|---------|----------|-------|
| | | | |
| PÀæ ^a | ¥ÀzÀUÀ¼ | CxÀðªÀiÁ | °ÉüÀÄ |
| ÀÄ | ÀÄ | r | vÀÛzÉ |
| ÀAS | | PÉÆ¼ÀÄî | |
| Éå | | vÀÛzÉ | |
| 6. | ¨ÁV®Ä | | |
| 7. | ªÉÄnÖ® | | |
| | Ä | | |
| 8. | ªÉÄÃdÄ/ | | |
| | mÉç⁻ï | | |
| 9. | QlQ | | |

10. GqÀÄUÉ vÉÆqÀÄUÉ

| PÀæ ¥ÀzÀUÀ¼ ªÀÄ ÀÄ ÀA ŠÉå | CxÀð ªÀiÁrPÉÆ¼ ÀÄîvÀÛzÉ | °ÉüÀ ÄvÀÛzÉ | |
|------------------------------------|-------------------------------|----------------|--|
|------------------------------------|-------------------------------|----------------|--|

| 1. | §mÉÖ | |
|----|-------------|--|
| 2. | µÀmïð | |
| 3. | ¥ÀAZÉ | |

| 4. | ¥ÁåAmï | | |
|-----|------------------|-----------|--------|
| 5. | ¤PÀÌgï | | |
| 6. | mÉÆÃ¦ | | |
| 7. | P稀 | | |
| | aî | | |
| 8. | É⁻ïÖ | | |
| 9. | PÉÊUÀr | | |
| | AiÀiÁgÀ/ | | |
| | ªÁZÀÄ | | |
| PÀæ | ¥ÀzÀUÀ¼ | CxÀð | ⁰ÉüÀ |
| ªÀÄ | ÀÄ | ªÀiÁrPÉÆ¼ | ÄvÀÛzÉ |
| ÀA | | ÀÄîvÀÛzÉ | |

| SÉå | | |
|-----|--------------|--|
| | . | |
| 10. | GAUÀÄg | |
| | À | |
| 11. | <u>,</u> ÀgÀ | |
| 12. | §¹∕₄É | |
| 13. | Q«N⁻É | |
| 14. | ¹ÃgÉ | |
| 15. | ®AUÀ | |
| 16. | PÁ⁻ÉÎeÉ | |
| | Ó | |
| 17. | ,Éélgï | |
| | | |

10. ^aÀÄ£ÉAiÀİè EqÀ§°ÀÄzÁAvÀ°À ^aÀ¸ÀÄÛUÀ¼ÀÄ

| PÀ æ ^a À Ä ¸ÀA SÉå | ¥ÀzÀUÀ¼ÀÄ | CxÀðªÀiÁ r PÉÆ¼ÀÄî vÀÛzÉ | °ÉüÀ ÄvÀÛz É |
|---|--|-----------------------------------|--------------------|
| 1. | °ÉÆ¢PÉ/PÀ A§½ | | |
| 2. | ¹ Ã,É/ ÉÆÃ mÉ [−] ï | | |
| 3. | §lÖ®Ä | | |
| 4. | qÀ§â | | |
| 5. | ¥ÉÇgÀPÉ | | |
| 6. | §æµï | | |
| 7. | UÀrAiÀiÁg À | | |
| 8. | ÁZÀuÉUÉ | | |
| 9. | ¥ÁvÉæ | | |
| 10. | PÀ¸ÀzÀ §ÄnÖ | | |
| PÀ æ ^a À Ä ¸ÀA SÉå | ¥ÀzÀUÀ¼ÀÄ | CxÀðªÀiÁ r PÉÆ¼ÀÄî vÀÛzÉ | °ÉüÀ ÄvÀÛz É |
| 11. | UÁè,ï | | |
| 12. | ©ÃUÀzÀ PÉÊ | | |
| 13. | ¢Ã¥À | | |
| 14. | OµÀzÀ | | |
| 15. | zÀÄqÀÄØ | | |
| 16. | PÁUÀzÀ | | |

| A¼AA | | |
|--------------------|---|--|
| PÁ,ÀÄ/£Át | | |
| å | | |
| | | |
| | | |
| vÀmÉÖ | | |
| ¥ÀzÀUÀ¼ÀÄ | CxÀðªÀiÁ | °ÉüÀ |
| | r | ÄvÀÛz |
| | | É |
| | VAUZE | |
| PÉÊaî/¥À | | |
| | | |
| PÀwæ | | |
| ,ÉÆÃ¥ÀÅ | | |
| ZÀªÀÄZÀ | | |
| lªÀ ⁻ ï | | |
| | | |
| | | |
| ¥ÀzÀUÀ¼ÀÄ | CxÀðªÀiÁ | °ÉüÀ |
| | r | ÄvÀÛz |
| | | É |
| | VAUZE | |
| n. « | | |
| gÉÃrAiÉÆ | | 1 |
| Ã | | |
| ¥ÉÇãÀÄ | | |
| | | |
| ¥sÁå£ï | | |
| ¥sÁå£ï VqÀ/¸À¹ | | |
| | | |
| gÉÃrAiÉÆ Ã | | |
| | ¢A§Ä °Á¹UÉ vÀmÉÖ ¥ÀzÀUÀ¼ÀÄ PÉÊaî/¥À ,ïð PÀwæ ,ÉÆÃ¥ÀÅ ZÀªÀÄZÀ lªÀ ⁻ ï ¥ÀzÀUÀ¼ÀÄ n. « gÉÃrAiÉÆ | ¢A§Ä °Á¹UÉ vÀmÉÖ ¥ÀzÀUÀ¹¼ÀÄ CxÀðªÀiÁ r PÉÆ¹¼ÀÄî PÉÊaî/¥À vÀÛzÉ PÁwæ j< |

11. QæAiÀiÁ ¥ÀzÀUÀ¼ÀÄ

| PÀ æªÀ Ä ¸ÀA SÉå | ¥ÀzÀUÀ¼À Ä | CxÀð *ÀiÁrPÉÆ ¼ÀÄîvÀÛz É | °ÉüÀ ÄvÀÛz É |
|------------------------------|--|-----------------------------------|--------------------|
| | PÀZÀÄÑ | | |
| 2. | HzÀÄ | | |
| 1. 2. 3. 4. | HzÀÄ ^a ÀÄÄj vÉUÉzÀÄ | | |
| 4. | vÉUÉzÀÄ | | |
| | PÉÆAgÁ | | |
| | Ä Á | | |
| 5. | Ä "Á ±ÀÄa | | |
| | ^a ÀiÁqÀÄ ^a ÀÄÄZÀÄ | | |
| 6. | | | |
| | Ñ | | |
| 7. | C¼ÀÄ | | |
| 8. | PÀÄtÂ | | |
| 9. | PÀÄr | | |
| 10. | w£ÀÄß | | |
| 11. | ©Ã¼ÀÄ | | |
| 12. | w¤ß,ÀÄ | | |
| 13. | ªÀÄÄV¸À | | |
| | Ä | | |
| 14. | PÉÆqÀÄ | | |
| 15. | °ÉÆÃUÀÄ | | |
| 16. | °ÉÆr | | |
| 17. | vÀ©âPÉÆ | | |
| 18. | £ÉV | | |
| 19. | M¢ | | |
| | | | |

| PÀ | ¥ÀzÀUÀ¼À | CxÀð | °ÉüÀ |
|-------------|-------------------------------|---------------|------------|
| æªÀ Ä | Ä | *ÀiÁrPÉÆ | ÄvÀÛz É |
| A ÀA | | ¼ÀÄîvÀÛz É | E |
| , AA SÉå | | E | |
| 20. | ªÀÄÄwÛq | | |
| | ÀÄ | | |
| 21. | £ÉÆÃqÀÄ | | |
| 22. | vÉUÉ | | |
| 23. | DqÀÄ | | |
| 24. | J ¹ / ₂ | | |
| 25. | vÀ¼ÀÄî | | |
| 26. | EqÀÄ | | |
| | NzÀÄ | | |
| 28. | Nr,ÀÄ NqÀÄ | | |
| 29. | NqÀÄ | | |
| 30. | °É¼ÀÄ | | |
| 31. | vÉÆÃj¸À | | |
| | Ä | | |
| 32. | °ÁqÀÄ | | |
| 33. | ªÀÄ®UÀÄ | | |
| 34. | £ÀUÀÄ | | |
| 35. | ¤°è¸ÀÄ | | |
| 36. | vÉUÉ¢PÉ | | |
| | Æ | | |
| 37. | J1 | | |
| 38. | ªÀÄÄlÄÖ | | |
| 39. | £Àr | | |
| 40. | \$j | | |

12. PÁ® ¸ÀÆavÀ ¥ÀzÀUÀ¼ÀÄ

| PÀæ ªÀÄ ¸ÀA SÉå | ¥ÀzÀU À¼ÀÄ | CxÀð ªÀiÁrPÉÆ¼À ÄîvÀÛzÉ | °ÉüÀÄ vÀÛzÉ |
|--------------------------|---------------|-------------------------------|----------------|
| 1. | °ÀUÀ ®Ä | | |

| 2. | | | |
|-----|-------|------|-------|
| 3. | ∵ɽUÉ | | |
| | Î | | |
| 4. | DªÉÄÃ | | |
| | ⁻É | | |
| PÀæ | ¥ÀzÀU | CxÀð | °ÉüÀÄ |

| ^a ÀÄ ¸ÀA SÉå | À¼ÀÄ | ^a ÀiÁrPÉÆ¼À ÄîvÀÛzÉ | vÀÛzÉ |
|-------------------------------|-------|-----------------------------------|-------|
| 5. | FUÀ | | |
| 6. | EªÀvÀ | | |

| | ÄÛ | |
|----|------|--|
| 7. | £Á¼É | |

13. ¥Àæ±ÁßxÀðPÀ ¥ÀzÀUÀ¼ÀÄ

| PÀæ ªÀÄ ¸ÀA SÉå | ¥ÀzÀUÀ ¼ÀÄ | CxÀð ªÀiÁrPÉÆ¼ ÀÄîvÀÛzÉ | °ÉüÀÄ vÀÛzÉ |
|--------------------------|---------------|-------------------------------|----------------|
| 1. | ⁰ÉÃUÉ | | |
| 2. | K£ÀÄ | | |
| 3. | J°è | | |
| PÀæ | ¥ÀzÀUÀ | CxÀð | °ÉüÀÄ |
| ªÀÄ | ¼ÀÄ | ^a ÀiÁrPÉÆ¼ | vÀÛzÉ |
| ,ÀA | | ÀÄîvÀÛzÉ | |

| SÉå | | |
|-----|--------|--|
| 4. | AiÀiÁª | |
| | ÀÅzÀÄ | |
| 5. | AiÀiÁg | |
| | ÀÄ | |
| 6. | KPÉ | |

14. ǻÀgÁtvÀäPÀ ¥ÀzÀUÀ¼ÀÄ

| PÀæ ^a ÀÄ ¸ÀAS Éå | ¥ÀzÀUÀ¼À Ä | CxÀð ªÀiÁrPÉÆ¼ ÀÄîvÀÛzÉ | °Éü ÀÄvÀ ÛzÉ |
|--------------------------------------|--------------------------------------|-------------------------------|--------------------|
| 1. | J®è ⁰ÉÆAiÀÄ ÄÛ | | |
| 2. | PÉlÖzÀÄ | | |
| 3. 4. | zÉÆqÀØ | | |
| 4. | ªÀÄÄjzÀ | | |
| 5. | °ÀĵÁgÀ Ä/ eÁUÀgÀ ÆPÀ | | |
| 6. | vÀtÚUÉ | | |
| 7. | ªÀÄÄzÁV | | |
| 8. | PÀvÀÛ® Ä | | |
| 9. | PÉÆ¼É | | |
| 10. | PÁ° | | |
| 11. | ^ª ÉÃUÀªÁ V/¨ÉÃUÀ £É | | |
| 12. | ZÉ£ÁßV | | |

| PÀæ ^a | ¥ÀzÀUÀ¼À | CxÀð | °Éü |
|------------------|---------------------|--------------------------------------|------|
| ÀÄ | Ä | ^a ÀiÁrPÉÆ ¹ /4 | ÀÄvÀ |
| ¸ÀAS Éå | | ÀÄîvÀÛzÉ | ÛzÉ |
| | | | |
| 13. | M¼ÉîAiÀ | | |
| | Ä | | |
| 14. | RÄ ² | | |
| 15. | UÀnÖ | | |
| 16. | ©1 | | |
| 17. | °À¹ªÀÅ | | |
| 18. | £ÉÆÃªÀÅ | | |
| 19. | , Àé®à | | |
| 20. | vÀgÀ⁻É | | |
| 21. | °ÉzÀjzÀ | | |
| 22. | ¤zÉæAiÀ | | |
| | Ä | | |
| | ªÀÄA¥Àg | | |
| | ÀÄ | | |
| 23. | ªÀÄÈzÀĪ | | |
| | ÁV | | |
| 24. | ÁAiÀÄjP | | |
| | É | | |
| 25. | , ÀÄ,ÀÄÛ | | |
| 26. | °À1 | | |

15. ¸ÀªÀð£ÁªÀÄ

| PÀæ ªÀÄ ¸ÀA SÉå | ¥ÀzÀU À¼ÀÄ | CxÀð ªÀiÁrPÉÆ¼À ÄîvÀÛzÉ | °ÉüÀÄ vÀÛzÉ |
|--------------------------|---------------|-------------------------------|----------------|
| 1. | £Á£À Ä | | |
| 2. | CªÀ¼ À | | |
| 3. | CªÀ£À | | |
| 4. | £À£À UÉ | | |
| 5. | £À£Àß | | |

| PÀæ ªÀÄ ¸ÀA SÉå | zÀÄ ¥ÀzÀU À¼ÀÄ | CxÀð °ÀiÁrPÉÆ¼À ÄîvÀÛzÉ | °ÉüÀÄ vÀÛzÉ |
|--------------------------|----------------------|-------------------------------|----------------|
| 6. | £À£Àß | | |
| 7. | CzÀÄ | | |
| 8. | EzÀÄ | | |
| 9. | ¤Ã£À | | |
| | Ä | | |
| 10 | ¤£Àß | | |

16. ¥ÁæªÀiÁuÁzÀjvÀ ¥ÀzÀUÀ¼ÀÄ

| PÀæ ªÀÄ ¸ÀA SÉå | ¥ÀzÀUÀ ¼ÀÄ | CxÀð ªÀiÁrPÉÆ¼ ÀÄîvÀÛzÉ | °ÉüÀÄ vÀÛzÉ |
|--------------------------|---------------|-------------------------------|----------------|
| 1. | J®è | | |
| 2. | E£ÉÆß | | |
| | AzÀÄ | | |
| PÀæ | ¥ÀzÀUÀ | CxÀð | °ÉüÀÄ |

| °ÀÄ ֻÀA SÉå | ¹∕₄ÀÄ | ^a ÀiÁrPÉÆ¼ ÀÄîvÀÛzÉ | vÀÛzÉ |
|-------------------|-------|-----------------------------------|-------|
| 3. | E®è | | |
| 4. | CzÉÃ | | |

17. ,ÀܼÁzÁjvÀ ¥ÀzÀUÀ¼ÀÄ

| PÀæ ªÀÄ ¸ÀA SÉå | ¥ÀzÀU À¼ÀÄ | CxÀð ªÀiÁrPÉÆ¼À ÄîvÀÛzÉ | °ÉüÀÄ vÀÛzÉ |
|--------------------------|---------------|-------------------------------|----------------|
| 1. | °ÀwÛg À | | |
| 2. | zÀÆg À | | |
| 3. | »AzÉ | | |
| 4. | PɼÀ | | |
| | UÉ | | |
| PÀæ | ¥ÀzÀU | CxÀð | °ÉüÀÄ |

| *ÀÄ ¸ÀA SÉå | À¼ÀÄ | ^ª ÀiÁrPÉÆ¼À ÄîvÀÛzÉ | vÀÛzÉ |
|-------------------|-------|-----------------------------------|-------|
| 5. | ªÉÄÃ⁻ | | |
| | É | | |
| 6. | M¼À | | |
| | UÉ | | |
| 7. | °ÉÆgÀ | | |
| | UÉ | | |

18. E¤ßvÀgÉ

| PÀ ¥ÀzÀUÀ¼À æ ^a À Ä À ÀA SÉå | CxÀð ªÀiÁrPÉÆ ¼ÀÄîvÀÛz É | ⁰ÉüÀ ÄvÀÛz É |
|---|-----------------------------------|--------------------|
|---|-----------------------------------|--------------------|

| 1. | ͺÁβ£À | |
|----|-------|--|
| 2. | °ÀƪÀÅ | |
| 3. | vÉÆÃl | |
| 4. | ªÀÄ£É | |

| 5. | ZÀAzÀæ | | |
|-----------------|-------------------|----------|-------|
| 6. | ªÀļÉ | | |
| 7. | PÀ®Äè | | |
| 8. | ±Á ⁻ É | | |
| 9. | DPÁ±À | | |
| | | | |
| PÀ | ¥ÀzÀUÀ¼À | CxÀð | °ÉüÀ |
| æªÀ Ä | Ä | *ÀiÁrPÉÆ | ÄvÀÛz |
| Ä | | ¼ÀÄîvÀÛz | É |
| | | | |
| ÀA | | É | 2 |
| ÀA ÀA SÉå | | | 2 |
| ÀA | £ÀPÀëvÀ | | |
| ֻÀA SÉå | æ | | |
| ֻÀA SÉå | | | |

| | ð | |
|-----|----------------------------------|--|
| 13. | GAiÀÄå⁻ | |
| | É | |
| 14. | ªÀÄgÀ | |
| 15. | PÉ®¸À | |
| 16. | ªÀÄtÄÚ | |
| 17. | UÁAiÀÄ | |
| 18. | zÉêÁ®A | |
| | iÀÄ | |
| 19. | qÁPÀÖgï/ D _. ÀàvÉæ | |
| | D _, ÀàvÉæ | |

[•]sÁUÀ 3: ¸À£Éß ªÀÄvÀÄÛ QæAiÉÄUÀ¼ÀÄ

<u>,ÀÆZÀ£ÉUÀ¼ÀÄ:</u> PɼÀUÉ ªÀÄPÀ̼ÀÄ ªÀiÁqÀ§°ÀÄzÁAvÀ°À PÉ®ªÀÅ P˱À®åUÀ¼À£ÀÄß ¤ÃqÀ[~]ÁVzÉ. ¤ªÀÄä ªÀÄUÀÄ ªÀiÁqÀ§°ÀÄzÁAvÀ°À P˱À®åUÀ¼À ªÀÄÄAzÉ UÀÄgÀÄvÀÄ °ÁQ. ¤ªÀÄä ªÀÄUÀÄ ªÀiÁqÀ[~]ÁUÀ¢gÀĪÀ P˱À®åUÀ¼À ªÀÄÄA¢gÀĪÀ eÁUÀªÀ£ÀÄß SÁ° ©r.

a. ^aÉÆzÀ® ¸ÀA¥ÀPÀðzÀ gÀÆ¥À/®PÀëtUÀ¼ÀÄ

| PÀæªÀÄ | ^a ÁPÀåUÀ¼ÀÄ | ªÀiÁqÀÄvÀÛzÉ |
|---------------|--|--------------|
| ,ÀASÉå | | |
| 1. | CªÀ¼ÀÄ/CªÀ£ÀÄ »r¢gÀĪÀ ªÀ¸ÀÄÛªÀ£ÀÄß PÉÊ | |
| | ZÁa vÉÆÃj ÀĪÀÅzÀÄ. | |
| 2. | CªÀ¼ÀÄ/CªÀ£ÀÄ »r¢gÀĪÀ CnPÉ/ªÀ¸ÀÄÛªÀ£ÀÄß | |
| | PÉÆqÀ®Ä ¤*ÉÄäqÉUÉ §gÀÄ*ÀÅzÀÄ | |
| 3. | CªÀ½UÉ/CªÀ¤UÉ C¸ÀQÛ¬ÄgÀĪÀ | |
| | ªÀ¸ÀÄÛ«£ÉqÉUÉ ¨ÉgÀ¼ÀÄ ªÀiÁr | |
| | vÉÆÃj,ÀĪĂÅzÀÄ. | |
| 4. | CªÀ¼À/CªÀ£À PÉÊ ªÉÄÃ⁻É JwÛ | |
| | CªÀ¼À£ÀÄB/CªÀ£À£ÀÄB JwÛPÉÆ¼ÀÄîªÀAvÉ | |
| | ,ÀÆa,ÀĪÀÅzÀÄ. | |
| 5. | "E®è" JA§AvÉ vÀ ⁻ É C ⁻ Áèr,ÀĪÀÅzÀÄ. | |
| 6. | "°ËzÀÄ" JA§AvÉ vÀ⁻É Dr¸ÀĪÀÅzÀÄ. | |
| 7. | ¨ÉgÀ¼À£ÀÄβ vÀÄnAiÀÄ ªÉÄÃ⁻É ElÄÖ | |
| | "±ï(¤±Àå§Ý)" JA§AvÉ vÉÆÃj ÅÄàÅzÀÄ. | |
| 8. | J£À£ÁßzÀgÀÄ PÉüÀ®Ä PÉÊAiÀÄ£ÀÄß °ÉÆgÀ | |
| | ZÁa vÉUÉzÀÄ ªÀÄÄaÑ ªÀiÁqÀĪÀÅzÀÄ. | |
| 9. | zÀÆgÀzÀ°ègÀĪÀ ªÀåQÛUÉ ªÀÄÄvÀÛ£ÀÄß | |
| | UÁ½AiÀİè HzÀĪÀÅzÀÄ. | |
| 10. | C ªÀ,ÀÄÛ gÀÄaAiÀiÁVzÉ JAzÀÄ vÀÄnAiÀÄ£ÀÄß | |

»AzÉ ªÀÄÄAzÉ ªÀiÁr vÉÆÃj¸ÀĪÀÅzÀÄ.

b. DlUÀ¼ÀÄ ªÀÄvÀÄÛ ¢£ÀZÀj

| | DIUÀ¼ÀÄ | ^a ÀiÁqÀÄvÀÛzÉ |
|---------------|---------------------------------|--------------------------|
| ,ÀASÉå | | |
| 1. | PÀ¼Àî §AzÀ PÀ¼Àî | |
| 2. | ¨É£ÀßnÖ ⁰ÉÆÃUÀĪÀ DIUÀ¼ÀÄ | |
| 3. | UÉÆA¨É E¤ßvÀgÀ ªÀ¸ÀÄÛUÀ¼À eÉÆvÉ | |
| | DqÀĪÀÅzÀÄ | |
| 4. | °ÁqÀĪÀÅzÀÄ | |
| 5. | °ÁrUÉ °ÉeÉÓ °ÁPÀĪÀÅzÀÄ | |

c. ^aÀ,ÀÄÛUÀ¼ÉÆA¢UÉ ^aÀiÁqÀÄ^aÀ PÉ®,ÀUÀ¼ÀÄ

| | ^a ÁPÀåUÀ¼ÀÄ | *ÀiÁqÀÄvÀÛzÉ |
|---------------|---|---------------------|
| ,ÀASÉå | | |
| 1. | PÉʬÄAzÀ/ZÀªÀÄZÀ¢AzÀ w£ÀÄߪÀÅzÀÄ | |
| 2. | UÁ蹤AzÀ PÀÄrAiÀÄĪÀÅzÀÄ | |
| 3. | ¨ÁZÀtÂUɬÄAzÀ vÀ⁻É ¨ÁZÀĪÀÅzÀÄ | |
| 4. | §æ¶¤AzÀ °À®Äè GdÄÓªÀÅzÀÄ | |
| 5. | mÉÆÃ¦°ÁQ PÉÆ¼ÀÄîªÀÅzÀÄ | |
| 6. | ZÀ¥Àà° °ÁQPÉÆ¼ÀÄîªÀÅzÀÄ | |
| 7. | PÀtÄÚ ªÀÄÄaÑ ¤zÉæ §AzÀªÀgÀAvÉ | |
| | ªÀÄ®UÀĪÀÅzÀÄ | |
| PÀæªÀÄ | ^a ÁPÀåUÀ¼ÀÄ | ªÀiÁqÀÄvÀÛzÉ |
| ,ÀASÉå | | |
| 8. | ªÁºÀ£ÀUÀ¼À£ÀÄß »rzÀÄPÉÆ¼ÀÄîªÀÅzÀÄ | |
| | ªÀÄvÀÄÛ ZÀ°¸ÀĪÀAvÉ ªÀiÁqÀĪÀÅzÀÄ. | |
| 9. | ¥ÉÇãÀ£ÀÄß Q«AiÀÄ §½ »rzÀÄ | |
| | ^a ÀiÁvÀ£ÁqÀÄ ^a ÀaÀgÀAvÉ £Àn¸ÀÄ ^a ÀÅzÀÄ | |
| 10. | ©¹AiÀiÁVzÉ JAzÀÄ ¸ÀÆa¸À®Ä HzÀĪÀÅzÀÄ | |
| 11. | ZÉAqÀ£ÀÄß J¸ÉAiÀÄĪÀÅzÀÄ | |
| 12. | MAzÀÄ ¥ÁvÉæ¬ÄAzÀ ªÀÄvÉÆÛAzÀÄ ¥ÁvÉæUÉ | |
| | ¤ÃgÀÄ ¸ÀÄjAiÀÄÄåÅÅzÀÄ | |
| 13. | ¥ÁvÉæAiÀİè CxÀªÀ [–] ÉÆÃlzÀ°è ¤ÃgÀ£ÀÄß | |
| | ZÀªÀÄZÀ¢AzÀ wgÀÄV,ÀÄzÀÄ | |
| 14. | UÉÆA ÉUÉ ªÀÄÄvÀÄÛ PÉÆqÀĪÀÅzÀÄ CxÀªÀ | |
| | vÀ©âPÉÆ¼ÀÄîªÀÅzÀÄ | |
| 15. | PÀ£ÀßqÀPÀ °ÁQ PÉÆ¼ÀÄîªÀÅzÀÄ | |

d. zÉÆqÀتÀgÀ jÃwAiÀÄ PÉ®,ÀUÀ¼À£ÀÄß C£ÀÄ,Àj,ÀĪÀÅzÀÄ

| PÀæªÀÄ ¸ÀASÉå | ^a ÁPÀåUÀ¼ÀÄ | ^a ÀiÁqÀÄvÀÛzÉ |
|------------------|------------------------------------|--------------------------|
| 1. | ¥ÉÇgÀPɬÄAzÀ £É® UÀÄr¸ÀĪÀÅzÀÄ CxÀªÀ | |

| | PÀ,À °ÉÆqÉAiÀÄĪÀÅzÀÄ |
|----|---|
| 2. | PÀ®Äè CxÀªÀ ¸ÀÄwÛUɬÄAzÀ |
| | ZÀZÀÄѪÀÅzÅÄ |
| 3. | NzÀĪÀÅzÀÄ (¥ÀŸÀÛPÀªÀ£ÀÄß vÉgÉzÀÄ |
| | ¥ÀÅIUÀ¼À£ÀÄß wgÀĪÁPÀĪÀÅzÀÄ) |
| 4. | ,ÉÊPÀ ⁻ ï ^e ÉÆqÉAiÀÄ®Ä ¥ÀæAiÀÄvÀβ |
| | ^a ÀiÁqÀÄ ^a ÀÅzÀÄ |
| 5. | §mÉÖ¬ÄAzÀ ªÀgɸÀĪÀÅzÀÄ |
| 6. | ¥É£ï/¥É¤ì⁻ï/E¤ßvÀgÉ ªÀ¸ÀÄÛ«¤AzÀ |
| | §gÉAiÀÄĪÀÅzÀÄ |
| 7. | ĂiÀiÁªÀÅzÁzÀgÀÄ ªÀ¸ÀÄÛªÀŤAzÀ UÀÄAr vÉUÉAiÀÄ®Ä ¥ÀæAiÀÄw߸ÀĪÀÅzÀÄ |
| | vÉUÉAiÀĮĥÀæAiÀÄw߸ÀĪÀÅzÀÄ |

Appendix III

Content validity Scoring sheet Communication Inventory for Infants A^aÀ^oÀ£À vÀ¥À²îÄ ¥ÀnÖ

Instructions: Please compare communication inventory of Kannada language with Inventory if English and tick in appropriate column. If the translation work is proper mark in $\hat{Aj} EzE$ column, if the translation is not proper please mark it $\hat{Aj} E \otimes \hat{e}$ and if you think translation is happened properly and changes need please mark in $\hat{sAUA} \pm \hat{AB}$ \hat{Aj}

| PÀæªÀÄ | ^a ÁPÀåUÀ¼ÀÄ | ,Àj | ,Àj | ¨sÁUÀ±ÀB |
|---------------|---|-----|------------|-------------|
| ,ÀASÉå | | EzÉ | E®è | , Àj |
| 1. | ^a ÀÄÄR sÁªÀªÀ£ÀÄß CxÀð | | | |
| | ^a ÀiÁrPÉÆ¼ÀÄîvÀÛzÉ. (PÉÆÃ¥À, | | | |
| | ,ÀAvÉÆÃµÀ) | | | |
| 2. | PÉ®ªÀÅ ¥ÀzÀUÀ¼À£ÀÄß | | | |
| | CxÀðªÀiÁrPÉÆAqÀÄ ¸ÀÆPÀÛªÁzÀ | | | |
| | ¥ÀæwQæAiÉÄAiÀÄ£ÀÄß ¤ÃqÀÄvÀÛªÉ. | | | |
| | GzÀ: "Á, mÁ mÁ | | | |
| 3. | ,ÀAVÃvÀPÉÌ UÀªÀÄ£À PÉÆqÀĪÀÅzÀÄ. | | | |
| 4. | CªÀ£À/CªÀ¼À ¸ÀÄvÀÛªÀÄÄvÀÛ | | | |
| | £ÀqÉAiÀÄĪÀ¥ÀÇgÀ | | | |
| | ÀA [¨] sÁµÀuÉAiÀÄ£ÀÄß D°¹zÀAvÉ | | | |
| | PÁtÄvÀÛzÉ. | | | |
| 5. | CªÀ£À/CªÀ¼À ºÉ ÀgÀ£ÀÄß PÀjzÁUÀ | | | |
| | ^a ÀiÁqÀÄwÛgÀÄ ^a À PÉ®¸ÀªÀ£ÀÄß | | | |
| | ¤°è,ÀÄvÀÛzÉ. | | | |
| 6. | zsÀé¤AiÀİè£À ªÀåvÁå,ÀªÀ£ÀÄß | | | |
| | CxÀðªÀiÁrPÉÆ¼ÀÄîvÀÛzÉ. | | | |
| 7. | ÉÃqÀ JAzÀÄ °ÉýzÀgÉ ªÀiÁqÀĪÀ | | | |
| | PÉ®,ÀªÀ£ÀÄß ¤°è,ÀÄvÀÛzÉ. | | | |
| 8. | avÀæzÀ(¥sÉÇÃmÉÆ)°ègÀĪÀ | | | |
| | ^a ÀåQÛAiÀÄ£ÀÄß ºÉ,Àj¹zÁUÀ MAzÀÄ | | | |
| | ¤«ÄµÀUÀ¼À PÁ® D avÀæzÉqÉUÉ | | | |
| | UÀªÀÄ£À ºÀj,ÀÄvÀÛzÉ. GzÀ; EzÀÄ | | | |
| | C¥Àà£À sÁªÀavÀæ (¥sÉÇÃmÉÆ) | | | |
| 9. | ¥Àj̯avÀgÀÄ ªÀÄvÀÄÛ C¥ÀjavÀgÉÆA¢UÉ | | | |
| | "ÉÃgÉ "ÉÃgÉAiÀiÁV | | | |
| | ¥ÀæwQæ¬Ä,ÀÄvÀÛzÉ. | | | |
| 10. | ºÉƸÀ ¥ÀzÀUÀ¼À£ÀÄß PÉüÀ®Ä | | | |

[™]sÁUÀ 1: A. ªÀÄÄAa£À ¸ÀA¥ÀPÀð P˱À®åUÀ¼ÀÄ

| | GvÁì°À vÉÆÃjzÀAvÉ PÁtÄvÀÛzÉ. | | |
|-----|--|---|--|
| 11 | | | |
| 11. | ÉgÉAiÉÄqÉUÉ UÀªÀÄ£À ºÀj ÀZÉ | | |
| | ^a ÀiÁvÀ£ÀÄߥÀÇtðªÁV PÉüÀÄvÀÛzÉ. | | |
| 12. | PÉ®,À*À£ÀÄß °ÉýzÁUÀ C©ü£À¬Ä¹ | | |
| | vÉÆÃj ÀÄvÀÛzÉ. GzÀ; Hl | | |
| | ^a ÀiÁqÀÄ ^a ÀÅzÀÄ °ÉÃUÉ? | | |
| 13. | PÀvÉ PÉüÀ®Ä RĶ¥ÀqÀÄvÀÛzÉ. | | |
| 14. | ÀAVÃvÀPÉÌ ªÉÄÊ PÉÊ Z°1 | | |
| | ¥ÀæwQæ¬Ä,ÀÄvÀÛzÉ. | | |
| 15. | ^a ÉÄÃ ⁻ É,PɼÀUÉ (ÀܼÁzÁjvÀ) | | |
| | ¥ÀzÀUÀ¼À£ÀÄß | | |
| | CxÀðªÀiÁrPÉÆ¼ÀÄîvÀÛzÉ. | | |
| 16. | ZÉ£ÀBV PÁtÄw¢ÃAiÀÄ JAzÀÄ °ÉýzÁUÀ | | |
| | RĶ¥ÀqÀÄvÀÛzÉ. | | |
| 17. | vÀ£Àß ªÀ¸ÀÄÛUÀ¼À£ÀÄß | | |
| | ¨ÉÃgÉAiĂĪÀjUÉ ©lÄÖPÉÆqÀĪÀÅ¢®è. | | |
| 18. | °É ÀgÀÄ PÀgÉzÁUÀ | | |
| | ¥ÀæwQæ¬Ä ÀÄvÀÛzÉ GzÀ: wgÀÄV | | |
| | £ÉÆqÀĪÀÅzÀgÀ ªÀÄÆ®PÀ, PÀgÉzÀ | | |
| | ^a ÀåQÛUÁV °ÀÄqÀÄPÀÄ ^a ÀÅzÀgÀ | | |
| | ^a ÀÄÆ®PÀ | | |
| 19. | ÉÃgÉAiÀĪÀgÀÄ vÀ£Àß | | |
| | ^a À ÄÄÛUÀ¼À£ÀÄß vÉUÉzÀÄPÉÆAqÁUÀ, | | |
| | G¥ÀAiÉÆV ¹ zÁUÀ CxÀªÁ | | |
| | °Á¼ÀĪÀiÁrzÁUÀ | | |
| | PÉÆÄ ^l PÉÆ ¹ /4ÀÄîvÀÛzÉ/ | | |
| | dUÀ¼ÀªÁqÀÄvÀÛzÉ. | | |
| 20. | °ÁqÀ£ÀÄß PÉüÀ®Ä, n. «£ÉÆÃqÀ®Ä | | |
| 20. | RÄ ² ¥ÀqÀÄvÀÛzÉ. | | |
| | | 1 | |

B. ªÉÆzÀ® ªÁPÀåUÀ¼ÀÄ

| PÀæªÀÄ | ^a ÁPÀåUÀ ¹ ⁄4ÀÄ | ` Àj | _Àj | "sÁUÀ±ÀB |
|---------------|---------------------------------------|-------------|------------|------------|
| ,ÀASÉå | | EzÉ | E®è | ,Àj |
| 1. | °À¹ªÁUÀÄwÛzÉAiÉÄÃ? | | | |
| 2. | ¤zÉæ | | | |
| | §gÀÄwÛzÉAiÉÄ?/¸ÀĸÁÛVzÉAiÀÄ? | | | |
| 3. | ±À§Ý ªÀiÁqÀ¨ÉÃqÀ | | | |
| 4. | ZÀ¥Á¼É °ÉÆr | | | |
| 5. | "Á E°è | | | |
| 6. | E£ÀÄß "ÉÃPÉÃ? | | | |
| 7. | CzÀ£ÀÄß ªÀiÁqÀ¨ÉÃqÀ/¸ÀĪÀÄä¤gÀÄ | | | |
| 8. | *ÀÄÄlÖ ÉÃqÀ | | | |
| 9. | K¼ÀÄ ªÉÄÃ⁻É | | | |
| 10. | CªÀÄä¤UÉ PÉÆqÀÄ | | | |

| 11. | £À£ÀUÉÆAzÀÄ ªÀÄÄvÀÄÛ PÉÆqÀÄ | | |
|-----|-------------------------------|--|--|
| 12. | °ÉÆÃV vÉUÉzÀÄPÉÆAqÀÄ ¨Á | | |
| 13. | eÁt °ÀÄqÀÄUÀ/°ÀÄqÀÄV | | |
| 14. | E£ÀÄß Åé®à°ÉÆvÀÄÛ °ÁUÉ »r¢PÉÆ | | |
| 15. | £Ér °ÉÆUÉÆÃt mÁ mÁ | | |
| 16. | E°è £ÉÆqÀÄ | | |
| 17. | ¨Á¬Ä vÉV | | |
| 18. | PÀÄ1⁄2vÀÄPÉÆ | | |
| 19. | °ÉÆgÀUÉ GV | | |
| 20. | ¤°è,ÀÄ | | |
| 21. | ZÉAqÀ£ÀÄß J¹ | | |
| 22. | F aPÀÌ UÉÆA¨É | | |
| 23. | °ÉÆgÀUÉ °ÉÆÃUÀ ¨ÉÃPÁ? | | |
| 24. | ¤£ÀUÉ "ÉÃPÁ? | | |
| 25. | mÁ mÁ °ÉüÀÄ | | |
| 26. | FUÀ ªÀÄ®UÀÄ | | |
| 27. | C¼À¨ÉÃqÀ | | |
| 28. | °ÉÆgÀUÉ °ÉÆÃUÀ¨ÉÃqÀ | | |
| 29. | ¤zÁ£ÀªÁV £Àr | | |
| 30. | F §mÉÖ ZÉ£ÁßV®è | | |
| 31. | £À£ÀUÉ ¸Àé®à PÉÆqÀÄ | | |

^{..}sÁUÀ 2 : ªÀÄÄAa£À ¥ÀzÀ¥ÀnÖ

1. ««zÀ jÃwAiÀÄ ±À§ÝUÀ¼ÀÄ

| PÀæ ^a ÀÄ | ¥ÀzÀUÀ | ۣÀ | ۣÀ | sÁUÀ |
|------------------------|----------------------|---------|----|------------------|
| ÁA | ¼ÀÄ | j | j | ±ÀB |
| ֻÀAS Éå | | Ĕz É | Ε | , Àj |
| | | É | ®è | |
| 1. | "Á "Á | | | |
| 2. | ªÁ ªÁ | | | |
| 3. | "Á "Á ªÁ | | | |
| | ^a Á vÀ vÀ | | | |
| 4. | vÀ zÀ ªÀ | | | |
| | ªÀÄ | | | |
| 5. | CA"Á | | | |
| | CA"Á | | | |
| 6. | ZÀÆ | | | |
| | ZÀÆ | | | |

2. PÀÄlÄA§ ,ÀzÀ ,ÀågÀÄ

| 7. | UÀgïæ | | |
|-----|-----------|--|--|
| 8. | «ÄAiÀÄ | | |
| | Aªï | | |
| 9. | PÉÆ | | |
| | PÉÆ | | |
| 10. | M °ÉÆ | | |
| 11. | qÀ gïæ | | |
| | gïæ gïæ | | |
| 12. | G¥sï G¥sï | | |
| 13. | CªÀiï | | |
| 14. | CAiÉÆÃ | | |

| PÀæ | ¥ÀzÀUÀ¼ | À | À | "sÁUÀ |
|-----|-----------|----------|------------|-------|
| IAa | HALAUA /4 | <u>م</u> | <u>,</u> л | SAUA |

| ^ª ÀÄ ¸ÀAS Éå | ÀÄ | j E z É | j E ® è | ±ÀB ,Àj |
|-------------------------------|------------|------------------|------------------|------------|
| 1. | CªÀÄä | | | |
| 2. | C¥Àà | | | |
| 3. | CfÓ | | | |
| 4. | CdÓ/vÁvÀ | | | |
| 5. | CtÚ/vÀªÀÄ | | | |
| | ä | | | |
| б. | CPÀÌ/vÀAV | | | |
| 7. | ªÀiÁªÀ/aPÀ | | | |
| | Ì¥Àà/ | | | |

| | zÉÆqÀØ¥À | | |
|-----|-----------|--|--|
| | à | | |
| 8. | CvÉÛ/aPÀ̪ | | |
| | ÀÄä/ | | |
| | zÉÆqÀتÀ | | |
| | Ää | | |
| 9. | °ÀÄqÀÄUÀ | | |
| 10. | °ÀÄqÀÄV | | |
| 11. | ªÀÄUÀÄ/¥ | | |
| | Á¥ÀÅ | | |
| 12. | ªÀÄ£ÀĵÀ | | |
| | å/ªÀåQÛ | | |
| 13. | d£À | | |

3. zÉðÀzÀ ^{..}sÁUÀUÀ¼ÀÄ

| PÀæªÀÄ ¸ÀASÉå | ¥ÀzÀU À¼ÀÄ | ∫À j E z É | ∫À j E ℝ è | ∵sÁUÀ ±ÀB ¸Àj |
|-------------------------------|-------------------------------|------------------------|------------------------|---------------------|
| 1. | vÀ-É | | | |
| 2. | PÀtÄÚ | | | |
| 3. | Q« | | | |
| 4. | Q« ^a ÀÄÆU ÀÄ | | | |
| 5. | "Á¬Ä | | | |
| 6. | ªÀÄÄR | | | |
| 7. | PÉÊ | | | |
| P À æ ^a À | ¥ÀzÀU À¼ÀÄ | À j E z | À j E ® | ∵sÁUÀ ±ÀB ¸Àj |

| Ä Å A S É å | | É | è | |
|----------------------------|----------------------|---|---|--|
| 8. | P稀 | | | |
| 9. | ⁰ÉÆmÉ | | | |
| | Ö | | | |
| 10. | °À®Äè | | | |
| 11. | PÉ£Éß | | | |
| 12. | PE£Eß ¨ÉgÀ¼À Ä | | | |
| | Ä | | | |
| 13. | £Á°UÉ | | | |
| 14. | PÀÆzÀ | | | |
| | ®Ä | | | |

| 4. Hl/ | /wAr |
|--------|------|
|--------|------|

| PÀæ ^a ÀÄ ¸ÀAS Éå | ¥ÀzÀUÀ¼ ÀÄ | ∫À j Ez É | ∫À j E ®è | ∵sÁUÀ ±ÀB ¸Àj |
|--------------------------------------|---------------|--------------------|--------------------|---------------------|
| 1. | C£Àß | | | |
| 2. | ªÀÄÄzÉÝ | | | |

| 3. | ,ÁA§gï/,Ág |
|-----|---------------------|
| | ÀÄ |
| 4. | Erè |
| 5. | zÉÆÃ,É |
| 6. | ZÀ¥Áw |
| 7. | ¤ÃgÀÄ |
| 8. | ĹĔçÄ |
| 9. | Á¼É°ÀtÄ |
| | Ú |
| 10. | QvÀۼɰ |
| | ÀtÄÚ |

| 11. | zÁæQë |
|-------|--|
| | °ÀtÄÚ |
| 12. | °Á®Ä |
| 13. | ªÉƸÀgÀÄ |
| 14. | "ÉuÉÚ |
| 15. | ÉæqÀÄØ |
| 16. | PÉÃPï |
| 17. | ZÉÆPÉÆÃ |
| | ⁻ ÉÃmï |
| 18. | Ljï |
| | QæÃªÀiï |
| 19. | dÄå,ï |
| 20. | ^a ÉÆmÉÖ |
| 21. | ^a ÀiÁA,À |
| | /«ÄãÅÄ |
| 22. | PÁ¦ü/ nÃ |
| 23. | HI |
| 6 VÁm | $+\hat{\lambda} \times \hat{\lambda} \cap \hat{\partial} U \hat{\lambda} 1/2 \hat{\lambda} \ddot{\lambda}$ |

6. ¥Áæt ¥ÀQëUÀ¼ÀÄ

| PÀæ ^a ÀÄ ¸ÀAS Éå | ¥ÀzÀUÀ¼ ÀÄ | À j Ez É | Å j E ®è | ∵sÁUÀ ±ÀB ¸Àj |
|--------------------------------------|-------------------|-------------------|-------------------|---------------------|
| 1. | ÉPÀÄÌ | | | |

| 2. | £Á¬ÄªÀÄj |
|-----|------------------------|
| 3. | °À,ÀÄ |
| 4. | PÉÆÃ ¹ ⁄2ªÀ |
| | Äj |
| 5. | PÁUÉ |
| 6. | UÀħâaÑ |
| 7. | PÀÄj |
| 8. | amÉÖ |
| 9. | C ¹ /2®Ä |
| 10. | D£É |
| 11. | ¥ÀQë/°ÀQÌ |
| 12. | ¥ÁætÂ |
| 13. | PÀvÉÛ |
| 14. | PÀ¥Éà |
| 15. | PÉÆÃw |
| 16. | E° |
| 17. | ǀ̣ˀ |
| 18. | eÉãÀİÀ |
| | ļÀÄ |
| | |
| 19. | °ÁªÀÅ |
| 20. | °Àİ/¹A°À |

5. ªÁ°À£ÀUÀ¼ÀÄ

| PÀæ | ¥ÀzÀUÀ¼ | <u>`</u> Àj | ,Àj | ¨sÁU |
|------------|---------------|-------------|------------|-------------|
| ªÀÄ | ÀÄ | Ez É | E® | À±À |
| ∫ÀA SÉå | | É | è | В |
| SÉå | | | | , Àj |
| 1. | § ,ÀÄì | | | |
| 2. | ţÉÊPÀ⁻ï | | | |
| 2. 3. | ¸ÀÆÌlgï∕¨É | | | |
| | ÊPï | | | |
| 4. | PÁgÀÄ | | | |
| 5. | gÉĒ®Ä | | | |
| 6. | «ªÀiÁ£À/K | | | |
| | gÉÆÃ¥ÉèÃ | | | |
| | £ï | | | |
| 7. | mÉA¥ÉÇ | | | |

8. GqÀÄUÉ vÉÆqÀÄUÉ

7. DlzÀ ,ÁªÀiÁ£ÀÄUÀ¼ÀÄ

| PÀæ ^a | ¥ÀzÀUÀ¼ | À ٍ | À ٍ | ¨sÁUÀ |
|------------------|-----------|-------------|-----|-------------|
| ÀÄ | ÀÄ | j | j | ±ÀB |
| ÀAS Éå | | Ez | Ε | ` Àj |
| Éå | | É | ®è | |
| 1. | ZÉAqÀÄ | | | |
| 2. | ¦Ã¦/§®Æ£À | | | |
| | Ä | | | |
| 3. | ¥ÀÅ,ÀÛP | | | |
| | À | | | |
| 4. | ªÉÆmïÖ/U | | | |
| | ÀļÉî | | | |
| 5. | UÉÆA"É | | | |
| 6. | ¥É£ÀÄß | | | |
| 7. | CnPÉ | | | |
| ªÀÄ | | À j E | À | À±ÀB |
| ∫ÀA SÉå | | j | j | À j |
| SÉå | | Ĕ | Ĕ | |
| | | Z | R | |

| | | É | è | |
|-----|-------------|---|---|--|
| 1. | μÀmïð | | | |
| 2. | ¥ÀAZÉ | | | |
| 3. | ¥ÁåAmï | | | |
| 4. | ¤PÀÌgï | | | |
| 5. | PÉÆÃlÄ | | | |
| 6. | mÉÆÃ | | | |
| 7. | P稀 ą | | | |
| 8. | §Æmïî | | | |
| 9. | ¨É⁻ïÖ | | | |
| 10. | PÉÊUÀrAiÀi | | | |
| | ÁgÀ/ªÁZÀÄ | | | |
| 11. | GAUÀÄgÀ | | | |
| 12. | ÀgÀ §¼É | | | |
| 13. | §¼É | | | |
| 14. | Q« N⁻É | | | |
| 15. | 1ÃgÉ | | | |
| 16. | ®AUÀ | | | |
| 17. | PÁ⁻ÉÎeÉÓ | | | |
| 18. | ,Éélgï | | | |
| 19. | §mÉÖ | | | |

9. PÉÆoÀr ªÀÄvÀÄÛ ¦ÃmÉÆÃ¥ÀPÀgÀt

| PÀæ ^a | ¥ÀzÀUÀ¼ | ۣÀ | À | ¨sÁUÀ |
|------------------|-----------------|---------|--------|-------------|
| ÀÄ | ÀÄ | j | À j | ±ÀΒ |
| ¸ÀAS Éå | | Ez É | E | ` Àj |
| Éå | | É | ®è | |
| 1. | CqÀÄUɪ | | | |
| | À£É | | | |
| 2. | ªÀÄ®UÀ | | | |
| | ĪÀ | | | |
| | PÉÆÃuÉ | | | |
| 3. | ှÁߣÀzÀ ªÀÄ£É | | | |
| | | | | |
| 4. | ªÀÄAZÀ | | | |
| 5. | PÀÄað | | | |
| 6. | ¨ÁV®Ä | | | |
| 7. | ªÉÄnÖ®Ä | | | |
| 8. | ªÉÄÃdÄ/ | | | |
| | mÉç⁻ï | | | |
| 9. | QlQ | | | |

10. ªÀÄ£ÉAiÀİè EqÀ§°ÀÄzÁAvÀ°À ªÀ¸ÀÄÛUÀ¼ÀÄ

| PÀæ ^a | ¥ÀzÀUÀ¼ | À | À | sÁUÀ |
|------------------|---|--------------------|---------|------------------|
| ÀÄ ¸ÀAS Éå | ÀÄ | ∫À j Ez É | ∫À j | ±ÀB |
| ÀAS | | J Ez | Б Б | ±ÀB ¸Àj |
| Éå | | É | ®è | 50 |
| 1. | °ÉÆ¢PÉ/P | | | |
| | ÀA§1⁄2 | | | |
| 2. | ¹Ã,Ě/¨ÉÆ | | | |
| | ÃmÉ⁻ï | | | |
| 3. | ÀA§ ¹ / ₂ ¹ Ã,É/ ⁻ ÉÆ ÃmÉ ⁻ ï §lÖ®Ä | | | |
| 4. | qA§â | | | |
| 5. | ¥ÉÇgÀPÉ | | | |
| 6. | §æμï UÀrAiÀiÁ | | | |
| 7. | UÀrAiÀiÁ | | | |
| | gÀ | | | |
| 8. | "ÁZÀuÉU | | | |
| | É | | | |
| 9. | É ¥ÁvÉæ | | | |
| 10. | PAAZA | | | |
| | §ÄnÖ | | | |
| 11. | UÁè,ï ©ÃUÀzÀ | | | |
| 12. | ©ÂUÀzÀ | | | |
| | PÉÊ | | | |
| 13. | ¢Ã¥À | | | |
| 14. | OµÀzÀ zÀÄqÀÄØ | | | |
| 15. | zAAqAAØ | | | |
| 16. | PÁUÀzÀ | | | |
| 17. | PÁ ÀÄ/£Á | | | |
| | tå | | | |
| 18. | avÀæUÀ¼ | | | |
| | ÀÄ | | | |
| 19. | ¢A§Ä | | | |
| 20. | °Á¹UÉ | | | |
| 21. | vÀmÉÖ DÉÊ: Ã @ N | | | |
| 22. | PÉÊaî/¥ | | | |
| | À jið PÀwæ | | | |
| 23. | | | | |
| 24. | ,ÉÆÃ¥ÀÅ ZÀªÀÄZÀ | | | |
| 25. | ZA [*] AAZA l ^a À ⁻ ï | | | |
| 26. | | | | |
| 27. | n. « œÉÃrAiÉÆ | | | |
| 28. | gÉÃrAiÉÆ Ã | | | |
| | А | | | |

| 29. | ¥ÉÇãÀÄ | | |
|-----|---------|--|--|
| 30. | ¥sÁå£ï | | |
| 31. | VqÀ/ À¹ | | |

| 32. bÀwæ |
|----------|
|----------|

12. QæAiÀiÁ ¥ÀzÀUÀ¼ÀÄ

| PÀæ | ¥ÀzÀUÀ¼À | À | À | sÁUÀ |
|------------------------|-----------------------|--------|--------|------------------|
| ^a ÀÄ | Ä | j E | j | ±ÀB ¸Àj |
| _, ÀA SÉå | | | E ® | ¸АJ |
| SEa | | z É | è | |
| 1. | PÀZÀÄÑ | Ľ | C | |
| 2. | HzÀÄ | | | |
| 3. | ^a ÀÄÄi | | | |
| 4. | vÉUÉzÀÄP ÉÆAqÀÄ "Á | | | |
| | ÉÆAqÀÄ "Á | | | |
| 5. | ±ÀÄa | | | |
| | ªÀiÁqÀÄ | | | |
| 6. | ªÀÄÄZÀÄÑ | | | |
| 7. | C¼ÀÄ | | | |
| 8. | PÀÄtÂ | | | |
| 9. | awæ¸ÀÄ | | | |
| 10. | N | | | |
| 11. | | | | |
| 12. | ©Ã¼ÀÄ | | | |
| 13. | | | | |
| 14. | ªÁÄÄV¸ÀÄ | | | |
| 15. | PÉÆqÀÄ | | | |
| 16. | °ÉÆÃUÀÄ À°ÁAiÀÄ | | | |
| 17. | , ŰÁAįÀÄ | | | |
| | ªÀiÁqÀÄ | | | |
| 18. | \ / | | | |
| 19. | | | | |
| 20. | £ÉV | | | |

12. PÁ® ,ÀÆavÀ ¥ÀzÀUÀ¼ÀÄ

| PÀæ ^a ÀÄ ¸ÀAS Éå | ¥ÀZÀUÀ ¼ÀÄ | À j Ez É | ֻÀ j E ®è | ∵sÁUÀ ±ÀB ¸Àj |
|--------------------------------------|--------------------|-------------------|--------------------|---------------------|
| 1. | °ÀUÀ®Ä | | | |
| 2. | gÁwæ | | | |
| 3. | ɹ∕₂UÉÎ | | | |

| PÀæ | ¥ÀzÀUÀ¼À | ۣÀ | <u>م</u> | sÁUÀ |
|----------|---|--------|----------|------------------|
| ªÀÄ | Ä | j | j | ±ÀB |
| ÀA | | Ε | Ē | ` Àj |
| SÉå | | z É | ® | |
| | | E | è | |
| 21. | M¢ | | | |
| 22. | ^a ÀÄÄwÛqÀ Ä | | | |
| | | | | |
| 23. | £ÉÆÃqÀÄ vÉUÉ | | | |
| 24. | DqÀÄ | | | |
| | | | | |
| | J ¹ / ₂ vÀ ¹ / ₄ ÀÄî | | | |
| 27. | EqÀÄ | | | |
| 20. | NzÀÄ | | | |
| <u> </u> | Nr,ÀÄ | | | |
| 30. | NaÀÄ | | | |
| 32 | NqÀÄ °ÉüÀÄ | | | |
| 33. | | | | |
| 34 | °ÁqÀÄ | | | |
| 35. | ^a ÀÄ®UÀÄ | | | |
| 36. | £ÀUÀÄ | | | |
| | ¤°è,ÀÄ | | | |
| 38. | , , , | | | |
| 39. | J1 | 1 | | |
| 40. | ªÀÄÄlÄÖ | | | |
| 41. | £Àr | | | |
| 42. | §j | | | |
| 4. | DªÉÄÃ ⁻ É | | | |
| 5. | FUÀ | | | |
| 6. | E ^a ÀvÀÄ Û | | | |
| | U £Á¼É | | | |
| 7. | £A¼E £É£Éß | | | |
| 8. | tEtEli | | | |

13. ¥Àæ±ÁßxÀðPÀ ¥ÀzÀUÀ¼ÀÄ

| PÀæ ^a ¥ÀzÀUÀ | À À | "sÁUÀ |
|-------------------------|-----|-------|
|-------------------------|-----|-------|

| ÀÄ ¸ÀAS Éå | ¹ /4ÀÄ | j Ez É | j E ®è | ±ÀB ¸Àj |
|------------------|-------------------|--------------|--------------|------------|
| 1. | °ÉÃUÉ | | | |
| 2. | KµÀÄÖ | | | |
| 3. | K£ÀÄ | | | |
| 4. | AiÀiÁªÁ | | | |

| | UÀ | | |
|----|---------|--|--|
| 5. | J°è | | |
| 6. | AiÀiÁªÀ | | |
| | ÅzÀÄ | | |
| 7. | AiÀiÁgÀ | | |
| | Ä | | |
| 8. | KPÉ | | |

14. ǻÀgÁtvÀäPÀ ¥ÀzÀUÀ¼ÀÄ

| PÀæ ªÀÄ ¸ÀA SÉå | ¥ÀzÀUÀ¼À Ä | ∫À j E z É | Å j E ℝ è | ∵sÁUÀ ±ÀB ¸Àj |
|--------------------------|---|------------------------|-----------------------|---------------------|
| 1. | J®è | | | |
| | ⁰ÉÆAiÀÄÄ Û | | | |
| 2. | PÉlÖzÀÄ | | | |
| 3. | zÉÆqÀØ | | | |
| 4. | ªÀÄÄjzÀ | | | |
| 5. | ^a ÀÄÄjzÀ ^o ÀĵÁgÀÄ/ | | | |
| | eÁUÀgÀÆP | | | |
| | À | | | |
| 6. | vÀtÚUÉ | | | |
| 7. | ^a ÀÄÄzÁV PÀvÀÛ®Ä | | | |
| 8. | PAVAU®A PÉÆ¼É | | | |
| | MtV | | | |
| | PÁ° | | | |
| 11. | | | | |
| 12. | ÉÃUÀ£É | | | |
| 13. | ZÉ£ÁßV | | | |
| | M¼ÉîAiÀÄ | | | |
| | RÄ ² | | | |
| 16. | UÀnÖ | | | |
| 17. | | | | |
| 18. | / ~ \ B | | | |
| 19. | | | | |
| 20. | 3 | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | °ÉzÀjzÀ ¤zÉæAiÀÄ | | | |
| 24. | ¤ZEæAIAA ªÀÄA¥ÀgÀ | | | |

| | Ä | | |
|-----|----------------------|--|--|
| 25. | ªÀÄÈzÀĪÁ | | |
| | V | | |
| 26. | ÁAiÀÄjPÉ | | |
| 27. | , ÀÄ,ÀÄÛ | | |
| 28. | °À1 | | |

15. ¸ÀªÀð£ÁªÀÄ

| PÀæ ^a ÀÄ ÀAS Éå | ¥ÀzÀUÀ ¼ÀÄ | À j Ez É | ∫À j E | ∵sÁUÀ ±ÀB ¸Àj |
|-------------------------------------|---------------|-------------------|--------------|---------------------|
| Éå | | É | ®è | |
| 1. | £Á£ÀÄ | | | |
| 2. | CªÀ¼À | | | |
| 3. | CªÀ£À | | | |
| 4. | £À£ÀUÉ | | | |
| 5. | £À£ÀßzÀ | | | |
| | Ä | | | |
| 6. | £À£Àß | | | |
| 7. | CzÀÄ | | | |
| 8. | EzÀÄ | | | |
| 9. | ¤Ã£ÀÄ | | | |
| 10. | ¤£Àß | | | |

16. ¥ÁæªÀiÁuÁzÀjvÀ ¥ÀzÀUÀ¼ÀÄ

PÀæ^a ¥ÀzÀUÀ À À SÁUÀ

| ÀÄ ¸ÀAS Éå | ¼ÀÄ | j Ez É | j E ®è | ±ÀB ¸Àj |
|------------------|--------|--------------|--------------|------------|
| 1. | J®è | | | |
| 2. | E£ÉÆßA | | | |
| | zÀÄ | | | |
| 3. | eÁ¹Û | | | |
| 4. | E®è | | | |
| 5. | ¨ÉÃgÉ | | | |
| 6. | CzÉÃ | | | |
| 7. | PÉ®ªÀÅ | | | |

| PÀæª ÀÄ ¸ÀAS Éå | ¥ÀzÀUÀ ¼ÀÄ | À j Ez É | À j E ®è | ∵sÁUÀ ±ÀB ¸Àj |
|--------------------------|---------------|-------------------|-------------------|---------------------|
| 1. | °ÀwÛgÀ | | | |
| 2. | zÀÆgÀ | | | |
| 3. | »AzÉ | | | |
| 4. | PɼÀUÉ | | | |
| 5. | ªÉÄÃ⁻É | | | |
| 6. | M¼ÀUÉ | | | |
| 7. | °ÉÆgÀU | | | |
| | É | | | |

17. ,ÀܼÁzÁjvÀ ¥ÀzÀUÀ¼ÀÄ

18. E¤ßvÀgÉ

| PÀæ ^a | ¥ÀzÀUÀ¼ | ∫À j Ez É | À j | sÁUÀ |
|------------------|-------------------|--------------------|--------|------------------|
| ÀÄ | ÀÄ | j | j | ±ÀB ¸Àj |
| ∫ÀAS Éå | | Ez | E | `À j |
| Éå | | É | R | |
| | | | è | |
| 1. | ,ÁߣÀ | | | |
| 2. | °ÉÆ®/UÀz | | | |
| | ÉÝ | | | |
| | | | | |
| 3. | °ÀƪÀÅ | | | |
| 4. | vÉÆÃl | | | |
| 5. | ªÀÄ£É | | | |
| 6. | ZÀAzÀæ | | | |
| 7. | £À¢/PÉÆ¼ | | | |
| | À | | | |
| 8. | ªÀļÉ | | | |
| 9. | PÀ®Äè | | | |
| 10. | ±Á ⁻ É | | | |

| $\mathbf{P} \hat{\mathbf{A}} \hat{\mathbf{x}}^{a}$ | ¥ÀzÀUÀ¼ ÀÄ | À | ှÀ j | ¨sÁUÀ ±ÀB |
|--|----------------------|---------|---------|-----------------|
| ÀÄ | AA | J Ez | J E | ±AB ¸Àj |
| ÀAS Éå | | Еz É | Е ® | _, АJ |
| La | | Ľ | è | |
| 11. | DPÁ±À | | | |
| 12. | £ÀPÀëvÀæ | | | |
| 13. | CAUÀr | | | |
| 14. | _, ÀÆAiÀÄð | | | |
| 15. | GAiÀÄå⁻É | | | |
| 16. | ªÀÄgÀ | | | |
| 17. | PÉ®¸À | | | |
| 18. | ªÀÄtÄÚ | | | |
| 19. | UÁAiÀÄ | | | |
| 20. | zÉêÁ®Ai | | | |
| | ÀÄ | | | |
| 21. | qÁPÀÖgï/D | | | |
| | ÀàvÉæ | | | |

[¨]sÁUÀ 3: ¸À£Éß ªÀÄvÀÄÛ QæAiÉÄUÀ¼ÀÄ ªÉÆzÀ® ¸ÀA¥ÀPÀðzÀ gÀÆ¥À/®PÀëtUÀ¼ÀÄ

| PÀæªÀÄ ¸ÀASÉå | ^a ÁPÀåUÀ¼ÀÄ | ∫Àj EzÉ | ֻÀj E®è | ¨sÁUÀ±ÀB ¸Àj |
|------------------|--|------------|------------|-----------------|
| 1. | CªÀ¼ÀÄ/CªÀ£ÀÄ »r¢gÀĪÀ ªÀ¸ÀÄÛªÀ£ÀÄß PÉÊ ZÁa vÉÆÃj¸ÀĪÀÅZÀÄ. | | | |
| 2. | CªÀ¼ÀÄ/CªÀ£ÀÄ »r¢gÀĪÀ CnPÉ/ªÀ¸ÀÄÛªÀ£ÀÄß PÉÆqÀ®Ä ¤ªÉÄäqÉUÉ | | | |

| | <u>§gÀĪÀÅzÀÄ</u> | | |
|-----|--|--|--|
| 3. | CªÀ½UÉ/CªÀ¤UÉ C,ÀQÛ¬ÄgÀĪÀ | | |
| | ^a À ÀÄÛ«£ÉqÉUÉ ÉgÀ¼ÀÄ ^a ÀiÁr | | |
| | vÉÆÃj,ÀĪÀÅzÀÄ. | | |
| 4. | CªÀ¼À/CªÀ£À PÉÊ ªÉÄÃ¯É JwÛ | | |
| | CªÀ¼À£ÀÄB/CªÀ£À£ÀÄB JwÛPÉÆ¼ÀÄîªÀAvÉ | | |
| | ,ÀÆa,ÀĪÀÅzÀÄ. | | |
| 5. | "E®è" JA§AvÉ vÀ ⁻ É C ⁻ Áèr ÀĪÀÅzÀÄ. | | |
| 6. | "ºËzÀÄ" JA§AvÉ vÀ⁻É Dr ĂĪÀÅzÀÄ. | | |
| 7. | "ÉgÀ¼À£ÀÄβ vÀÄnAiÀÄ ^ª ÉÄÃ⁻É ElÄÖ | | |
| | "±ï(¤±Àå§Ý)" JA§AvÉ vÉÆÃj ÅÄÅÅÅÅÅ. | | |
| 8. | J£À£ÁßzÀgÀÄ PÉüÀ®Ä PÉÊAiÀÄ£ÀÄß | | |
| | °ÉÆgÀ ZÁa vÉUÉzÀÄ ªÀÄÄaÑ | | |
| | ^a ÀiÁqÀÄ ^a ÀÅzÀÄ. | | |
| 9. | zÀÆgÀzÀ°ègÀĪÀ ªÀåQÛUÉ ªÀÄÄvÀÛ£ÀÄß UÁ½AiÀİè HzÀĪÀÅzÀÄ. | | |
| | UÁ½AiÀİè HzÀĪÀÅzÀÄ. | | |
| 10. | C ªÀ,ÀÄÛ gÀÄaAiÀiÁVzÉ JAzÀÄ | | |
| | vÀÄnAiÀÄ£ÀÄß »AzÉ ªÀÄÄAzÉ ªÀiÁr | | |
| | vÉÆÃj¸ÀĪÀÅzÀÄ. | | |

DlUÀ¼ÀÄ ªÀÄvÀÄÛ ¢£ÀZÀj

| PÀæªÀÄ ¸ÀASÉå | DIUÀ¼ÀÄ | ,Àj EzÉ | ¸Àj E®è | [∵] sÁUÀ±ÀB ¸Àj |
|------------------|---------------------------------------|---------|---------|-----------------------------|
| 6. | PÀ¼Àî §AzÀ PÀ¼Àî | | | |
| 7. | ^{··} É£ÀßnÖ ºÉÆÃUÀĪÀ DlUÀ¼ÀÄ | | | |
| 8. | UÉÆA¨É E¤ßvÀgÀ ªÀ¸ÀÄÛUÀ¼À | | | |
| | eÉÆvÉ DqÀĪÀÅzÀÄ | | | |
| 9. | °ÁqÀĪÀÅzÀÄ | | | |
| 10. | ● ŶÁrUÉ ºÉeÉÓ ºÁPÀĪÀÅzÀÄ | | | |

^aÀ¸ÀÄÛUÀ¼ÉÆA¢UÉ ^aÀiÁqÀĪÀ PÉ®¸ÀUÀ¼ÀÄ

| PÀæªÀÄ | ^a ÁPÀåUÀ¼ÀÄ | ,Àj | _Àj | ¨sÁUÀ±ÀB |
|---------------|--|-----|------------|------------|
| ,ÀASÉå | | EzÉ | E®è | `Àj |
| 1. | PÉʬÄAzÀ/ZÀªÀÄZÀ¢AzÀ w£ÀÄߪÀÅzÀÄ | | | |
| 2. | UÁ蹤AzÀ PÀÄrAiÀÄĪÀÅzÀÄ | | | |
| 3. | ¨ÁZÀtÂUɬÄAzÀ vÀ⁻É ¨ÁZÀĪÀÅzÀÄ | | | |
| 4. | §æ¶¤AzÀ °À®Äè GdÄÓªÀÅzÀÄ | | | |
| 5. | PÉÊ PÁ®Ä/ªÀÄÄRªÀ£ÀÄß lªÀ⁻ï¤AzÀ | | | |
| | MgɸÀĪÀÅzÀÄ | | | |
| 6. | mɯĦ°ÁQ PÉÆ¼ÀÄîªÀÅzÀÄ | | | |
| 7. | ZÀ¥Àà° °ÁQPÉÆ¼ÀÄîªÀÅzÀÄ | | | |
| 8. | ,ÀgÀ, PÉÊ UÀrAiÀiÁgÀ °ÁQPÉÆ¼ÀÄîªÀÅzÀÄ | | | |
| 9. | PÀtÄÚ ªÀÄÄaÑ ¤zÉæ §AzÀªÀgÀAvÉ | | | |
| | ^a ÀÄ®UÀÄ ^a ÀÅzÀÄ | | | |
| 10. | ©¹AiÀiÁVzÉ JAzÀÄ ¸ÀÆa¸À®Ä HzÀĪÀÅzÀÄ | | | |

| 11. | ^a Á°À£ÀUÀ¼À£ÀÄβ »rzÀÄPÉÆ¼ÀÄîªÀÅzÀÄ | | |
|-----|--|--|--|
| | ^a ÀÄvÀÄÛ ZÀ°,ÀÄ ^a ÀAvÉ ^a ÀiÁqÀÄ ^a ÀÅzÀÄ. | | |
| 12. | ¥ÉÇãÀ£ÀÄß Q«AiÀÄ §½ »rzÀÄ | | |
| | ^a ÀiÁvÀ£ÁqÀÄ ^a ÀªÀgÀAvÉ £Àn¸ÀÄ ^a ÀÅzÀÄ | | |
| 13. | ZÉAqÀ£ÀÄß J,ÉAiĂÄĪÀÅzÀÄ | | |
| 14. | MAzÀÄ ¥ÁvÉæ¬ÄAzÀ ªÀÄvÉÆÛAzÀÄ | | |
| | ¥ÁvÉæUÉ ¤ÃgÀÄ ¸ÀÄjAiÀÄĪÀÅzÀÄ | | |
| 15. | ¥ÁvÉæAiÀİè CxŪÀ ÉÆÃlzÀ°è ¤ÃgÀ£ÀÄß | | |
| | ZÀªÀÄZÀ¢AzÀ wgÀÄV¸ÀÄzÀÄ | | |
| 16. | UÉÆA¨ÉUÉ ªÀÄÄvÀÄÛ PÉÆqÀĪÀÅzÀÄ | | |
| | CxÀªÀ vÀ©âPÉÆ¼ÀÄîªÀÅzÀÄ | | |
| 17. | UÉÆA¨ÉAiÉÆA¢UÉ ªÀiÁvÀ£ÁqÀĪÀÅzÀÄ | | |
| 18. | PÀ£ÀßqÀPÀ °ÁQ PÉÆ¼ÀÄîªÀÅzÀÄ | | |

zÉÆqÀتÀgÀ jÃwAiÀÄ PÉ®¸ÀUÀ¼À£ÀÄß C£ÀĸÀj¸ÀĪÀÅzÀÄ

| | ľÁPÀåUÀ¼ÀÄ | ,Àj | `Àj E®è | ¨sÁUÀ±ÀB |
|---------------|--|------------|----------------|-------------|
| ,ÀASÉå | | EzÉ | | <u>`</u> Àj |
| 1. | ¥ÉÇgÀPɬÄAzÀ £É® UÀÄr ÀĪÀÅzÀÄ CxÀªÀ PÀ Å °ÉÆqÉAiÀÄĪÀÅzÀÄ | | | |
| | CxÀªÀ PÀ¸À ºÉÆqÉAiÀÄĪÀÅzÀÄ | | | |
| 2. | PÀ®Äè CxÀªÀ ¸ÀÄwÛUɬÄAzÀ | | | |
| | ZÀZÀÄѪÀÅzÀÄ | | | |
| 3. | ©ÃUÀzÀ PÉÊAiÀÄ£ÀÄß ©ÃUÀPÉÌ | | | |
| | °ÁPÀĪÀÅzÀÄ | | | |
| 4. | NzÀĪÀÅzÀÄ (¥ÀŸÀÛPÀªÀ£ÀÄß | | | |
| | vÉgÉzÀÄ ¥ÀÅlUÀ¼À£ÀÄß | | | |
| | wgÀĪÁPÀĪÀÅzÀÄ) | | | |
| 5. | VqÀUÀ½UÉ ¤ÃgÀÄ °ÁPÀĪÀÅzÀÄ | | | |
| 6. | ͺÉÊPÀ⁻ï ⁰ÉÆqÉAiÀÄ®Ä ¥ÀæAiÀÄvÀβ | | | |
| | ^a ÀiÁqÀÄ ^a ÀÅzÀÄ | | | |
| 7. | ¥ÁvÉæ vÉÆ¼ÉAiÀÄĪÀÅzÀÄ | | | |
| 8. | §mÉÖ¬ÄAzÀ ªÀgɸÀĪÀÅzÀÄ | | | |
| 9. | ¥É£ï/¥É¤ì⁻ï/E¤ßvÀgÉ ªÀ¸ÀÄÛ«¤AzÀ | | | |
| | §gÉAiÀÄĪÀÅzÀÄ | | | |
| 10. | AiÀiÁªÀÅzÁzÀgÀÄ ªÀ¸ÀÄÛªÀŤAzÀ | | | |
| | UÀÄAr vÉUÉAiÀÄ®Ä | | | |
| | ¥ÀæAiÀÄw߸ÀĪÀÅzÀÄ | | | |

Appendix IV

Demographic information form

Name of the child:

age/sex:

Date of birth:

| | Name | Age | Education | Occupation |
|----------|------|-----|-----------|------------|
| Father's | | | | |
| Mother's | | | | |

Annual income of the family:

Consanguinity:

Family status:

Total no of persons in the family:

Family history: (of Mental retardation, psychological problem, congenital deformity, handicapped, and any neurological problem):

Speech and language stimulation at home:

Sibling history

no. of siblings:

| | Name | Age/Sex | Education |
|------------|------|---------|-----------|
| I sibling | | | |
| II sibling | | | |

Prenatal complications:

Perinatal complications:

Postnatal complications:

Developmental pattern:

Motor:

Speech and language:

Any congenital abnormalities:

Any sensory abnormalities:

Vision:

Hearing:

Screening result:

Hearing:

Vision:

Psychological test:

Appendix V

Communication inventory for 6 – 8 months infants

Section 1 Early Communication Skills

Section 1 A, Prelinguistic skills

- 1. Appears to be able to distinguish general meanings of warning, anger and/or friendly voice pattern by facial and bodily gestures.
- 2. Responds with appropriate gestures to words such as "come", "bye-bye".....etc.
- 3. Gives some attention to music or singing.
- 4. Frequently appears to listen to whole conversation around him/her.
- 5. Regularly stops activity when his/her name called.
- 6. Reacts to loudness changes in voice of a others.
- 7. Sustain interest for up to a full minute in looking at person or picture, if they are named. Ex "look this is your daddy's picture"
- 8. Reacts differently to familiar people and strangers.
- 9. Appears to enjoy listening to new words.
- 10. Responds to rhythmic music by bodily or hand movements
- 11. Understands words like up, down.....
- 12. Responds when name called. Ex. Turning back, searching for the person who called... etc.
- 13. Child enjoys watching TV, looking at comics or listening to music.

Section 1 B, Early Phrases

- 1. Are you hungry?
- 2. Clap your hands
- 3. Come on/ come here
- 4. Get up
- 5. Look / look here
- 6. Want to go out?

Section 2 vocabulary

Comprehension

Family members: Mummy, Daddy, Grandma and Grandpa Food items: Rice, Mudde, Water, Apple and Milk Vehicles: Motorcycle and Car Toys: Doll and Toy Rooms and Furniture: Kitchen, Bedroom, Bathroom and Cot Dress: Cloth/Dress Common objects: Blanket, Bottle, Bowl, Lamp, Medicine, TV, Telephone and Fan Action verbs: Bite, Drink and Eat Other words: Bath and Home

Expression:

Different sound effects: Ba ba, Wa wa, Ba ba va va ta ta, Ta da va ma, ambaa ambaa, choo choo and amma.

Family members: mummy

Section 3 nonverbal communication

First communicative features

- 1. Waves bye-bye on his/her own when someone leaves.
- 2. Blows kisses from a distance

Games and routines

- 1. Play peekaboo
- 2. Play chasing games
- 3. Play with a toys
- 4. Sing
- 5. Dance

Actions with objects

- 1. Drink from a cup.
- 2. Hold vehicle object and make it move.
- 3. Kiss or hug a toy.

Communication inventory for 8-10 months infants

Section 1 Early Communication Skills

Section 1 A, Prelinguistic skills

- 1. Appears to be able to distinguish general meanings of warning, anger and/or friendly voice pattern by facial and bodily gestures.
- 2. Responds with appropriate gestures to words such as "come", "bye-bye".....etc.
- 3. Gives some attention to music or singing.
- 4. Frequently appears to listen to whole conversation around him/her.
- 5. Regularly stops activity when his/her name called.
- 6. Reacts to loudness changes in voice of a others.
- 7. Regularly stops activity in response to "No".
- 8. Reacts differently to familiar people and strangers.
- 9. Appears to enjoy listening to new words.
- 10. Generally able to listen to speech without being distracted by others.
- 11. Enjoys listening stories.
- 12. Responds to rhythmic music by bodily or hand movements
- 13. Child is possessive about his/her clothes, toys.
- 14. Responds when name called. Ex. Turning back, searching for the person who called... etc.
- 15. Child enjoys watching TV, looking at comics or listening to music.

Section 1 B, Early Phrases

- 1. Are you hungry?
- 2. Are you tired/sleepy?
- 3. Be quiet!
- 4. Clap your hands
- 5. Come on/ come here
- 6. Don't do that
- 7. Don't touch
- 8. Give me a hug/kiss
- 9. Let's go bye bye

- 10. Look / look here
- 11. Open your mouth
- 12. Sit down
- 13. Stop it
- 14. Want to go out?
- 15. Say bye bye 16. Sleep now?
- 17. Don't cry
- 18. Don't go outside

Section 2 vocabulary

Comprehension

Family members: Mummy, Daddy, Grandma and Aunty

Body parts: Eye and Hand

Food items: Water and Milk.

Animals: Dog

Vehicles: Bicycle, Motorcycle and Car

Toys: Ball, Book, Doll, Pen and Toy.

Clothing: Cloth/Dress, Hat and Bangles.

Rooms and furniture: Kitchen, Bedroom, Bathroom and Cot.

Common objects: Broom, Medicine, Money, Paper, Bed, Plate, Spoon, Telephone and Fan.

Action verbs: Dance, Drink, Eat, Go, Hug, Kiss, Look and Take.

Descriptive words: All gone, Hot, Hungry, and Tired.

Others: Bath, Flower, and Hospital/ Doctor

Expression

Different sound effects: Ba ba, Wa wa, Ba ba va va ta ta, Ta da va ma, Choo choo, Vroom, woof woof and umm

Family members: Mummy and Daddy.

Section 3 Nonverbal communication

First communicative features

- 1. Reaches out and gives you a toy or some objects that he/ she in holding.
- 2. Points (with arm and index finger extended) at some interesting object or event.
- 3. Waves bye-bye on his/her own when someone leaves.
- 4. Extends his/her upward to signal a wish to be picked up.
- 5. Shakes head "no"
- 6. Blows kisses from a distance.

Games and routines

- 6. Play peekaboo
- 7. Play chasing games
- 8. Play with a toys
- 9. Sing
- 10. Dance

Actions with objects

- 1. Eat with a spoon.
- 2. Drink from a cup.
- 3. Put on hat
- 4. Hold vehicle object and make it move.
- 5. Put telephone to ear.
- 6. Throw ball
- 7. Pour liquid from one container to another
- 8. Kiss or hug a toy.

Imitating adult like actions

- 1. Sweep with broom or mop
- 2. Read (open book and turn pages)
- 3. Write with pen or pencil

Communication inventory for 10-12 months infants

Section 1 Early Communication Skills

Section 1 A, Prelinguistic skills

- 16. Appears to be able to distinguish general meanings of warning, anger and/or friendly voice pattern by facial and bodily gestures.
- 17. Responds with appropriate gestures to words such as "come", "bye-bye".....etc.
- 18. Gives some attention to music or singing.
- 19. Frequently appears to listen to whole conversation around him/her.
- 20. Regularly stops activity when his/her name called.
- 21. Reacts to loudness changes in voice of a others.
- 22. Regularly stops activity in response to "No".
- 23. Reacts differently to familiar people and strangers.
- 24. Appears to enjoy listening to new words.
- 25. Generally able to listen to speech without being distracted by others.
- 26. Mimes when action is named. Ex. When you ask "How to eat?" Child will make action to show how to eat.
- 27. Enjoys listening stories.
- 28. Responds to rhythmic music by bodily or hand movements
- 29. Feels happy when the child is praised for looks/ neat dress
- 30. Child is possessive about his/her clothes, toys.
- 31. Responds when name called. Ex. Turning back, searching for the person who called... etc.
- 32. Child enjoys watching TV, looking at comics or listening to music.

Section 1 B, Early Phrases

- 19. Are you hungry?
- 20. Are you tired/sleepy?
- 21. Be quiet!
- 22. Clap your hands
- 23. Come on/ come here
- 24. Do you want more?
- 25. Don't do that
- 26. Don't touch
- 27. Get up
- 28. Give it to mummy
- 29. Give me a hug/kiss
- 30. Go get
- 31. Good girl/boy
- 32. Let's go bye bye
- 33. Look / look here
- 34. Open your mouth
- 35. Sit down

- 36. Stop it
- 37. Throw the ball
- 38. Want to go out?
- 39. Do you want it?
- 40. Say bye bye
- 41. Sleep now?
- 42. Don't cry
- 43. Don't go outside.
- 44. Give me some???

Comprehension

Family members: Mummy, Daddy, Grandma, Grandpa, Sister, Aunty and Child.

Body parts: Head, Eye, Mouth, Hand and Leg.

Food items: Rice, Idli, Dosa, Chappati, Water, Apple, Banana, Milk and Food items.

Animals: Cat, Dog, Cow, Crow and Animal

Vehicles: Bus, Bicycle, Motorcycle, Car and Auto

Toys: Ball, Balloon, Book, Doll, Pen and Toy.

Clothing: Cloth/Dress, Nikker, Hat, Necklace/Chain, Bangles, Ear rings, Ankle lace and Sweater.

Rooms and furniture: Kitchen, Bedroom, Bathroom, Cot, Chair, Door and Stairs.

Common objects: Blanket, Bottle, Bowl, Box, Broom, Comb, Dish, Glass, Key, Lamp, Medicine, Money, Paper, Bed, Plate, Purse, Soap, Spoon, TV, Telephone, Fan and Plant.

Action verbs: Bite, Bring, Close, Cry, Dance, Drink, Eat, Fall, Feed, Finish, Give, Go, Hit, Hug, Kiss, Look, Open, Play, Pull, Push, Put, Say, Show, Sing, Sleep, Smile, Take, Throw, Touch and Walk.

Question words: what, who and why.

Descriptive words: All gone, Dark, Empty, Fast, Fine, Happy, Hard, Hungry, Hurt, Sleepy and Tired.

Pronouns: I, Me, That, This and You.

Quantifiers: none

Others: Bath, Flower, Home, Moon, Store, Mud, Temple and Hospital/ Doctor

Expression

Different sound effects: Ba ba, Wa wa, Ba ba va va ta ta, Ta da va ma, ko ko, woof woof and umm

Family members: mommy, daddy, grandpa.

Section 3 Nonverbal communication

First communicative features

- 1. Extends arm to show you something he/she is holding.
- 2. Reaches out and gives you a toy or some objects that he/ she in holding.
- 3. Points (with arm and index finger extended) at some interesting object or event.
- 4. Waves bye-bye on his/her own when someone leaves.
- 5. Extends his/her upward to signal a wish to be picked up.
- 6. Shakes head "no"
- 7. Nods head "yes"
- 8. Blows kisses from a distance.

Games and routines

- 1. Play peekaboo
- 2. Play chasing games
- 3. Play with a toys
- 4. Sing
- 5. Dance

Actions with objects

- 1. Eat with a spoon.
- 2. Drink from a cup.
- 3. Comb his/her own hair.
- 4. Brush teeth.
- 5. Put on hat
- 6. Hold vehicle object and make it move.
- 7. Put telephone to ear.
- 8. Throw ball
- 9. Pour liquid from one container to another
- 10. Kiss or hug a toy.

Imitating adult like actions

- 1. Sweep with broom or mop
- 2. Read (open book and turn pages)
- 3. Try to ride bicycle.
- 4. Clean with cloth
- 5. Write with pen or pencil