DEVELOPING VIDEO TRAINING MODULE FOR THE EVALUATION OF PRAGMATIC SKILLS

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CERTIFICATE

This is to certify that this dissertation entitled "**Developing video training module for the evaluation of pragmatic skills"** is a bonafide work submitted in part fulfillment for the Degree of Master of Science (Speech Language Pathology) of the student (Registration No.: 12SLP011). The study has been carried out under the guidance of a faculty of this institute and has not been submitted earlier to any other University for the award of Diploma or Degree.

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CERTIFICATE

This is to certify that this dissertation entitled "**Developing video training module for the evaluation of pragmatic skills"** has been carried out under my supervision and guidance. It is also certified that this has not been submitted earlier to any other University for the award of Diploma or Degree.

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DECLARATION

This is to certify that this dissertation entitled "**Developing video training module for the evaluation of pragmatic skills"** is the result of my own study under the guidance of Dr.K.S.Prema, Professor of Language Pathology, Department of Speech Language Sciences, All India Institute of Speech and Hearing, Mysore, and has not been submitted earlier in other University for the award of Diploma or Degree.

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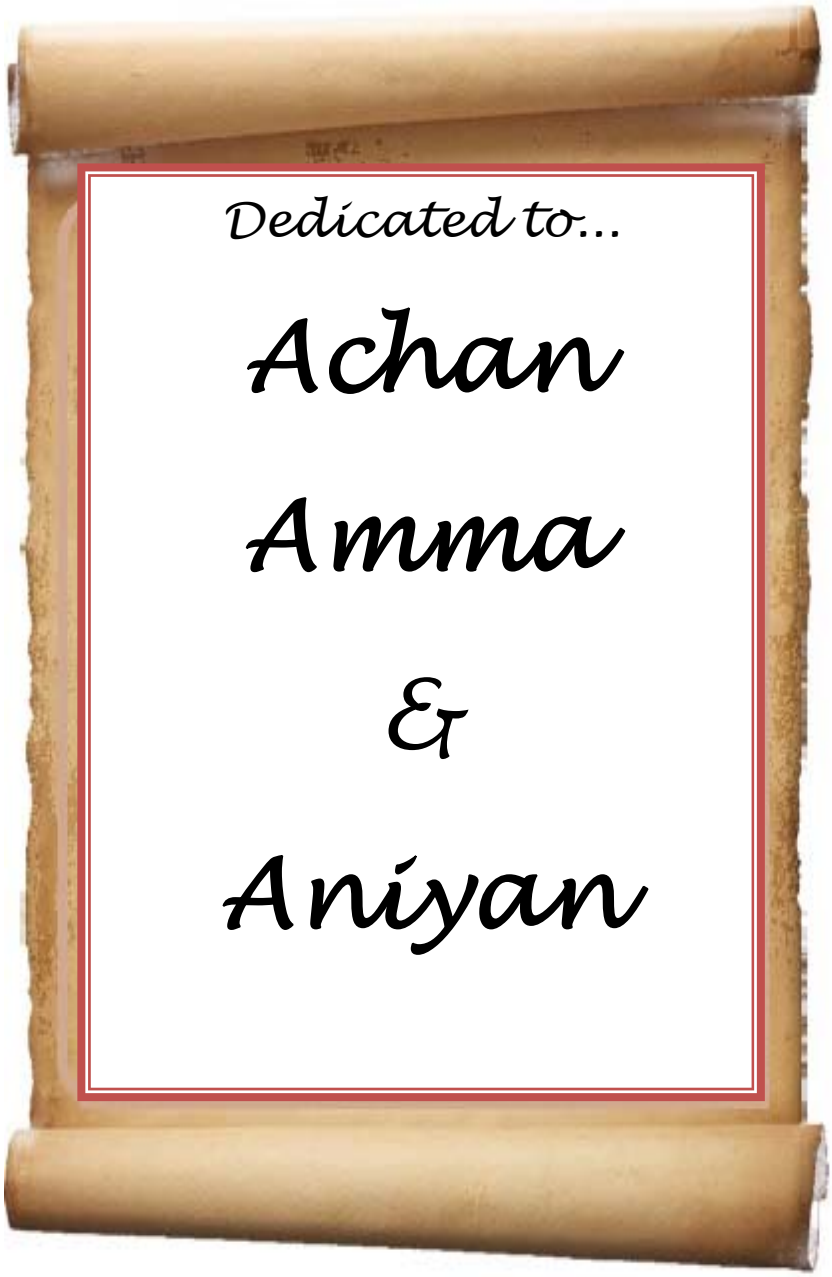
Dedicated to...
Achan
Amma
&
Aniyan

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"With God everything is possible"

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CHAPTER 1

INTRODUCTION

"The scope of context is not easy to define...one must consider the social and psychological world in which the language user operates any given time."(Ochs, 1979 c).

Communication is a social affair that takes place within the context of a fairly well defined social situation (Akmajian, Demers & Harnish, 1984). It is the exchange of ideas, information, thoughts, and feelings where, each person's role in the exchange is clearly defined. The process of communication not only involves speech or language, but also, non-linguistic communication behaviours such as gestures, posture, eye contact, facial expression, and head and body movement. Non-linguistic communication modes may be used in conjunction with linguistically encoded messages to produce a complex interrelationship between verbal and non verbal behaviour; for instance, even the distance between the participants provide certain information based on the communication (Higginbotham & Yoder, 1982).

Communicative competence is described as the child's acquisition of knowledge of "when to speak, when not and as what to talk about with whom, when, where, and in what manner" (Hymes, 1972). Pragmatic competence had constituted a well-established component of communicative competence (Bachman, 1990; Bachman & Palmer, 1996). *"Language is the systematic and conventional use of sounds or signs or written symbols for the purpose of communication or self-expression"* (Crystal, 1995, pp. 4). Bloom and Lahey (1978) and Lahey (1988) discussed language as comprising the following three major aspects: the form

referring to primarily syntax, morphology and phonology; the content referring to the semantic components of language- knowledge of vocabulary and about objects and events and; the use consisting of the goals or functions of language for carrying out cooperative conversations.

1.1 Pragmatic aspects of language

Pragmatics deals with the practical use of language for social interaction. The people describe the quality of *being pragmatic* as "down to earth, practical and pragmatic" (McLaughlin, 2006). The language functions in speakers' intentions, the alterations in language forms observed in different social contexts and the organization of language in conversational discourse are the three major perspectives from which the pragmatic aspect of language can be considered. Pragmatics refers to the correspondence between language abilities and the principles governing the functional use of language that includes the social conditions and the rules that govern the use of language in a communicative interaction (Prutting, 1987).

Pragmatics is the area of language function that embraces the use of language in social context. The term pragmatics has its origin in the early Greek word "IIpama" which means action and the words "practice" and "practical" were derived from that word. The term pragmatics has been introduced into the field of speech-language pathology by Bates (1976), who described it as "the rules governing the use of language in context."

1.1.1 Functions in pragmatics

In a communicative context, functions consist of purposes or intentions that are achieved by speakers through the use of language. Austin (1962) introduced the concept of language functions in his discussion of performatives. This idea was

further developed as the concept of speech acts by Searle (1969). Linguists (e.g. Dore, 1975) catalogued the speech acts and included practical functions such as requesting, labeling, answering, repeating and practicing.

1.1.2. Alterations in Pragmatics

Alteration means using different words or sentence forms to get the same result (Ervin-Tripp & Mitchell-Kernan, 1977). This is generally based on situational factors such as the social and linguistic context. Social context is mainly based on the roles assumed by the individual speakers according to the situations (formal or informal), that is according to the listener characteristics (e.g. age, social status, racial ethnic background, familiarity, etc.) and the degree of formality required, the speakers use alternative forms (McLaughlin, 2006). Linguistic context is another factor affecting the use of different or varied forms, for instance, the information and utterances that have preceded an utterance can affect the speaker's subsequent utterance. The speech acts are carried through direct and indirect means as well as in literal or non-literal ways (Searle, 1975). A direct speech act ends the utterance with only one interpretation, whereas an indirect speech act has several possible interpretations. For instance, one can obtain the salt on the dinner table using direct request 'Please pass the salt' or through indirect requesting 'Is the salt on the table?' (McLaughlin, 2006).

1.1.3. Discourse in Pragmatics

Discourse means an extended verbal exchange on some topic, especially a conversation. Conversation refers to an organizational structure based on elements such as topic initiation, turn taking, topic maintenance, and repairs; appropriate conversations should adhere to standards referred as the cooperation principle (Grice,

1975). The cooperation principle states that conversation must include appropriate quantity of information, adequate quality or truthfulness, relevant to the established topic and delivered in a clear and understandable manner (McLaughlin, 1952).

1.2 Definition of pragmatics

Pragmatics is defined as "the study of the use of context to make inferences about meaning" (Fasold, 1990). Verscueren (1999) referred pragmatics as a general cognitive, social, and cultural perspective on linguistic phenomena is related to their usage in forms of behaviour. Cutting (2008) suggested the difference between three different types of spoken context: *situational*, based on the knowledge about what they can see around them; *background knowledge*, based on the knowledge about each other (interpersonal knowledge) and the world (cultural knowledge); and *co-textual*, based on the knowledge about what they have been saying. Thus, the pragmatic choices made by conversational participants can simultaneously encode position, time, interpersonal and cultural indicators such as power, status, gender and age. Therefore, pragmatics provides a theoretical framework accounts for the relationship between the cultural setting, language user, linguistic choices the user makes and the factors that underlie those choices.

The pragmatics is observed as the relationship between the linguistic forms and the communicative functions with the contexts or settings in which given forms have given functions (Fillmore, 1974). Language users depend on each other's knowledge and recognition of procedures to enter and sustain a state of mutual involvement for social interaction (Goffman, 1963). The choice of code may affect the interpretations of a speaker's intentions; for instance, the selection of a standard rather than a nonstandard dialect may signal the speaker's intention to increase

distance between himself and the addressee, to shift the topic, and so on (Blom and Gumperz, 1972; Cook-Gumperz and Gumperz, 1976).

"Pragmatics refers to the study of the use of language in context, by real speakers and hearers in real situations" (Bates, 1974). It is wiser to see pragmatics as the context in which intervention takes place and to make sure that each new form learned is practiced in a variety of pragmatic contexts (Craig,1983; Martin, 2005). Developmental pragmatics is concerned with the competencies underlying rule-governed employment of speech of the child in interpersonal situations. The proper concern of pragmatics is related to the use of meaningful linguistic forms for communicative purposes: production and comprehension of speech acts- making statements, requesting, promising and other phenomena include the regulation of conversational exchange; politeness rules and other culturally conventionalized variations in speech register that convey social meaning and determine appropriateness; the control of presuppositions; and the creation of connected discourse. Over the past two decades the field of Speech and Language Pathology has undergone a shift in perspective so radical that it has been described as the "Pragmatic revolution" (Conti-Ramsden & Gunn, 1986).

Leech (1983) and Thomas (1983) proposed that pragmatics is subdivided into pragmalinguistic and sociopragmatic components. The pragmalinguistics referred to the resources that convey communicative acts and relational or interpersonal meanings, which include pragmatic strategies like directness and indirectness, routines, and a large range of linguistic forms which can intensify or soften communicative acts. Leech (1983) described socio-pragmatics as 'the sociological interface of pragmatics', which refers to the social perceptions underlying participants' interpretation and performance of communicative action. The assessment of

pragmatics is still in infancy. Several protocols, questionnaires and scales have been proposed since 1980, for observing the child's communicative attitude. Some of the standardized and non-standardized tests/procedures in the western version being used are given below:

a. Pre assessment questionnaire (Gallagher, 1983)
b. Assessment of pragmatic abilities (Roth &Spekman, 1984)
c. Clinical discourse analysis (Damico, 1985)
d. Discourse skills checklist (Bedrosian, 1985)
e. Clinical discourse analysis (Damico, 1985)
f. Towards a profile of conversational ability (McTear, 1985a)
g. Pragmatic protocol (Prutting& Krichner,1987)
h. Pragmatic profile of early communication skills (Dewart& Summers, 1988)
i. Bristol Language Development Scales –BLADES (Gutfreund, Harrison & Wells, 1989)

Other tests of pragmatic skills:

a. Test of pragmatic skills (Schulman, 1986)
b. Analysis of language impaired children's conversation (Adams & Bishop, 1989)
c. Communication and symbolic behaviour scales (Wetherby&Prizant, 1990)
d. Test of pragmatic language-TOPL (Terasaki& Gunn, 1992)
e. Test of problem solving revised-TOPS-R (Bowers et al, 2001)

f. Targeted Observation of Pragmatics in Children's Conversations -TOPICC (Adams, Galle, Freed & Lockton, 2010).

Need for the study

Pragmatic skills involve both linguistic and non-linguistic behaviours that cause ambiguity during the assessment process; demanding well-versed knowledge and experience of clinicians. There are hardly any studies focused on the orientation about the evaluation of pragmatic skills to the Speech-Language Pathologists for a qualitative pragmatic language assessment. There is a dearth of literature about the assessment of pragmatic behaviours, especially based on qualitative assessments used in natural context. As well as, in large country like India, there is an increased growth of person with disabilities due to population growth, emergence of chronic diseases and medical advances that save life and demands for increased health and rehabilitation services (Srivastava & Khan 2008). The lack of manpower as well as the geographical constraints demands tele-practice in India inorder to enhance early identification and rehabilitation of communication disorders. In view of limited number of studies across the globe for evaluation of pragmatic skills (using video samples) through distance mode, this study focused on the importance of professional training for the evaluation of pragmatic skills. The present study aimed to develop video based training module for the evaluation of pragmatic skills of typically developing 3-6 year old children with the primary objective to compare the agreement between parental assessment and professional assessment of pragmatic skills.

CHAPTER 2

REVIEW OF LITERATURE

Pragmatics has not only become the focus of interest in linguistics and the philosophy of language, but also has attracted intense attention from anthropologists, artificial intelligence workers, cognitive scientists, psychologists and semioticians and thus it is a rapidly growing field in the contemporary linguistics (Huang, 2007). Morris (1938) introduced the trichotomy of syntax, semantics and pragmatics; he defined syntax is the study of formal relations of signs to one another, semantics involves studying the relations of objects that they denote and pragmatics is the study of relationship between signs and their interpreters, i.e. the speaker and addressee. This distinction between pragmatics and other components of language is referred to as distinction between language and speech i.e. la langue and la parole (de Saussure, 1922/1983); distinction between performance and competence (Chomsky, 1965); differentiation of illocutionary and locutionary acts (Austin, 1962); distinction between illocutionary force and propositional content (Searle, 1975) ; discrimination of utterer's meaning and sentence-meaning (Grice, 1968; 1969); statements vs. Sentences (Lemmon, 1966), and so on.

2.1 Development of pragmatic skills

The development of pragmatics is mainly through experience of social interaction (Beitchman and Brownlie, 2013). The authors claimed that the caregivers introduce social and instrumental functions of language through repeated interactions in different contexts using nonverbal and verbal communication and the infants learn

the pragmatic skills through play and other interactions with caregivers. Pragmatic development continues with the increase in child's linguistic repertoire. They develop these skills in context when they experience the consequences of various communication strategies and from direct instructions by the caregivers. Learning how to use language and how to interact effectively with others, rely on social and cognitive development. As the adults may improve their communication skills for particular purposes, the development of pragmatics can continue till adulthood. The use of language begins with the intention to communicate. Woolfold & Lynch (1981) studied the development of pragmatics and traced the patterns as follows:

a. Eye contact, Gaze exchange, smiling, attention, pointing and vocalization are present between 2-10 months of age.

b. Regulatory function of language such as gestures of giving, pointing and showing draw attention to what is wanted and nonverbal turn taking are present in 10-16 months of age.

c. Symbolic play, use of imaginative speech, beginning of discourse, answering questions, use of description, expressing feeling, deictic use of pronouns and ability to change topics are observed in 18-30 months of age

d. Code switching and maintaining conversation beyond several turns are present in 4-5 years of age.

e. Child can tell puns and stories, uses at least three language codes and follows rules of discourse in grade-school age.

f. Understanding jokes, sarcasm, social etiquette and artistic use of language begin in high school age.

Communication through eye contact and gestures are used by infants from an early age (Nichols, Martin & Fox, 2005) and one must consider the natural contexts in which it occurs, in order to understand language (Kovarsky & Maxwell, 1997). In the studies about infantile language, the pragmatic theories focus basically on communicative functions and conversational abilities. Communicative functions are abstract units that reflect the speaker's communicative intent. They involve motivation, aims and objectives that one wishes to achieve by communicating with other. Conversational abilities refer to the subject's capacity for participating on an interactive sequence of speech acts which aims at the communicative interchange (Mayor, 1991).Several authors analyzed the language development through the functional perspectives and proposed taxonomies to the study of the acquisition of communicative functions.

Six types of communicative functions of the pre-linguistic period, between 9 and 18 months (Halliday, 1975):

a. Instrumental function: the child uses language to satisfy material needs.

b. Regulatory function: the child uses language to control the other's behaviour.

c. Interactive function: the child uses language to interact with others.

d. Personal function: the child uses language to express personal feelings related to other people or to the environment.

e. Heuristic function: the child uses language as an instrument to explore the environment aiming the identification of actions' and objects' names.

f. Imaginative function: the child plays with language, creating or re-creating the environment according to his/her imagination.

g. Informative function: the child uses language to convey information. It is considered a sophisticated function because it involves the internalization of complex linguistic concepts.

Table: 1 Primitive speech acts at one-word stage (Chapman, 1981)

Speech acts	Definition	Examples
Labelling	Uses word while attending to objects or events while does not address adults or wait for the response.	Child says "eyes" by touching its eyes.
Repeating	Repeats part or whole of adult's utterance, while does not wait for a response.	Child says "doctor" by repeating mother's utterance.
Answering	Addresses adults and answers adult's questions.	Child answers "bow-wow" when mother asks "what's that?" by pointing to a picture of a dog.
Requesting action	Word or vocalization usually accompanied with gestures signalling demand by addressing adults and awaiting response.	Child may utter "uh uhuh" by looking at mother while he/she is unable to push a peg through hole.
Requesting	Addresses adults and awaits for response by asking questions using word or gestures.	Child says "book?" with rising intonation, by picking up book and looks at mother.
Calling	Awaits response after calling adult's name loudly.	Child shouts "mama" to call his mother across the room.
Greeting	Greets adults or objects when it appears.	Child says "hi" when somebody enters the room.
Protesting	Uses word or cry to resist adult's action.	When mother attempts to put on shoes, child resists her by an extended scream.
Practicing	Using words or prosodic patterns even in the absence of any specific object or an event.	Child says "Daddy" when he is not present.

Proto-declarative and proto-imperative functions as described by Bates (1976) are the two types of communicative functions in early ages. While the proto-declaratives are defined as child's attitudes aimed to drive the adult's attention to some object or event of his/her interest or to obtain the adult's attention to his/herself, the proto-imperatives are attitudes aiming that the adult perform something that the child wants, as grabbing something or producing an action. These attitudes or behaviours are characterized, for example, by movements of opening and closing the hands while trying to reach an object and looking back at the adult.

However, Rees (1978) reviewed a list of communicative functions such as to greet and to express social routines, regulate, exchange information, express feelings, imaginative function and metalinguistic functions. Despite these, pre-verbal communication is known to be the precursor of conversational abilities since the communicative exchanges in which children engage provide the conversational model (Zorzi and Hage, 2004). Bates et al. (1975) described three phases in the beginning of intentional communication: (a) the perlocutionary stage, (b) the illocutionary stage, and (c) the locutionary stage, that follow a general sequence in child's early development. During the perlocutionary stage, certain actions are produced by the infants without self-awareness that have a systematic effect on the listener. Children less than 8 months of age usually exhibit perlocutionary acts even though the actions and vocalizations produced are not intentional. Caregivers frequently attribute meaning to such behaviours and thus start teaching early functions of communication. During the illocutionary stage, infants around the age of 8-9 months begin to show awareness of communicative intent and its effect, and use gestures and vocalizations to communicate with others. The locutionary stage can be characterized by the child's use of words or symbols for specific purposes which are manifested within the age

range of 12-13 months. The communicative intentionality continues to develop from an alternative to a more discrete stage model, that is, a typical child progresses from no self-awareness in infancy to a more sophisticated ability in later childhood to reflect and verbalize about their strategies to achieve a goal (Wetherby&Prizant, 1989).

Several researchers discussed about the major developments in three areas of pragmatic skills: communicative functions, response to communication and interaction and conversation based on reports by several researchers (Halliday, 1975; Bates, 1976., Dore, 1978., Rees, 1978., Ochs &Shieffelin, 1979., Golinkoff, 1983., Roth &Spekman, 19844a., Becker, 1990., McTear& Conti-Ramsden, 1992., Dewart& Summers, 1995., andAcosta, Moreno, Ramos, Quintana, Espino, 2003).

2.1.1 Communicative functions

Infants between birth to nine months of age use signals such as eye-gaze, smiling, crying and vocalizations without any specific communicative intentions. At 9 to 18 months of age, children begins to express a range of communicative intentions, first by gesture combined with vocalization and then by words. In the age range of 18 months to 3 years, the range of communicative intentions increases; the child uses single word or multiple word utterances to comment, express feelings and assert independence and also begin to use language imaginatively. Children use language to talk about past and future events and to give information in 3 to 4 years of age. At 4 to 7 years of age, the child learns to express intentions in a variety of forms to fit the communicative needs of the listener, politeness constraints and indirect requests. He/she uses language to gain and hold adults' attention, give information, seek

information from other people, give instructions to peers, state rules, negotiate and bargain, express a range of feelings/emotions, state beliefs and opinions, taunt and threaten. At this age level, child begins to tell jokes and uses narrative to report experiences, complain about others' actions and to tell simple stories. At the age range of 7 years and beyond, more sophisticated functions of language become established: promising; hypothesizing; describing own and others' feelings and reactions; uses language to develop ideas: planning, predicting and hypothesizing; reasoning and evaluation; explanation; expressing abstract ideas and opinions; argument and debate. They become flexible in using indirect requests and other indirect forms. Negotiation and persuasion skills develop further; narratives become longer and more complex; can sequence and organize events in stories in time and space. They begin to use of non-literal language, for example, idiom, simile, metaphor and sarcasm and irony.

2.1.2 Response to communication

Right from birth to nine months of age, infants pay attention to human voice and human face, responds to interaction by looking, smiling and laughing and enjoy action games and smile in recognition of familiar words or in anticipation of tickling. At nine to 18 months of age, they begin to understand adult's gestures such as pointing and respond appropriately to simple directions. Children within the age range of 18 months to 3 years begins to recognize a range of adult communicative intentions and respond appropriately, responds to speech with speech and comes to realise that such phrases as 'in a minute' mean he or she is being asked to wait.

At 3 to 4 years of age, further development happens in understanding indirect requests, notices changes in wording of familiar stories and rhymes. At 4 to 7 years of age, children understand indirect requests, rely less on context for understanding, requests clarification when not understood, takes instructions from peers and responds to their questions, able to treat language as an object of analysis and to use language to talk about language (metalinguistic awareness). The child enjoys jokes but does not fully understand play on words/puns, listens to extended stories from books and can read simple ones. Children within the age of 7 years and beyond, understand indirect forms in greater facility, can cope with little non-verbal support for linguistic messages, judge utterances as appropriate for a particular listener or setting, assess the adequacy of a communication and comment on where it has gone wrong, respond appropriately to idiomatic language, understand figurative and non-literal language, aware of the politeness of various forms of request, shows awareness of how intonational cues affect meaning, learns to make more subtle distinctions between communicative functions, understand jokes based on play on words and read and extract information from books.

2.1.3 Interaction and conversation

From infancy, early interactions between the infants and caregivers involve turn-taking and temporally linked behaviours; may be initiated by infant looking at a caregiver's face and terminated by infant looking away; often consist of ritualised and repetitive games (peek-a-boo) with turn-taking; involve joint attention between infant and caregiver, which expands to include external objects and events. At 9 to 18 months of age, child initiates non-verbal interactions, for example, by giving, pointing, showing or making requesting gestures and vocalizations. Interactions may

be terminated by child moving away, responds to questions by non-verbal vocalization or gesture and interactions are limited to one or two turns per partner.

Children within the age range of 18 months to 3 years, begin to use speech in response to speech, initiate interactions by using vocative and responds to requests for clarification by question or by revision of the original form of utterance. During 3 to 4 years of age, child can initiate conversation by verbal strategies, is better able to communicate with strangers, talk may alternate between private talk to self and talk to partner with peers, can participate in pretend conversations and switch from one speech code to another when taking stereotypical roles in play, will respond to things overhead in other people's conversations with rapid change of conversational topics and tends to repeat without modification when partner does not understand.

At 4 to 7 years of age, child becomes more efficient at initiating and terminating conversations and controlling the timing of conversational turns with significant increase in the number and length of turns. The child learns to choose most appropriate timing for attempts to join in other people's conversations and may distinguish deictic forms such as 'here' and 'there' reflectively so that listener has to probe to find out what is being referred to. The child can repeat the information with some elaboration when not understood. The child uses contingent query to request clarification from others and participates in games involving role play negotiated through language. S(h)e gradually learns to adopt conversational partners who differ in age, sex, status and familiarity, shows some awareness of social conventions for language use, for example, modifies request forms to make them more polite and makes judgments about degrees of politeness in others' requests.

At the age of 7 years and beyond, the child takes account of listeners' needs in a better manner, becomes more proficient at use of cohesive devices in discourse,

conversational breakdown can repair by addressing the source of breakdown and elaborating appropriately. The topics of conversation extend into abstract ideas and S(h)e adapts style of speech to age, status and other variables related to listener. The child becomes more proficient at using politeness as a strategy in communicating and develops appreciation and use of social conventions relating to facial expression, gesture, posture, distance and eye contact.

2.1.4 Conversation and discourse

The studies about conversational abilities are more restrict than the ones about communicative functions. Those which focus on the conversational development have addressed three aspects such as learning the roles of speaker and listener, ability to maintain the conversational topic besides being apt to adapt to the context, that is, to the listener and to the communicative situation of which he/she is participating. The ability for dialogue involves an interactive sequence of speech acts and is the result of the communicative exchange among two or more interlocutors included on a larger social context (Mayor, 1991). Besides this sequence, the efficient dialogue demands from the interlocutors the compliance with turn taking rules, adherence to the topic and abilities to adapt to participants and situations. In respect to the proficiency on conversational rules the child needs to learn the roles of speaker and listener, taking his/her turns when necessary and allowing the interlocutors to take their roles (Zorzi & Hage, 2004).

2.2 Assessment of pragmatic skills

The assessment of pragmatic skills is considered essential due to the following reasons:

a. Children may attain many pragmatic functions even though their vocabulary and syntax are limited (Dore, 1975; Ingram, 1975).

b. Rapid expansion of the range of pragmatic functions was observed during the one word and very early two word phrases (Ingram, 1975).

c. Universal sequence of emergence of pragmatic functions was observed in children (Greenfield & Smith, 1976).

d. Pragmatic development is considered as an independent dimension of development (Snyder, 1978).

The pragmatic assessment can be done using structured elicitation tasks or low structured observation. A structured setting may not assess all the language functions within the child's spontaneous conversation (Klecan-Aker and Lopez, 1984) A familiar adult interacting and responding naturally to the child's effort to share information yielded a representative sample of his/her ability to encode an intentional comment (Guthie, 1987). The pragmatic or communication skills are analyzed at different levels. Roth and Spekman (1984a) and McCormick and Shiefelbusch, 1984 (cited in Hess, 1984) gave three major levels of pragmatic analysis.

a. Performatives or communicative intentions

b. Presuppositions

c. Conversational postulates and social organization of discourse.

Many protocols, questionnaires and scales for observing the child's communicative attitude have been proposed since 1980. Adams (2002) reviewed about the types of pragmatic assessment and described the available protocols such as: a developmentally ordained list of emerging of different communicative intents; a comprehensive checklist of verification of pragmatic behaviour, the Children Communicative Checklist; the assessment of language pragmatic knowledge and the assessment of specific details based on observation analysis.

The study conducted by Carpenter and Strong (1988) based on the pragmatic development in normal children using the assessment protocol (Creaghead, 1984), included 30 normal children within the age range of 3 to 5 years and assessment procedure consisted of individual sampling sessions of first 15-20 minutes of 1 hour video-taped session which was followed by the administration of two testing protocols namely Test Format I and Test Format II developed by Creaghead (1984). The analysis was done based on the frequency with which the behaviours occurred for each child. Creaghead's checklist of 25 pragmatic behaviours includes:

a. *Communicative intents*: Greeting, request for object, request for action, request for information, comment on object, describing an event, predicting, hypothesizing, denial, making choices, giving reasons and closing.

b. *Conversational devices* such as answering, volunteering to communicate, attending to the speaker, taking turns, acknowledging, specifying a topic, changing a topic, maintaining a topic, asking conversational questions, giving expanded answers, requesting clarification and clarifying.

Results revealed that three of the twenty-five pragmatic skills namely; "Hypothesizing", "Denial", and "Giving reasons" were infrequently appeared or

emerging behaviours. Several of the behaviours like; “Greeting”, “Request for action”, “Request for information”, “Request for object”, “Taking turns”, “Comment on object”, and “Hypothesizing” were developed nonverbally first.

The pragmatic protocol, developed by Prutting (1982), was designed to provide an overall communicative index for school-age children (5 years of age or older), adolescents, and adults. The protocol should be completed after observing individuals engaged in spontaneous, unstructured conversation with a communicative partner and it was recommended that the clinicians should observe 15 min of conversation online or from a videotaped sample. The components of pragmatic protocol were included in the table 2.

Table 2: Components of Pragmatic Protocol

Verbal aspects
I. Speech acts
1. Speech act pair analysis
2. Variety of speech acts
II. Topic
3. Selection
4. Introduction
5. Maintenance
6. Change
III. Turn taking
7. Initiation
8. Response
9. Repair/revision
10. Pause time
11. Interruption/ overlap
12. Feedback to speaker
13. Adjacency

14. Contingency
15. Quantity/ conciseness

IV. Lexical selection/ use across speech acts
16. Specificity/ accuracy
17. Cohesion

V. Stylistic variations
18. The varying of communicative style

Paralinguistic aspects

VI. Intelligibility and prosodies
19. Intelligibility
20. Vocal intensity
21. Vocal quality
22. Prosody
23. Fluency

Nonverbal aspects

VII. Kenesics and proxemics
24. Physical proximity
25. Physical contacts
26. Body posture
27. Foot/leg and hand/arm movements
28. Gestures
29. Facial expression
30. Eye gaze

A pragmatic test in Tamil was developed by Sundaram (1994) based on the pragmatic test given by Shulman (1986). The tests consists of 4 tasks such as playing with puppets, pencil and sheet of paper, telephone and blocks with a total of 33 probes. The test was designed to provide information on ten categories of communicative intentions namely Requesting information and Requesting action, Rejection/Denial, Naming/Labelling, Answering/Responding, Informing, Reasoning,

summoning/Calling, Greeting and losing conversation. The test was administered in a non-testing environment to 25 Tamil speaking children within the age range of 3 to 8 years. The test uses guided play, naturalistic social interaction and contextual cues, which makes it a formal and conversational/naturalistic pragmatic assessment tool. The results indicated that there is development in the communicative intent between 3 to 5 years for all tasks. The author observed that Task-1 (playing with puppets) is the easiest task for all age groups and task 2 (playing with pencil and sheet of paper) was the most difficult one.

Developmental Protocol for Pragmatics was developed by Dheepa & Shyamala (2008) to identify development of pragmatic milestones in the age range of 0 to 8 years.

Table: 3 Developmental Protocol for Pragmatics

Age range	Pragmatic skills
0-1 year	Physical proximity, facial expression, attention, smiling, body posture, communicative intent, eye contact and gaze exchange.
1.1-2.0 years	Joint attention, intelligibility, communicative games, greeting, refusing/rejection/denial, actions and information, requesting objects, nonverbal turn taking, pointing (visual gesture cues) and giving
2.1-8.0 years	Commenting objects & actions, communicative games, informing, acknowledging, answering questions, topic initiation, topic maintenance, change, selection/choice making, and continuation, adding new information, response, and clarification. Repairs/revisions pause time, interruption or overlap, feedback to speakers, adjacency, contingency, quantity and conciseness, preposition, code switching, politeness, reciprocity, anticipation, proxemics, permission directives, indirect responses, stylistic variations, narratives, perspective taking, persuasion, opining and referential communication.

The effects of an intensive speech and language intervention for 85 children with pragmatic language impairment for a direct observational measure of pragmatics in conversation to use as an outcome measure was investigated by Adams, Galle, Freed and Lockton in 2010. They developed TOPICC (Targeted Observation of Pragmatics in Children's Conversation), as the range and number of children who require an assessment of pragmatics has increased greatly. Targeted Observation of Pragmatics in Children's Conversations (TOPICC) scale involves conversation skills such as: Reciprocity, Taking account of listener knowledge, Turn taking, Verbosity, Topic management, Discourse style and Response problems, using a four point rating scale consisting of 3 for marked evidence of behaviour across conversation and making marked impact on the interaction, 2 for making a moderate but still significant impact on the interaction, 1 for occasionally noticeable and slight impact on the interaction and 0 for never observed behaviour and typical mature interaction style.

The pragmatic assessment can be done using structured elicitation tasks or low structured observation. A structured setting may not be able to assess all the language functions of children in a spontaneous conversation (Lopez, 1984). Pragmatic behaviours do not occur naturally in every conversational situation (Prutting, 1985). The formal tools used to assess structural aspects of language such as syntax and semantics, are poorly suited to an assessment of pragmatic language skills (Cummings, 2009). Most of the clinical and research effort focuses on developing informal methods of assessment even though formal tools are available for the assessment of pragmatics.

2.3 Assessment of pragmatic skills in disordered population

The data collection for the assessment of language are done mainly based on spontaneous talk or natural observation, a structured test or experimentally manipulated situation (Owens, 1996). The pragmatic analysis; defined as the assessment of functional aspects of language (Fernandes, 1996) allows the speech-and language pathologist to determine when and how the child uses his/her communicative abilities. Data regarding the language development is difficult to obtain (Owens, 1996) as a series of procedures is required to guarantee the objective description, validity and reliability. A lot of researchers had evaluated numerous language samples and found the most frequently occurring problems in the pragmatic functions of language-delayed school-age children (Johnson, Johnston, &Weinrich, 1984) were as follows:

a. Problems with Topicalization include establishing the topic and making comments, Topic change lacks marker and inability to maintain topic for sufficient length of time.
b. Problems with Conversation consider factors such as; lacks sentence termination, lacks discourse connectors, inability to respond when called upon; not listening to the speaker, not knowing when to take a turn in conversation, not knowing how to ask or answer questions and inability to open or close a conversation.
c. Problems with Register consider insufficient information for listener, not knowing when to make a statement, inability to make appropriate question, failure to give reason, cause, and effect of situation and inability to adjust register of language to the speaker (i.e., social status, age, sex).

d. Problems with syntactic forms included the use of redundant information, deletion of necessary information, unstated reference and referent error, inability to use question form, inability to order old and new information into sentence and inability to use appropriate pronouns and articles. .

Impairment of pragmatic behaviours is reported in persons with Autism, Semantic Pragmatic Disorders and children with hearing impairment. As presented in DSM-IV (Volkmar et al, 1994), individuals with autism exhibit marked impairment in the use of multiple non-verbal behaviours such as eye-to-eye gaze, facial expression, body postures, gestures to regulate social interaction and a lack of spontaneous seeking to share enjoyment, interest or achievements with other people.

The pragmatic skills of eight-year old boy with autism was studied by Bernard-Optiz (1982) by analyzing videotaped samples of his interaction with various communication partners: child-mother waiting, child-mother interacting, child-stranger waiting, child-stranger interacting, and child-clinician conversation. The results indicated that the autistic child responded differently to different communicative partners. The child communicated more with his mother and with clinician, while reduced interaction was observed with stranger and tended to use more requests with the mother and statements with the clinician. The pragmatic problems observed in children with semantic pragmatic disorder were failure to obey conversational rules, failure to use context in comprehension, provided too little or unnecessary information during conversation and failure to provide adequate response (Bishop and Adams, 1989),.

The comparison between pragmatic abilities of children with autism and normal children with the mental age 3 to 5 ½ years was done by Anjana (1999). The data collection was based on a questionnaire containing 30 questions that were filled by

the child's parent or clinician and 30 minutes observation sessions of parent-child and stranger-child interactions were done. The results showed that the autistic children used language for non social or quasi-social ends in comparison to the normal children who utilized language for a social function. The autistic children showed a predominance of request functions during the interaction with the parent and response functions with the clinician and they also showed a significant proportion of non-socialized speech which varied with the change in the interacting partner. The children with autism used only repetition as the repair strategy in contrast to the normal subjects who used elaboration and confirmation for avoiding conversation breakdown.

The cross sectional study conducted by Shilpashri (2010) explored the developmental patterns of pragmatic skills in children with Autism Spectrum disorders within the age range of 2.5 to 6.2 years of age. This study utilized audio-video recording of semi instructed mother-child interaction method for the effective assessment of pragmatic skills that reflects the dynamic of social interaction. The results showed that by 5-6 years of age, all the pragmatic skills were mastered by typically developing children. The 26 pragmatic skills studied include; response for eye contact, smiling, response for gaze exchange, response for joint attention, response for request of object and or action, response for turn taking, response for conversational repair, response for topic initiation, response or comment/ feedback and response for adding information, refusal, communicative intent, request for object and /or action, stylistic variation, questioning, initiation of turn taking, narration, topic initiation, initiation of topic maintenance, topic change, initiation of joint attention and request for conversational repair. Children with ASD were found deficient at all

the age levels and for all the pragmatic skills studied when compared with the typically developing children.

Clinical characterization of Semantic-pragmatic disorders includes: verbosity, comprehension deficits for connected speech, atypical word choices, phonology and syntax unimpaired, inadequate conversational skills, speaking aloud to no one in particular, poor topic maintenance and answering besides the question (Rapin, 1996). Children who are hard of hearing use more directive and less informative communicative functions than their normally hearing age- matched peers (Nicholas, 2000). Fernandes (2003) used the videotapes of a specific situation and a specific protocol to assess the communicative profile of individuals with autistic spectrum. The study included objects such as a toy with movement, a transparent recipient difficult to open, books, bubbles, balloons, food items the children liked and disliked.

Most, Shina-August and Meilijson (2010) compared the pragmatic abilities of 24 children with hearing loss in which 13 using hearing aids and 11 using cochlear implants; and 13 hearing children within the age group of 6.3–9.4 years. The spontaneous conversation between child and a familiar adult was videotaped for 15 minutes was videotaped and pragmatic skills were assessed using the pragmatic protocol (Prutting& Kirchner, 1987). The percentage of inappropriate pragmatic behaviour parameters in children with hearing loss (HL) and children with normal hearing (NH) are showed in Table4.

Table 4

Inappropriate pragmatic behaviours in hearing impaired population

Pragmatic behaviour inappropriately used		HL	NH
Verbal aspects	1. Speech acts: speech act repair analysis and variety of speech acts. 2. Topic: topic selection, topic introduction, topic maintenance and topic change. 3. Turn taking: initiation, response, repair/revision, pause time, interruption/ overlap, feedback to speakers, adjacency, contingency and quantity/ conciseness. 4. Lexical selection/use across speech acts: specificity/accuracy and cohesion.	51.23%	21.72%
Paralinguistic aspects	5. Intelligibility and prosodics: intelligibility, vocal intensity, vocal quality, prosody and fluency.	16.67%	10.77%
Nonverbal aspects	6. Kinesics and proxemics: physical proximity, physical contacts, body posture, foot/leg and hand/arm movements, gestures, facial expression and eye gaze.	3.57%	1.10%

The results revealed that children with HL used varied and inappropriate pragmatic functions as compared to hearing children. Both HL and NH groups showed most inappropriate behaviours in verbal parameters and no significant difference was found between children using cochlear implants and those using hearing aids. The difference in pragmatic abilities of children with HL might be explained by reduced flexibility in language structures, difficulties in theory of mind and auditory perception of spoken language, and reduced exposure to varied pragmatic situations and strategies.

The pragmatics and social communication behaviours in 3 children with hearing loss and 3 normal hearing peers within the age range of 2 to 6-years-old, were compared by Guest (2013). The data considering the conversation with adult and peers were audio recorded and the utterances were coded for their pragmatic social communication behaviour using the Social Interaction Coding Scale (SICS) and analyzed the ability of child's ability to use conversational turns, length of utterance, and to initiate and respond. The results showed that the hearing impaired children used limited conversational repairs than normal hearing peers. The children with HL had an overall response rate of 51% or higher and thus showed more response behaviours than their typical hearing counterparts. The highest rate of responses (63%) occurred within the HL group while the lowest rate of responses (16%) were occurred in typical hearing children and the highest rate (20%) for conversational repair was observed in children with normal hearing.

The conversational characteristics of 57 language-impaired children and 67 control children aged 4 to 12 years, was compared by Bishop and Adams (1989). Independent raters transcribed conversations and sub grouped the characteristics as 'semantic-pragmatic disorder' and 'other language impaired' children and identified the instances of disrupted flow of conversation. The following categories of inappropriate utterances were considered for rating.

a. Expressive problems in semantics/syntax
b. Failure to comprehend literal meaning
c. Pragmatic problems
d. Other conversational problems included inadequate or lack of experience and unclassified categories.

Table 5

Inappropriate pragmatic behaviours (*Bishop and Adams ,1989)*

Pragmatic problems	Description
Violation of exchange structure	a) Nil response This is coded when the child produced not even an 'er - - -' or a non-verbal response even though adult waited for a response. b) Ignores initiation while remaining on topic Child follows adult's initiation with other utterances. E.g. "A: what did you eat at your party? C: there's a wasp in your hair."
Failure to use context in comprehension	a) Child may fails to understand the intended meaning due to over literal interpretation of linguistic, environmental or social content. E.g." A: would you say that the boy looked ill? C: the boy looked ill."
Provides too little information to the communication partner.	a) Inappropriate presupposition ('pseudo-ellipsis) Codes when the child's responses omit one or more elements with wrong presupposition that the listener has knowledge of the 'elided' words. E.g. "A: so what did you do when you were sick?/ C: I Can't remember/ I DID though when I was run over by a car." b) Un established referent Coded when the child introduces a term without an established reference sufficient for the listener. E.g. "C: over here you can go to the car park and get some more petrol but it's not on that car." c) Logical step omitted When the child omits a logical or a critical step in the conversation. E.g. "A: when do you have parties at school?

	C: we still have a one in the infant and junior.”
Provides too much information to the communication partner.	a) Unnecessary assertion/denial Unnecessary assertion or denial of a fact during the conversation. E.g. “C: now the new exhaust wasn't rusty. A: mhm. C: and the silencer hadn't dropped off.”
	b) Excessive elaboration Over-elaborating or saying more about a topic in response to a question. E.g. “A: so what happens to people who get very ill? C: they won't be able to go downstairs and watch their favourite television programme.”
	c) Unnecessary reiteration Child reiterates or confirms a piece or information that has already been established. E.g. “A: can you think of any other occasions when we have parties? C: sing happy birthday - -all sorts of things.”
	d) Ellipsis/reference not used Child fails to use elliptical form or references during the conversation. E.g. “A: what's the doctor doing? C: the doctor is looking at the boy.”
Unusually Or socially inappropriate content or style	a) Topic drift Child drifts off into talk about something which is related he original subject, but not relevant. E.g. “A: what's going on there? C: it's someone's birthday. something could be dangerous you know like a fire from the candles.”

	b) Unmarked topic shift
	Shifting the topic to unrelated one.
	E.g. "A: where might he go?
	C: down to the_____
	you know I told them about Blue Peter."
	c) Stereotyped/formulaic
	Producing stereotyped utterances or repeating learnt information or a learnt construction.
	E.g. "A: have you ever been to the doctor?
	C: I had a apple a day."
	d) Inappropriate questioning
	The child asks questions which are inappropriate to the context.
	E.g. "C: do you like candyfloss?
	A: no.
	C: do you HATE it?"
	e) Socially inappropriate remarks
	Producing over-friendly or over-personal remarks which are inappropriate to the context.
	E.g. "A: right, let's sit over here.
	C: you've got purple socks on!"

Note: C: Child, A: Adult

The results of the study revealed that inappropriate pragmatic behaviours in typically developing children decreased with age and those with 'semantic-pragmatic disorder' obtained particularly high scores. Semantic-pragmatic disordered children resembled younger normal children as they violated normal conversational rules and frequently misunderstood literal or implicit meaning of adult utterances, while in other aspects, the semantic-pragmatic group did not resemble normally developing children. They provided too much or too little information to the listener. In order to overcome the problems of clinicians and researchers based on the assessment and

treatment of pragmatic language disorders, Cummings (2009) had provided the following criteria related to the pragmatics.

a. Language must be a central component of pragmatics but it's clear that, pragmatics involves more than language. The non-linguistic processes such as Prelinguistic skills must operate alongside language.

b. Language pragmatics involves reasoning i.e. the ability to exercise judgement about the utterances used in conversation, where we are engaged in the process of reasoning that is sensitive to the features of context.

c. Pragmatics needs a principle of charity which applies to the formulation of missing premises during the reconstruction of argument. Failure to produce a charitable reconstruction is related to a certain deficit of imagination, which is necessary to develop a theory of mind.

d. Pragmatic behaviours always involve the intention to communicate. The term 'pragmatics' is used when the speaker has an intention to communicate his or her needs.

Prutting and Kirchner (1987) mentioned some of the factors to be considered while judging the pragmatic aspects as appropriate or inappropriate.

a. The sociolinguistic background of the subject should be clearly understood as people are not culturally homogeneous.

b. The relationship between the communicative partners should be positive or neutral as both the partners are expected to engage in cooperative discourse (Grice, 1975).

c. Judge appropriately considering the relationship and situation of communication process even though subjects may communicate in an

exaggerated manner, disinterested, ironic, and so forth and thereby exploit communicative conventions. That is, one can be grossly inappropriate and yet be supremely appropriate (Levinson, 1983).

d. It is essential to realize that the definitions of appropriate and inappropriate have tremendous variability in terms of the manner in which one adheres to or violates these conventions.

Children with language impairment usually have the difficulties in continuing language and related tasks in their academic life and in adulthood (e.g., Bishop & Adams, 1990). Language impairment is associated with social, emotional, and behavioural problems, which may persist into later life (e.g., Baker & Cantwell, 1987; Beitchman et al., 1996; Cantwell & Baker, 1987).

An early identification and thorough assessment and treatment are imperative for an individual with language disorder; however, access to speech-language pathology services are difficult for many children and their families, particularly those residing in rural and remote areas (American Speech-Language-Hearing Association [ASHA], 1985; Chezik, Pratt, Stewart, & Deal, 1989; Wilson, Lincoln, &Onslow, 2002). Research based on tele-health assessment of paediatric communication disorders is particularly lacking (Cole, Martin, Moody, & Miller, 1986).

Review of studies on pragmatic behaviours emphasize that the pragmatic functions are best assessed in natural contexts. It is widely known that in clinical situations, natural contexts are most often mimicked and therefore, the responses elicited from children may not be a true reflection of their pragmatic behaviours. Also, the number of children who require an assessment of pragmatics has greatly increased in the recent years. But, the qualified professionals who are available to

offer assessment services are invariably very few in comparison to the number of children who require such services. With this background, the current study is proposed with the objective of developing a video training module for the assessment of pragmatic behaviours in 3-6 year old children, using video samples of natural communicative contexts.

In the Indian context, there is dearth of studies related to the assessment of pragmatics. Certain studies that are related to the assessment of pragmatics include, adapted from western version provided by Schulman (1986), Developmental Protocol for Pragmatics (Dheepa&Shyamala, 2008) and others include the comparison studies based on the pragmatic skills of children with autism and their normal counterparts (Anjana, 1999; Shilpashri , 2010). Also, there are limited studies based on the analysis of pragmatic skills in the natural context. The essential data considering the non-linguistic elements or non-verbal behaviors are usually failed to taken into account during the assessment procedures while using standardized assessment checklists or protocols. There is limited literature focusing on the importance of training the clinicians about the assessment of pragmatic skills and qualitative assessment of pragmatic skills in natural context. Thus, the evaluation pragmatic skills is really challenging task for the Speech Language Pathologists. Also there are hardly any reported studies based on the evaluation of the pragmatic skills through distance mode by evaluating the video-samples. Along with these issues, the limited number of trained professionals and increasing number of children who needs the pragmatic assessment in developing country like India can be overcome by the introduction of telepractice. Considering these factors, the investigator highlighted the importance of providing proper orientation or training to the clinicians based on the evaluation of pragmatic skills for a more reliable pragmatic assessment. The literature review also

highlighted the need for studying the effectiveness of video-based pragmatic assessment. Hence, the current study aimed to develop the video-training module for the evaluation of pragmatic skills.

CHAPTER 3

METHODOLOGY

The present study was aimed to develop a video based training module for the evaluation of pragmatic skills of typically developing 3-6 year old children. The primary objective of the study was to compare the parental and professional assessment of pragmatic skills of the typically developing children.

3.1 Selection of participants

Ten typically developing native Malayalam speaking children within the age range of 3-6 years and their mothers were considered for the study. Participants from the middle class socio economic status (NIMH Scale, 2009) with no history of neurological, psychological, sensory or intellectual problems were considered for the study. The assessment Checklist for Speech and Language skills (Swapna, Jayaram, Prema & Geetha, 2007) was administered to rule out any speech and/or language deficits in children. The Receptive and Expressive language skills of each child was screened based on the interview with the mother and observation of the child during rapport building. Mothers participated in the study were in the age-range of 25-35 years with the minimum educational qualification of graduation. Prior to their inclusion, an informed consent was obtained from mothers along with their children, after briefly explaining about the purpose of the study.

3.2 Procedure

The study was planned to develop a video training module for the evaluation of pragmatic skills and to compare the ratings given by parents and Speech language

pathologists. The investigator done the procedure of the study based on the following steps:

a. Designed the pragmatic checklist based on the review of literature. Pilot study done using the pragmatic checklist.
b. Rating of the pragmatic checklist by the mothers based on their child's pragmatic skills.
c. Video recording of mother-child interaction done.
d. Preparation of video training module for the evaluation of pragmatic skills
e. Selection of Speech Language pathologists (judges) and training
f. Coding of the recorded video samples by the SLPs

3.2.1 Designed the pragmatic checklist

Designed a Pragmatic assessment checklist based on the review of assessment scales/ tools/ protocols based on the review of literature and considering the ease of evaluation, different pragmatic skills were selected and classified into ten domains for the ease of evaluation. Pragmatic skills such as eye-contact and body-language were considered as 'Non-verbal communication'; 'Attention-seeking'; commenting about objects and actions were judged as 'Commenting'; protesting an object and action were considered as 'Protesting'; requesting an object, action and information were judged as 'Requesting'; describing an object, action or event and narration were included in 'Describing'; predicting about an object, action or event are rated as 'Predicting', choice-making of object or action were regarded as 'Choice making'; topic introduction, turn taking, answering and questioning and conversational repairs were considered as 'Interaction and Conversation'; and taking roles during playing and conversation and stylistic variation were rated as 'Role Playing'.

Pragmatic Checklist includes the selection of appropriate domains that are rated on a 3-point scale:

0: the target behavior never occurs

1: the target behaviour occurs sometimes

2: the target behavior occurs consistently

Table 6

Proposed Pragmatic checklist

Name of the child: Age/gender of the child :

Name of the evaluator:

Pragmatic domains	**Rating**		
Non-verbal communication (D1)	0	1	2
Attention seeking (D2)	0	1	2
Commenting (D3)	0	1	2
Protesting (D4)	0	1	2
Requesting (D5)	0	1	2
Describing (D6)	0	1	2
Predicting (D7)	0	1	2
Choice making (D8)	0	1	2
Interaction and Conversation (D9)	0	1	2
Role playing (D10)	0	1	2

The designed checklist was translated in Malayalam using simple words for better understanding of pragmatic skills by the parents.

The designed Pragmatic Checklist was content validated independently by three post-graduate Speech Language Pathologists.

3.2.2 Pilot study

The pilot study was conducted on five typically developing children within the age range of 3-6 years, as a preliminary trial for the current study and based on this; the investigator had selected the pragmatic domains which were frequently observed in the children.

3.2.3 Rating of pragmatic skills by parents

The simplified version of the pragmatic checklist was provided to the parents for rating the pragmatic skills of their children. The investigator briefly explained about the pragmatic skills mentioned in the checklist and each mother rated the pragmatic behaviours of the child herself, based on individual perceptions of child's pragmatic skills. The investigator clarified the doubts and queries of the mothers during the rating procedure.

3.2.4 Video recording

a. *Materials used*: Toys and play activities suitable to the child's developmental age and preference were used to elicit the pragmatic behaviors appropriate to the target task. The toys and activities were selected based on the guidelines from 'Toy kit for children with developmental disabilities' (Venkatesan, 2003). The toys included were doll, kitchen set, doctor set, toy telephones and story charts. The same set of toys was used for all the participants of the study.

b. *Tasks*: The mother-child dyads were instructed to play with the provided toys as they do naturally in the home environment. The investigator provided the mother with few examples based on how to use the toys and they were also motivated to be more creative while using a particular toy, to increase the instances of pragmatic behaviors.

c. Rapport building: The investigator desensitized the dyad with the video recording procedure and thus helped to overcome any shyness/fear during the recording procedure. The investigator made general conversation and built rapport with the mother and child. The dyads were aware of the recording procedure.

3.2.5 Video-Recording:

The natural setting suitable for video recordings of the mother-child interaction was selected after a preliminary discussion with the mother pertaining to the child's preferences and abilities. The recording was done on the matted floor to create a naturalistic social interaction. Mother-child interaction was recorded in a quiet room with limited distraction and during the time of recording, no other person was entertained except the investigator. The participants were instructed not to pay attention to the presence of investigator and camera in the room. Twenty minute video recording was done using a Sony digital video camera recorder, which was handled by the investigator. Recordings were done in two split sessions to give adequate rest for the child. The video recordings of two dyads were redone due to insufficient information needed for the assessment of pragmatic skills. Content validity of the video-recorded video samples was judged independently by three post graduate Speech Language Pathologists.

3.2.6 Video Training module for the Evaluation of Pragmatic skills.

The video training module was developed based on the following steps:

i. Sampled the collected video samples for getting specific pragmatic skills that were considered in the pragmatic checklist. For this purpose, the investigator used Free video Cutter Joiner, Free Video Cutter and Any Video Converter program software. All the collected video samples of mother-child interaction were equally considered for this purpose in order to avoid biasing while rating the original videos.

ii. Prepared script based on the description of selected pragmatic domains, providing examples using sampled videos and about how to evaluate the pragmatic skills from the video samples. The prepared script was judged independently by 3 post graduate students of speech-language pathology (See Appendix B).

iii. The script was presented by a post graduate student of speech-language pathology and was audio-recorded using Computerized Speech Lab.

iv. The audio-recording was edited and mixed with the sampled videos using Audacity software and Adobe Audition software and thus created the video training module.

The developed video training module was content validated independently by five post-graduate Speech Language Pathologists.

3.2.7 Selection of Speech Language pathologists (judges) and training

Twenty graduate speech language pathologists were selected and oriented using the developed video module regarding the pragmatic domains, operational definitions and scoring of the pragmatic skills. For the ease of evaluation, these skills/behaviours

have been classified into 10 domains and each domain was described supported with video samples for better understanding. The twenty judges were seated in the Library hall with limited distraction. Then, the created 'Video Training Module for the Evaluation of Pragmatic Skills' was shown using a projector. Any kinds of queries, doubts or discussions were not encouraged during the procedure. The judges were allowed to observe the video training module as many times they wanted, if they have doubts regarding the assessment of pragmatic functions but any discussion based on the pragmatic skills or related activities were strictly avoided during the orientation procedure.

3.2.8 Coding of the recorded video samples by the SLPs

After the completion of training based on the assessment of pragmatic skills, the judges were blind to the purpose of the study and no information except the chronological age of the children. The recorded video samples were rated using the designed Pragmatic evaluation checklist by twenty graduate speech language pathologists. The collected video samples of participants were provided to the judges in a randomized order and adequate time was given for scoring the response. The judges were not allowed to discuss while coding the dyadic interaction. The SLPs rated the ten domains of pragmatic skills based on the simplified operational definitions provided in the video training module (see Appendix: B); 'Non-verbal communication'(eye-contact and body-language); 'Attention-seeking'; 'Commenting' (commenting about objects and actions); 'Protesting' (protesting an object and action); 'Requesting' (requesting an object, action and information); 'Describing' (describing an object, action or event and narration); 'Predicting' (predicting about an object, action or event); 'Choice making' (choice-making of object or action); 'Interaction and Conversation' (topic introduction, turn taking, answering and

questioning and conversational repairs); and 'Role Playing' (taking roles during playing and conversation and stylistic variation).

Statistical analysis

The obtained data were tabulated and analyzed using the Statistical Package for the Social Sciences Program (SPSS Version16). The data was subjected to compute the inter-judge reliability using Cronbach's alpha coefficient measure (α) among the scores given by twenty judges and depending on the reliability among the SLPs, the majority judgment was considered for computing the inter-judge reliability and comparing the ratings given by the judges and parent of each child. Since the study involves perceptual rating of the pragmatic skills, the statistical analysis was done using Kappa coefficient (K) to compare the ratings by SLPs and parents. The similarity of ratings given by the twenty SLPs and child's mother for the pragmatic domains observed in each child were manually calculated (in percentage) and provided in table 7.

CHAPTER 4

RESULTS AND DISCUSSION

The present study was aimed to develop a video based training module for the evaluation of pragmatic skills of typically developing 3-6 year old children. The primary objective of the study was to compare the parental and professional assessment of pragmatic skills of the typically developing children.

The results are analyzed to compare the ratings on pragmatic skill checklist as rated by parents and the ratings on the video samples of pragmatic behaviour by the Speech-language pathologists. The results are presented and discussed under the following subsections:

a. Comparison of ratings on pragmatic checklists by parents and the ratings on video recorded pragmatic behaviour by the Speech language pathologists.

b. Inter-judge reliability among the Speech language pathologists

c. Intra-judge reliability of parental rating and professional rating

The majority judgment was considered among the Speech language pathologists. In order to compare the ratings given by SLPs and parents, the agreement between the ratings given by parents and SLPs was done using Kappa coefficient (K) since the study involves qualitative assessment of pragmatic skills of the children.

4.1. Comparison of ratings on pragmatic checklists by parents and the ratings on video recorded pragmatic behaviours by the Speech language pathologists.

The agreement between the ratings given by parents and SLPs was done using the Kappa coefficient (K) since the study deals with the perceptual assessment of pragmatic skills of the children. The similarity of ratings between the twenty SLPs and parents were manually calculated (in percentage) and provided in table 7 for giving detailed information based on the assessment of pragmatic domains in each child. Since there was very good inter-judge reliability, the scores based on the majority of judgment by the twenty judges were taken for computing the agreement of rating between the SLPs and parents.

4.1.1 Agreement of ratings given by parents and SLPs

The results based on the overall agreement of the ratings given for each child by twenty SLPs and each parent are described on the basis of Kappa coefficient. The results showed that there was good agreement between the SLPs and parents, for the domain 'Non-verbal skills' (K value: 0.609 and $P < 0.05$). Slight agreement was shown by the domains such as 'Requesting' (K value: 0.182 and $P > 0.05$), 'Choice making' (K value: 0.000 and $P > 0.05$), and 'Role playing' (K value: 0.158 and $P > 0.05$). The 'Interaction and Conversation' shown less than chance agreement (K value: -0.200 and $P > 0.05$). The Kappa measure of agreement could not be computed for the pragmatic domains such as 'Attention seeking', 'Commenting', 'Protesting', 'Describing', and 'Predicting' as the ratings given by the parents and judges were not symmetrical. Added to the available statistical information, for further knowledge based on the similarity between the ratings given by Speech language Pathologists and mothers, the scores for the each pragmatic domains observed in each child were

manually calculated and described. This could explain the similarity in ratings of parental and professional judgment based on each domain in each child.

4.1.2 Description of the similarity ratings between the SLPs and parents for each child

Table 7

Similarity ratings between the SLPs and parents for each child (in percentage)

Pragmatic Domains	C1	C2	C3	C4	C5	C6	C7	C8	C9
D1	85	50	80	50	90	30	70	50	90
D2	20	85	10	10	45	90	15	35	65
D3	80	75	80	20	50	0	35	40	25
D4	0	30	30	25	15	65	20	50	5
D5	40	85	55	0	80	40	65	30	60
D6	75	60	95	15	60	0	80	20	15
D7	50	45	30	5	50	55	65	55	25
D8	60	35	20	25	65	45	30	65	30
D9	100	75	95	30	25	5	85	70	15
D10	100	45	10	70	70	30	35	50	95

C: Children (C1-C9)., D: pragmatic Domains (D1-D10)

For the child C1

About 85-100 percent of judges had shown good similarity with the ratings of first parent (P1) for the domains such as 'Non-verbal skills', 'Interaction and conversation'; and 'Role playing'. For the domains 'Describing', 'Commenting' and 'Choice making'; about 60-80 percent of the judges' ratings were similar to the parent's rating. In case of domains such as 'Requesting', 'Predicting', 'Attention seeking', judges showed 40-60 percent of similarity. Overall, the pragmatic domain 'Protesting' showed poor similarity in rating.

For the child C2

70-85 percent of the judges had given same ratings as parent (P2) for the domains such as 'Attention seeking', 'Commenting', 'Requesting' and 'Interaction and Conversation'. The domain 'Describing' showed 60 percent similarity in rating and only about 30-45 percent similarity in rating was observed for the domains 'Non-verbal skills', 'Predicting' and 'Role playing' 'Protesting' and 'Choice making'.

For the child C3

In case of the domains 'Non-verbal communication', 'Commenting', 'Describing', 'Interaction and Conversation' and 'Role playing', about 80-95 percent of the judges had given same ratings as the parent (P3). For other domains such as 'Protesting', 'Requesting', and 'Role playing', about 30-55 percent of the judges had rated similar to the parent. While, there was poor similarity in rating given by parents and SLPs for 'Attention seeking' and 'Choice making'

For the child C4

The domain 'Role playing' was rated by the judges and parent (P4) with a good similarity of about 70 percent and for 'Non-verbal communication' they were rated with a similarity of about 50 percent. The remaining pragmatic domains such as 'Commenting', 'Protesting' 'Requesting', 'Describing', 'Choice making', and Interaction and Conversation were rated with a poor similarity of about 15-30 percent. The pragmatic domains 'Predicting' and 'Attention seeking' were rated with a very poor similarity of 5-10 percent.

For the child C5

Judges' ratings were observed to be about 70-90 percent similar to the ratings of the parent (P5) for the domains such as 'Non-verbal communication skills', 'Requesting' and 'Role playing'. About 50-65 percent judges were able to rate same as the parent of fifth child (P5) for the domains such as 'Commenting', 'Describing', 'Predicting', and 'Choice making', while only 25-45 percent of judges were shown similarity with the parent for 'Attention seeking', and 'Interaction and Conversation'. Here, 'Protesting' had shown the poor similarity among the parent's and judges' rating.

For the child C6

About 90 percent of the judges were able to rate as same as the parent (P6) for only one domain 'Attention seeking'. The pragmatic domains; 'Requesting', Predicting', and 'Choice making' were rated with 40-65 percent similarity between the SLPs and parents. For the domains 'Non-verbal communication', and 'Role playing', the SLPs were shown 30 percent similarity with the parent. But, for this child, the domains; 'Commenting', 'Interaction and conversation' were shown with very poor similarity.

For the child C7

The judges' ratings were showing good similarity; about 70-85 percent with that of parent (P7) for the domains; 'Non-verbal communication', 'Describing' and 'Interaction and Conversation'. About 65 percent similarity in rating was observed for the pragmatic skills; 'Requesting' and 'Predicting'; while only 15-35 percent

similarity was observed for the domains such as ‘Attention seeking’, ‘Commenting’, ‘Protesting’, ‘Choice making’ and Role playing.

For the child C8

About 70 percent of the judges were able to rate as same as that of the parent (P8) only for the domain ‘Interaction and Conversation’ and about 50-65 percent were able to rate similarly for the pragmatic skills such as ‘Non-verbal communication’, ‘Protesting’, ‘Predicting’; ‘choice making’ and ‘Role playing’. There was reduced similarity for pragmatic skills rating shown for ‘Commenting’, ‘Attention-seeking’, ‘Requesting’ and ‘Describing’.

For the child C9

The judges’ ratings were 90-95 percent similar to the parent’s rating for two domains; Non-verbal communication’ and ‘Role playing’. About 60-65 percent similar ratings were observed for pragmatic skills; Attention-seeking’ and ‘Requesting’. While other domains such as ‘Commenting’, ‘Protesting’, ‘Describing’, ‘Predicting’, ‘Choice making’, and Interaction and Conversation were showing poor similarity between the SLPs and parent (P9), i.e. less than 30 percent. Thus the overall ratings given by the Speech Language Pathologists and parents were showing very good similarity (70-100%) consistently for the domains such as ‘Non-verbal communication skills’, Interaction and conversation skills, and ‘Role playing’. While, the domains such as ‘Protesting’ and ‘Attention-seeking’ were consistently shown poor similarity (less than 30 %) between the judges’ and parents’ rating.

4.2 Inter-judge reliability

The statistical measures were computed to obtain the inter-judge reliability using Cronbach's alpha coefficient measure (α) and it was observed that there was very good reliability among the judges ($\alpha > 0.91$) in rating the pragmatic domains of each child.

4.3 Intra-judge reliability

All the samples were re-evaluated by randomly selected 10 percent of SLPs after three weeks of first evaluation and their ratings for the pragmatic domains were computed and the findings suggested that the intra-judge reliability of the speech language pathologists was high, with the K value > 0.81 and $p < 0.05$. Likewise, intra-judge reliability among the parents was measured. 10 percent of the parents were selected after 4 months of the first evaluation and all the samples were reevaluated by them. Kappa coefficient was computed and the results revealed good intra-judge reliability (K value > 0.9 and $p < 0.05$).

Thus the results of the current study indicated that among the selected ten domains, the Speech Language Pathologists were able to rate the 'Non-verbal communication skills', Interaction and conversation skills, and 'Role playing' more significantly by observing the video samples of mother-child interaction (the operational definitions are provided in the table below). But the professional ratings failed to give agreement on domains such as 'Protesting' and 'Attention-seeking' skills. The rest of the domains were rated with a fair similarity.

The overall agreement between the ratings done by SLPs and mother based on domains also revealed good significance for the domain 'Non-verbal communication skills'. The measurements done based on the percentage of similarity of ratings done

by SLPs and each mother based on the domains of each child, also associates with overall agreement. This could be justified based on the fact that above 65% of communication is usually expressed nonverbally (Thompson, 1996).

Shilpashri (2010) selected the following pragmatic skills for the evaluation based on video-samples; response for eye contact, smiling, response for gaze exchange, response for joint attention, response for request of object and action, response for turn taking, response for conversational repair, response for topic initiation, response or comment/ feedback and response for adding information, refusal, communicative intent, request for object and /or action, stylistic variation, questioning, initiation of turn taking, narration, topic initiation, initiation of topic maintenance, topic change, initiation of joint attention and request for conversational repair. This supports with the selected domains for the current study and associates with the results of current study that 'Non-verbal skills', Interaction and conversational skills; and Role playing skills are better assessed through video samples.

The findings supported the findings done by Preeja (2009) based on the video-samples of the mother-child interaction for analyzing the communication interactions of children with severe physical impairment and cerebral palsy and the results revealed that judges (SLPs) were not able to code the communicative functions such as request for information, request for attention and denial. This finding is associated with the results of current study by emphasizing the fact that the pragmatic domains such as 'Requesting' and 'Protesting' are difficult to be assessed through observation of video samples of mother-child interaction in a natural communicative context.

The perceptual assessment tool namely; Targeted Observation of Pragmatics in Children's Conversation (TOPICC - Adams, Galle, Freed and Lockton, 2010) used to

evaluate conversation skills effectively in natural context involves the assessment of conversational skills in the natural context: Reciprocity, Taking account of listener knowledge, Turn taking, Verbosity, Topic management, Discourse style and Response problems (Adams, Galle, Freed and Lockton, 2010). This finding supports the current study by emphasizing the role of natural context and a qualitative assessment tool for the evaluation of the pragmatic domain 'Interaction and conversation skills' which showed a good agreement between the ratings provided by the parents and SLPs.

The pragmatic analysis demands the consideration of context and hence the filmed data gathering is the most adequate method since it allows the analysis of all pragmatic aspects of an individual's language. This supports the notion that the structured setting is not able to assess all the language functions of children in a spontaneous conversation and the formal tools used to assess structural aspects of language such as syntax and semantics are poorly suited to an assessment of pragmatic language skills (Lopez, 1984 and Cummings, 2009).

Video-taped assessment sessions could provide better assessment of communicative acts which involves gestural, vocal or verbal behaviours and communicative function (Fernandes, 1996). Important data regarding the communicative context and non-linguistic behaviours such as facial expressions and body-language that should be considered as language in the functional study of communication (Fernandes, 1996) may be missed out by the use of standardized checklists and questionnaires. This information based on the review of literature is associated with the results of the current study by revealing that 'Non verbal skills' can be better assessed through video samples as this domain includes the non-linguistic factors such as eye-contact, facial expressions and body-language. Among

all the pragmatic domains, 'Non-verbal skills' was showing highest agreement between the ratings of parents and SLPs.

The judgments of raters about the language performance, especially the pragmatic skills are biased by their own perceptual presuppositions can vary in terms of background characteristics of the rater such as being trained (e.g. Hsieh, 2011). Thus, the training of the evaluators can reduce the variability. The training reduces the dissimilarity due to the variability in raters and thus, improves the consistency among raters who adjusted their expectation in accordance with task requirements and abilities of the learners (Weigle, 1994a). This notion supports the results of the present study that the there was high inter-judge reliability among the Speech-language pathologists in rating the pragmatic skills of children and this reveals that orientation through the video-training module prior to the evaluation of pragmatic skills in children could reduce the variability among the judges. With the increased knowledge about pragmatic language, the Speech language pathologists could provide a refined and improved quality of intervention practices in their daily practice while working with children having pragmatic language impairment (Boje, 2009). . The findings of the study done by Boje (2009) highlighted the importance of:

a. Well versed understanding of pragmatic language by the SLPs.
b. Formation of an operational definition to guide clinical judgment in assessing and describing children with pragmatic language needs
c. Qualitative assessment and intervention of pragmatic language by SLPs
d. Execution of the action research paradigm as a model for self reflection and exploration of the social issues based on the assessment and intervention of pragmatic skills.

The social pragmatic skills cannot be assessed qualitatively only based on the comprehensive standard assessment that reflects that the evaluator needs adequate knowledge or experience based on the evaluation of pragmatic skills for an eminent assessment. Hence it is essential to systematically assess this area of language, individually based on the observations of child's behaviour in a natural context, and not merely based on 'background information' reported by the caregivers.

CHAPTER 5

SUMMARY AND CONCLUSIONS

Pragmatics is “the range of communicative functions (reason for talking), the frequency of communication, discourse skills (turn taking, topic maintenance and change), and flexibility to modify speech for different listeners and social situations” (Paul 2000). “Standardized test formats can actually destroy the social pragmatic assessment. The spontaneous nature of social skills defies assessing it through the more traditional structure of standardized test.” (Winner, 2002). The evaluation of pragmatic skills is a challenging task as the conversations are dynamic, but not static in nature. Evidence suggests that most of the standardized assessments fail to evaluate nonverbal cues from the context. There is hardly any studies discussing about the orientation or training to the evaluators based on the pragmatic skills.

The current study was aimed to develop video-training module for the evaluation of pragmatic skills of typically developing Malayalam speaking children within the age range of 3-6 year old. The pragmatic skills of each child were rated independently by respective mother using the designed pragmatic checklist. The investigator collected video samples of nine mother-child dyadic interactions within the natural home environment and independent pragmatic skills were selected from the obtained videos. The video training module was developed using the independent video samples of the pragmatic skills. Twenty graduate Speech Language Pathologists were subjected to rate the pragmatic skills of nine children after they were trained using the developed video training module.

The reliability of ratings done by judges was computed using Cronbach's alpha reliability measure (α) and the comparison between parental assessment and professional assessment of the pragmatic skills were done using the Kappa measurement for understanding the agreement of ratings between the judges and parents.

The results indicated high inter-judge reliability among the Speech Language Pathologists with the agreement ranges from less than chance agreement to good agreement between the judges and each child's parent within the different pragmatic domains. It was observed that there was very good agreement for the domain 'Non-verbal communication skills'. Based on the domains of each child, good similarity (i.e. above 70%) was observed consistently for the domains such as 'Non-verbal communication skills', Interaction and conversation skills, and 'Role playing'. While, the domains such as 'Protesting' and 'Attention-seeking' were consistently shown poor similarity (less than 30 %) between the judges' and parents' rating. Thus the results of the current study indicated that among the selected ten domains, the Speech Language Pathologists were able to rate the 'Non-verbal communication skills', Interaction and conversation skills, and 'Role playing' more significantly by observing the video samples of mother-child interaction as compared to other selected domains. This emphasize the importance of video based assessment to improve the quality of assessment procedure in children, especially during the assessment of non-verbal communication skills, that could be missed out while assessed only using standardized test materials.

Hence, the present study highlighted the challenges for the Speech language Pathologists in assessing pragmatic skills only based on parental interview. This dilemma emphasizes the need for qualified Speech Language Pathologists for the

assessment of social language skills. The obtained results indicated that appropriate orientation allowed the Speech language Pathologists to effectively evaluate the pragmatic skills from the video-samples of mother-child interaction in a natural context with high inter-judge reliability. Hence, proper orientation based on the evaluation of pragmatic skills is necessary to avoid the ambiguity during the assessment procedure.

Thus, the current study emphasizes the role of trained Speech language Pathologists in the tele-rehabilitation of pragmatic skills through the distance mode of assessment of video samples. This accomplish the early identification and thorough assessment and treatment of pragmatic language disorders; however, access to speech-language pathology services are difficult for many children and their families, particularly those residing in rural and remote areas (American Speech-Language-Hearing Association [ASHA], 1985; Chezik, Pratt, Stewart, & Deal, 1989; Wilson, Lincoln, &Onslow, 2002). Research based on tele-health assessment of pediatric communication disorders is particularly lacking (Cole, Martin, Moody, & Miller, 1986).

5.1 Limitations

a. Reduced sample size could affect the efficacy of the study.

b. Video samples of the mother-child were assessed only based on the naturalistic home environment that can provide only limited chance of observing all the pragmatic skills. For instance, video samples based on different child's interaction with mother, peers, teacher or other communication partner could provide more validated and sufficient information based on his/her current pragmatic language status.

c. The assessment of certain pragmatic skills like; “Protesting” “Role playing” can be more challenging for the clinicians to assess unless they are elicited in suitable contexts.

d. Reduced duration (20 min) of video samples could not give enough information based on all the pragmatic domains.

5.2 Implications

a. This study establishes an agreement between mother’s ratings with clinician ratings on the domains such as non-verbal communication skills; interaction and conversational skills; and role playing skills, this further supports that the assessment of these pragmatic skills could be done by a speech language pathologist by observing the video samples.

b. Furthermore, it would aid in the early diagnosis and intervention strategies for communication disorders (specifically pragmatic impairments) through distant-mode evaluation of pragmatic skills through video samples.

c. Additionally, it would be a boon for clients in need of services at remote/inaccessible regions. This serves to enhance the role of a Speech language pathologist in tele-practice and tele-rehabilitation services.

d. The developed video-training module is incorporated with simplified operational definitions along with supported video samples of a particular pragmatic skill. Thus, it could not only orient the professionals dealing with the communication disorders, but also give training to the mothers/ caretakers helping them to evaluate the pragmatic skills of their children themselves.

e. This study implies that the knowledge of the Speech language pathologists about the evaluation of pragmatic skills could provide an efficient and more

qualitative assessment and intervention practices while dealing with the children having pragmatic language impairment.

f. The developed video-training module could also be used for intervention services, for instance, during the counseling of the parents based on the pragmatic skills and how to evaluate these skills in children.

g. This study sets the foundation for the research based on the disordered population (e.g. autism, Semantic Pragmatic Impairment, Cerebral palsy, Hearing impairment and so on).

h. Further, the current study emphasizes the role of SLPs in assessing pragmatic skills through video samples, and thus, they could provide services to the persons with communication impairments, even through distance-mode.

5.3 Future directions

a. The developed video training module for the evaluation of pragmatic skills can be standardized by studying in a larger population.

b. Further studies could be done based on the evaluation of pragmatic skills by the parents after oriented with this training module.

c. Video samples collected from varied contexts (i.e. home, school, playing with peers and so on) could enhance the assessment procedure of pragmatics by providing sufficient data based on elicitation of most of the pragmatic behaviours. For instance, video samples based on different child's interaction with mother, peers, teacher or other communication partner could provide more validated and sufficient information based on his/her current pragmatic language status.

d. The comparison of evaluation of pragmatic skills based on the pre-training and post training of the SLPs with the developed video-training module could be done in the future research.

e. Comparison of evaluation of pragmatic skills based on the pre-training and post-training of mothers and Speech language Pathologists could strengthen the effectiveness of the current study.

f. Orientation based on the training module can also be used for intervention purpose like counseling, so that the parents could rate the pragmatic abilities of their children in a more accurate manner.

g. Further research based on the efficacy of the video-training module for the purpose of tele-assessment and tele-rehabilitation is needed to be studied.

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APPENDIX A

ALL INDIA INSTITUTE OF SPEECH & HEARING

Manasagangothri, Mysore- 570 006, Karnataka, India.

(An Autonomous Institute under the Ministry of Health and Family Welfare,

Govt. Of India)

TITLE: Developing video training module for the evaluation of pragmatic skills

INFORMED CONSENT FORM

I have been informed about the aims, objectives and the procedure of the study. The possible risks-benefits of our participation as human subjects in the study are clearly understood by me. I understand that I have a right to refuse participation or withdraw my consent at any time. I have the freedom to write to the head of the Institute in case of any violation of these provisions without the danger of my being denied any rights to secure the clinical services at this institute. I am interested in participating in the study along with my child and hereby give my written consent to the All India Institute of Speech and Hearing (AIISH), Mysore, Karnataka, India to use our video recordings for publishing in the Resource materials within the institute for Educational or Research purpose focused towards the welfare of Persons with Disabilities.

I, _____, the undersigned, give my consent to be the participant of this investigation/study/program. I have no objection in participating my child and myself in the program.

Signature of Participant

Name and Address: ----------

APPENDIX B

SCRIPT FOR VIDEO TRAINING MODULE FOR THE EVALUATION OF PRAGMATIC SKILLS

We all communicate with each other to express our thoughts and ideas. This is best done when a person conveys the message appropriate to the context, the skills that is generally known as pragmatic skills; majority of children, during their developmental years learn to communicate using pragmatic skills. Let us see, how children exhibit different types of pragmatic skills.

First of all...

What is Pragmatics?

In simple words, Pragmatics is the social use of language. It refers to an individual's ability to use language in a particular context.

These skills are important for successful socialization and building confidence in communicating our personal thoughts, ideas and feelings effectively with others.

How can we assess pragmatic skills? Is this an easy task?

Definitely, this is not an easy task.

Pragmatic skills are a combination of verbal and non-verbal behaviours.

We cannot evaluate the pragmatic skills of a child only based on an interview with the mother. It needs good observation of the child in different communicative contexts and an efficiently skilled evaluator.

The following videos are intended to help you evaluate pragmatic skills in children.

Pragmatics is a heterogeneous term and includes many behaviours; therefore for the ease of evaluation, these skills/behaviours have been classified into 10 domains. Each domain will be described supported with video samples for better understanding.

After understanding the types of pragmatic skills, you are also advised to rate the child's pragmatic behaviour on a 3-point rating scale as indicated in the video module.

Section-A

1. **Nonverbal communication skills:**

Non-verbal communication includes eye-contact and body-language.

a. *Eye contact:* what do you meant by eye-contact?

It is a type of social behaviour, which occurs when two people look at each other's eyes at the same time. When an individual makes eye-contact with other person, it indicates that he/she is interested in communication. However, this behaviour is not accepted equally in every culture. In some cultures, direct eye-contact with a person of opposite gender or elders is regarded disrespectful while in some others, it is acceptable and reflects an interest in communication. For example, in this video sample, the child maintains eye contact for about 8 seconds continuously while talking to her mother. While in the following sample, the child shows fleeting eye-contact, but still acceptable for his age and context of communication. Please note that during the evaluation process, every event of eye-contact is noted and considered for the rating of pragmatic skills.

b. *Body language***:** Body language refers to a form of nonverbal communication, wherein a person may reveal clues regarding some unspoken intention or feeling through the movements of the body such as

posture, gestures, facial expressions, and eye movements during the communication process. Whether the individual has the ability to communicate verbally or not, proper body language is essential to convey the emotional state of the individual such as happiness, interest, dislike or displeasure, hatred, anger and so on. For instance, in this video, the emotional state of the child is clear from her body language. Initially hesitation and shyness to narrate a story is evident but her interest and enthusiasm in cooking can be seen by her body language even though her speech is not too intelligible. Now, look at the body language shown by this young child who communicates her hesitation and disinterest in the activity. While evaluating, you have to observe whether the child is showing body language appropriate to the age and situation.

2. **Attention seeking:** Refers to acts or utterances that solicit attention to the child or to aspects of the environment; i.e. a child may direct other's attention towards himself/herself or towards any objects or events in their surroundings. For example, this child is directing his mother's attention towards a toy by showing it to her. In the next video, the child directs her mother's attention towards herself by calling /amma/ several times. This is a verbal mode of attention seeking behaviour.

3. **Commenting:** These are utterances used by the child to describe the physical attributes of objects, actions, events or anything in the environment. In the upcoming sample, the child comments on a toy telephone. In the next video, this child comments on an action i.e. about an injection being painful.

4. **Protesting**: means utterances or actions used to express opposition or rejection to objects or the ongoing actions of others. For example, the child in this video

protests when his mother pretends to use the syringe as a pen for writing a prescription. In this video, the child shows disinterest and protests to his mother's command to put the baby doll to sleep, by telling her that he will do so after he finishes what he is doing..

5. **Requesting:** acts or utterances used to ask for a desired tangible object, requesting for assistance with an activity or to find out information about an object or event. For example, the child requests her mother to take an object i.e. a 'toy-stethoscope' by pointing towards it. In this video, the child makes an indirect request for assistance by saying that she is not able to put the toy-stethoscope. To know about something, requesting for the information will help. This child is requesting his mother to describe the process of making tea. Thus, he is requesting the information.

6. **Description**: means providing detailed information about particular event, object or person, or narrating an event. For instance, the child featured in the following video is describing a recipe for a particular dish. This younger child is trying to describe a cat by giving clues based on a past experience. Narrating a story can also be considered under the domain of Description.

7. **Predicting**: these are utterances or actions used to indicate what will happen in the future or what will be the consequence of an action or event that has taken place. For example, in this video, when the mother shows the medicine box to the child, he predicts that there would be tablets inside the box.

8. **Choice making**: this refers to appropriate selection of object or actions or activities based on the preference of the child. The child in this video is asking

her mother to get her preferred spoon instead of the one already in hand, thus making a choice herself.

9. **Interaction & conversation skills :** This includes other sub-skills such as.: Topic introduction, turn taking, appropriate questioning & answering and conversational repairs. However, initially, check whether the child is interested in interacting with others and exhibits a communicative intent.

    a. *Topic introduction*: This means the ability to initiate conversation or a monologue by comments or questions regarding a particular object or other's action or an event. Here, this child is introducing the topic of preparing tea without any prompts from the mother and he is continuing with the topic. Younger children on the other hand, usually introduce a topic of conversation with prompts from adults. Both instances are acceptable considering the child's age and context of communication.

    b. *Turn-taking skills*: yes, wait for your turn to communicate. It refers to the process by which an individual decides who is to speak next. A conversation requires turn-taking by two people exchanging information on the current topic. In this video, observe that the child is talking to his mother using turn-taking rules for conversation. In the next video, the same child fails to take his turn and thus, interrupts his mother's speech.

    c. *Appropriate questioning & answering:* This involves the ability to ask or answer questions appropriately in suitable situations through verbal mode or gestures. Now, here the child is answering his mother's question on 'how to prepare tea?' and after that he asks-'where is the vessel? Thus, the child maintains the conversation through appropriate questions and

answers based on the context. In the next video, this child is an eager conversation partner, frequently asking his mother questions appropriate to the context.

d. *Conversational repairs*: It refers to an aspect of communicative interaction that occurs in the event of a communication failure when a speaker clarifies his/her own speech upon listener's request or body language. Let's have a look at this video, notice how the child clarifies information for his mother when she expresses that she hasn't understood him.

10. **Role playing**: It refers to the act of pretending or assuming the role of different individuals in diverse situations. It involves stylistic variation or observable change in speech patterns under specific circumstances and situations. For example, the child here assumes the role of an adult and uses baby-talk with the doll. Now this child pretends to be a doctor examining the doll.

There is no end to pragmatics!

A note of caution: During the evaluation process, every event of the discussed behaviours has to be considered for rating, considering the age and communicative context.

Section B

How do we rate pragmatic skills from a video sample?

Carefully observe the sample and rate each behaviour/domain on a 3-point scale, as below:

0: the target behaviour never occurs

1: the target behaviour occurs sometimes

2: the target behaviour occurs consistently

For instance, in the domain of non-verbal communication skills, if you feel that the child has maintained eye-contact and body-language consistently during the communication process, circle 2.

So, are you ready to rate the pragmatic skills???

Let us begin now...Have fun!