

***A DEVELOPMENTAL PROTOCOL
FOR PRAGMATICS***

REG. No: L0380003

Dissertation submitted to the University of Mysore, in part

fulfillment of the degree

of

M.Sc (Speech-Language pathology)

All India Institute of Speech and Hearing,

Naimisham campus, Manasagangothri,

Mysore -570006.

May 2005.


DEDICATION

Dedicated to all those who cannot use pragmatic skills
as competently as others, in spite of good and high
profile language skills,
&
Individuals with PLI.

CERTIFICATE

This is to certify that this dissertation entitled "**A DEVELOPMENTAL PROTOCOL FOR PRAGMATICS**" is the bonafide work in part fulfillment for the degree Master Science (Speech-Language Pathology) of the student (**Reg. No, L0380003**). This have 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 any other diploma or degree.


Mysore
May 2005.


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CERTIFICATE

This is to certify that this dissertation entitled "**DEVELOPMENTAL PROTOCOL FOR PRAGMATICS**" has been prepared under my supervision and guidance.

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DECLARATION

This dissertation entitled “**DEVELOPMENTAL PROTOCOL FOR PRAGMATICS**”, is the result of my own study under the guidance of **Dr. Shyamala Chengappa**, Reader, All India Institute of Speech and Hearing, Mysore, and has not been submitted earlier at any university for any other Diploma or Degree.

Place: Mysore.

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"... Each friend represents a world in us, a world possibly not born until they arrive, & it is only by this meeting, that a new world is born..."

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“Do hands talk on the mind’s behalf?”...

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INTRODUCTION

Pragmatics is the area of language function that embraces the use of language in social contexts. It is knowing what to say, how to say it and when to say it – and how to “be” with other people, Caroline Bowen (2001).

The term pragmatics has its origin in the early Greek word “ἵπμα” meaning action and from which the words “practice” and “practical” are derived. The term “pragmatics” has been introduced into the field of Speech-Language pathology by Elizabeth Bates (1976), who defined pragmatics as the “rules governing the use of language in context” since its inception, this concept has been viewed as an important and promising addition to our conceptual framework in Speech-Language pathology.

During the pre-Chomskian era, pragmatics was mainly of interest to philosophers like Pierce (1931), Morris (1946) and Austin (1962), who discussed the ways in which adults used language to communicate. During the 1970’s a theoretical shift occurred to look at both social and cognitive factors influencing the acquisition process. Pragmatics became the “fashion” of the middle and late 1970’s, this led to a series of ideas & innovations termed “the pragmatic revolution” (Dunchan, 1984). One of the major contributions of this revolution has been a re-emphasis on the importance of communication in the context of social interaction. Researchers and clinicians have questioned the soundness of fragmented approaches and have focused attention on language in the actual settings in which it is used. From this perspective, assessment and intervention within the context of conversation have become increasingly important.

This renowned interest in pragmatics indicated a contrast to the focus during the past two decades on the structural aspects of language. It is now realized that in addition to learning the phonologic, semantic and syntactic rules of language, a child must also master the rules that underlie how language is used for the purpose of communication. (Hymes, 1971)

In addition, the focus on pragmatics has broadened our view of communication toward the social dimension. This shifted emphasis from the study of syntactic – semantic features of child language to the social function of communication provides evidence that normal children use language quite early in life, to be able to direct others, persuade them for purposes of description, control and enquiry (Dore, 1974; 1977). The normal child, in essence, uses language as a social function for regulating and being regulated by others.

Pragmatic accounts of language development try to characterize children's growing communicative competence, (Bates, 1976; Hymens, 1972 and Snyder & Silverstein, 1972) rather than on focusing on the structural forms (syntax) or content (semantics) of their language, what does pragmatic development or communicative competence involve? It has been suggested that seeking a single definition of pragmatics is little like asking several gourmet pastry chefs how to bake a perfect chocolate cake? (Snyder & Silverstein, 1972) Like the chef's linguists agree on most of the basic ingredients, but they are likely to emphasize different components to give the overall domain a different flavor.

There is an intricate relationship between pragmatics and communicative context. Therefore, pragmatic behavior is essentially culture specific. Cultural expectations and patterns influence the manner in which narrative style and literacy are developed. There is a difference in narrative style across cultural groups? E.g., narratives of Japanese speakers are considered unelaborated. Narratives of Latin / Hispanic speakers do not appear to pay

attention to the sequencing of events. Narratives of working class African-American speakers use more descriptions and have a complex organization and structure.

As clinicians, in addition to changing linguistic behavior, we are changing a vehicle by which one initiates, maintains and terminates relationship with others. Goffman (1981) argues against taking a view of communication that is too narrowly linguistic, rather than understanding it as a part of a broader notion of social competence. One's social identity is often affected by having a speech, language and / or a hearing disorder. Appropriate communication is being viewed as a social competence (Prutting, 1982). It is this recognition of pragmatics as an important entity of language, both in terms of assessment and intervention that calls upon the need for extended research in this domain.

Assessment in the area of pragmatics is still in infancy. Throughout the years, many standardized and non-standardized procedures / tests are being used worldwide. Some of them are "Dialogue with pre-schoolers" (Blank & Franklin, 1980); "Pre assessment questionnaire" (Gallagher, 1983); "Assessment of pragmatic abilities"(Roth & Spekman,1984); "Discourse skills checklist" (Bedrosian,1985); "Clinical discourse analysis" (Damico, 1985); "Towards a profile of conversational ability" (McTear,1985a); "Test of pragmatic skills" (Schulman, 1986); "Pragmatic protocol" (Prutting & Krichner, 1987); "Pragmatic profile of early communication skills" (Dewart & Summers, 1988); "Bristol Language Development Scales" – BLADES (Gutfreund, Harrison & Wells,1989); "Analysis of language impaired Children's conversation" (Adams & Bishop,1989); "Communication and symbolic behavior scales" (Wetherby & Prizant, 1990); "Test of pragmatic language – TOPL (Terasaki & Gunn,1992) and "Test of problem solving – revised – TOPS-R (Bowers et al, 2001). Though there is a dearth of literature available for western population; there are hardly any reported studies on pragmatic abilities along

a developmental continuum; however, milestones with respect to pragmatics do exist as cited by Chapman, 2000.

In the Indian context, Pragmatics is only an emerging branch of Speech-language pathology, as far as assessment is concerned, certain western tests / tools scales or checklists have been adapted to the Indian population. “Test of pragmatic skills” (Priya, 1994). Others include comparison of the pragmatic abilities of children with autism spectrum disorders along with their normal counterparts (Anjana, 1999). Owing to variations in pragmatic behaviors across cultures, developmental trends in pragmatics is the question of the hour. Without this data, the assessment protocols / tests would be less useful.

The present study therefore is an attempt the first move towards this direction, in the Indian context. The study was designed to develop a developmental protocol for pragmatics which

- Helps to identify sequential milestones.
- Helps in identification and diagnosis of pragmatic disabilities.
- Allows intervention based on the developmental schedule.

REVIEW OF LITERATURE

“Speech is defective when it deviates so far from the speech of other people in the group that it calls attention to itself, interferes with communication, or causes its processor to be maladjusted to his or her environment”.

- Van Riper (1939).

Despite this global view of communication disorders, much of the literature was devoted to separating and defining components and subcomponents of the communication process. Clinical observation frequently involved the isolation, identification and habilitation of individual behaviors that did not meet normalcy, within this premise, the actual use of language behaviors to communicate was viewed as the final or rather the untrained domain in the process of intervention.

One of the linguistic models that are used in describing the nature of language disorders in children is that of Bloom and Lahey (1978). The model describes three major components of language; the content or meaning that is coded or represented, the form that codes the context, and the use or purpose of the code in a particular context. The knowledge of language is viewed as the integration of context, form and use.

Considering the use of language, as an entity, there are two major aspects of the use of language. The first has to do with the goals or function of language; the reasons why people speak; the second has to do with the influence of linguistic and non-linguistic context that determines how individuals understand and choose among alternative forms of language for reaching same or different goals (Bloom and Lahey, 1978).

Pragmatics is a term originally used by Pierce (1932) and further elaborated by Morris (1946) who defined it as **“the relationship between signs and their human users”**. The renewed interest in pragmatics came about through the realization that

semantic and structural analysis of language did not provide an adequate and complete account is needed to understand the fact that **“Language is a social event carried out by human beings in realistic communicative contexts”** (Bates, Benigini, Caimaioni & Volterra, 1977). Man does not view the application of principles of pragmatic analysis as an ancillary or parallel aspect of the study of language structure, but as an integral part of the nature and use of language. Bates (1976), states, **“All of semantics is pragmatic in nature”**, pp. 364 – 377.

Pragmatics in language refers to the identification and description of factors and rules that affect the structure and use of the linguistic code. The particular choice of structures – their length complexity, grammaticality, fluency and the style (causal or formal) with which the structures are used are influenced by factors within the individual and his environment that are extraneous to the linguistic code itself. These features may be under two major categories: function and context.

THE FUNCTION OF LANGUAGE: One of the major factors that influence language form is that of the function the language serves, both in society and in the individual, in general and at any particular time. The most frequently referred to function is that of communication. There are some non-communicative functions; these are self-directed functions (Rees, 1978).

A number of detailed lists of the communicative functions of language exist, and Rees (1978) reviewed them. The following communicative functions of language express a consensus of a number of researchers:

1. To greet and to express various social routines.
2. To regulate, which includes language used to control, persuade, request, convince, nag, correct, criticize, threat, demand etc.,

3. To exchange information incorporates language use to question, inform, describe, assert, state, explain, answer etc.,
4. To express feelings, which include language, used to express being happy, excited, sad, frightened, angry, mad, and hurt, as well as to protest and to feel good.
5. Imaginative function, which includes languages, used in games and fantasy as well as figurative and artistic language.
6. Meta-linguistic function. (Which includes the use of language to talk about language)

Some language is not directed to a listener and has no essential communicative function, although it may be social; such language is known as monologue. A monologue is that form of speech that occurs when the speaker ignores the presence of another person and directs the speech to him self (Piaget, 1955). This is unequally personal and non-communicative use of language has been outlined by few investigators (Bates, 1976) as that of being a tool use to:

1. Achieve potential and self- regulation.
2. To develop the cognitive, emotional and personality aspects of self.
3. Develops relations with others.
4. Provide organization for cognitive structures.

The non- communicative functions as described by Rees (1983) includes functions of:

1. Concept formation.
2. Directive function.
3. Magical function.

Discourse is at a higher level of organization. A discourse may be a dialogue or a monologue. What is crucial is that discourse has a topical structure with successive

utterances linked together based on a common topic? (Hurtig, 1977) An effective conversation involves rules for turn taking and learning such conventions as presupposition, indirect speech acts and deixis. These conventions are called conversational postulates or rules of discourse. They concern the quality, relevance and quantity of information, contained in the discourse (Gordon and Lakoff, 1976) and constitute the assumptions that humans share about discourse. These postulates are generally and tacitly agreed upon rules and include the following: (1) tell the truth; (2) offer new and relevant information and (3) request only information you want (Bates, 1976; Miller, 1978).

THE CONTEXT OF LANGUAGE: The recent emphasis on the pragmatic aspect of language stresses not only the function of language, but also the context in which language occurs. The language context refers to the environment in which the utterances are used as well as such listener variables such as age, sex, and relation of the listener to the speaker. Environmental variables also include the physical, cultural and social setting in which speech occurs.

The speech of adults and children changes when the listeners are an infant or toddler. These predictable changes are called as codes. Code shifting comes naturally to us.

Speech is dependent not only upon the listeners but also upon the social context. Some topics are considered appropriate for parties, while others, like the weather, may be discussed with strangers in waiting rooms or elevators. Appreciation of the effect that the social context has on the topic of conversation emerges only gradually in the child and is related to socialization. Meaning in language, is conveyed through the blending of the words with the social context (Bates, 1978).

The function and intended effects of utterances are also dependent on the environment in which the sentence is uttered. For e.g., the function of the utterance, “You must have some of this” varies depending upon the circumstances in which it is used. When used by a host to her guest, it is a polite request or social phrase. When used by a mother to her small child, the function of the utterance is to command, and the intended effect would be for the child to eat the designated food.

What is pragmatics?

Pragmatics explains the relationship between language structure and language use, to assess communicative effectiveness we must know not only what language structures a client is capable of using but also how he / she is using them in normal communicative situations.

Our goal is to characterize the client’s communicative competence – how different functions of speech and intentions of speakers are reflected in the use of language structures and in conversation.

Grice (1975) provided a framework for the study of conversations by setting forth a number of cooperative principles or maxims that successful conversationalist’s must obey. These include:

1. **Quantity:** Be as informative as necessary.
2. **Quality:** This requires what one says be the truth. Children must learn that their interlocutors expect them not to lie.
3. **Relevance:** the contributors for the conversation carried out, need to be relevant to the subject of the conversation.
4. **Manner:** Speakers are expected to take their turns in a timely fashion and to present them logically in an order.

Adults of course violate these principles in order to achieve certain ends, such as, to be ironic, joke, deceptive or insulting.

Just as there are phonological and grammatical rules, there are rules for the use of language in social context. These are governed by variables such as topic; channel of communication and of course, the social situation. A number of speaker or listener characteristics also affect the form of communication.

Language of social interaction is concerned with the study of linguistic acts in social contexts. As Greene (1987), pp.84 states, “**The broadest interpretation of pragmatics is that it is the study for understanding intentional human action**”.

E.g., there are many ways to ask the same things, polite forms versus more polite forms and direct form versus indirect forms.

TAXONOMY OF PRAGMATIC SKILLS

Different authors give different taxonomies to categorize the pragmatic aspects of language function. This diversity in the pragmatic classification according to Kelecan-Acker and Lopez (1984) is because of

1. Varying purpose of the individual author’s, their data and their philosophical points of view.
2. Varying degree to which discourse and social levels are considered.

E.g. Utterance level which classifies speaker’s intent independent of the utterance’s function in relation to the prior utterance (asserting, prompting). Related utterance, which categorizes the purpose of an utterance with respect to the previous utterance (labeling may be an answer to a question).

3. Some systems differentiate categories based on message content while others are more concerned with the syntactic forms.

These are different levels at which the pragmatic or communication skills can be analyzed and any one message can be classified differentially depending upon the level of analysis selected. Roth & Spekman (1984a) and McCormick & Schieffulbusch, 1984 (cited in Hess, 1984) gave three major levels of pragmatic analysis

1. Performatives / communicative intentions
2. Presuppositions
3. Conversational postulates and social organization of discourse.

Apart from these three levels, other areas of pragmatic functions are:

4. Propositions
5. Presumptions

To analyze communication behavior at any one of these levels, the

6. Functions of language and
7. The context in which an interaction occurs must be considered.

Thus, a comprehensive framework for assessing pragmatic abilities can be represented as follows:

1. **Performative / communicative intention:** It refers to the speech act, the act that the speaker, intends to carry out with his sentence – declaring, commanding, promising, asking questions. The focal point of speech act theory is the “locutionary act” which is the speech itself. The speaker’s reason for communicating is analyzed separately from the locutionary act and is called as the “illocutionary act”. The effect of the utterance on the listener is called as “perlocutionary act”.

E.g.

Speaker: “Beware of dog” (locutionary act)

Purpose: “Warn the listener” (illocutionary act).

Listener’s action: “Not entering” (perlocutionary act)

Children have been found to use a variety of intentions. Few categories of intentions are – requests, responses, greeting, protesting, descriptions, statements, acknowledgements, attention seeking, conversational devices, and performatives. As the age advances, the range of intentions gets more refined and more sophisticated; Children also use different systems to convey their communicative intentions. Selection of a particular coding system will depend on the linguistic sophistication of the child. Therefore, a child may use gestural, paralinguistic and / or linguistic means to code an intention.

A child who is at the single word stage may encode certain intentions linguistically although relying on gestural means for conveying others. Failure to look at both forms may result in an inaccurate examination of the child's communicative abilities. For e.g. Child's pattern may reflect a linguistic limitation, rather than a restricted range of intentions. So, the linguistic structures used to convey an intention should be analyzed. For a young child classification system of semantic relations can be employed and for a more syntactically advanced child, messages can be coded for sentence types (E.g. declaratives, negatives and imperatives). The degree of explicitness with which an intention is expressed, from the most to least explicit and also the usage of directives that expect initiation as opposed to cessation of a behavior can be examined (E.g. "Will you open the door?" versus "Must you open the door?") (Leonard, Fulmer, Wilcox & Davis, 1978).

The different ranges of intentions and forms of intentions at different stages of language development are:

At the preverbal stage – the different communicative intentions are attention seeking, requesting, greetings, transferring, protesting / rejecting, responding / acknowledging, and informing, as given by Coggins and Carpenter, 1981 (Cited in Roth & Spekman, 1984a).

At a single word stage – the different communicative intentions are naming, commenting, requesting object, requesting action, requesting information, responding, protesting / rejecting, attention seeking and greetings (Dale, 1980 and Halliday, 1975).

At multiword stage – the intentions are requesting information, requesting action, responding to requests, stating or commenting, regulating conversational behavior and other performatives as given by Dore, 1978 (Cited in Roth & Spekman, 1984a).

The directive forms, which develop, are direct imperative, embedded imperative, permission directive, personal need / desire statement, question directive and hint, Ervin-Tripp, 1977 (cited in Roth & Spekman, 1984a).

2. **Presuppositions:**

It can be defined as descriptions of what the speaker has chosen not to encode, the topic he / she chooses to highlight. It focuses on the ability of children to take the perspective of their communicative partner – role taking. It allows analyzing the topic – comment relationship inherent in every communicative act. Topicalization itself is viewed by Bates as an active process in which the speaker chooses which aspect of an array upon which to focus. What he/ she eventually chooses is considered the comment, highlighted against a topic. In any communicative process, the speaker must infer information about their partners and the context in order to determine the appropriate context and form of the message; likewise listener's must infer the speaker's intent rather than rely exclusively on a literal interpretation of what was said. That is to say information which is not necessarily explicit in a message but which the communication partner's must share if a message is to be understood. Shared information or knowledge can be established between interlocutors in several ways: by mutually monitoring some shared aspect of the physical setting or by sharing some general knowledge of the speech

situation itself or of the ones communicative partner (E.g. age, status) or by mutually monitoring the preceding discourse.

The role taking skills necessary for communicative success typically can be inferred from the linguistic, paralinguistic and extra linguistic modifications that a child makes when communicating with different partners, for different purposes and in different situations. Because there are currently no formalized coding systems available that address different aspects of role taking, the clinician will want to be sensitive to the informativeness of a child's messages as well as to the variables related to a social context.

Studies have shown that children even at the one word stage tend to comment on those aspects of environment that are maximally informative or communicative (Skarakis & Greenfield, 1982). Therefore, the clinician should be sensitive to what the child chooses to talk about in a given situation – is the information novel or is it a comment on what is already given or known? Is the information coded gesturally or linguistically? Whether the different referents were clearly established for the listener? Does the child give information only about the objects present in the environment or about those not present in the environment or about those not present also.

In addition to examining message information, presuppositional abilities may be reflected in linguistic devices, including deictics, indirect / direct reference forms and other forms of cohesion. Among these, deictic terms are empty of meaning. Their interpretation depends upon knowing something about communication act in which they play a role as given by Fillmore, 1975 (Cited in Roth & Spekman, 1984a).

E.g. of deictic – personal pronouns like “ I” and “You” demonstrative pronouns like “this” and “that”, adverb of location like “here” and “there”, adverb of time like “before”, “after”, “now”, and “then”, verbs like “come”, “ go” and “bring”.

The use of indirect / direct reference (a / the) is also contextually determined, if someone wishes to comment on a particular referent that is not contextually present, has not been mentioned previously, and about which the listener cannot be assumed to know, a competent speaker will typically use a form of indirect reference (i.e. a) as in an introduction. Once introduced, the referent can be presupposed or assumed to be shared by the interlocutors and then may be referred to a more definite form, such as ‘the’ or a pronoun. Deictics and indirect / direct reference can refer to referents that are external or internal to the discourse, but there are other cohesive devices within the discourse that function to establish relations. These include substitution, ellipses, and conjunction as given by Halliday & Hassan, 1976 (Cited in Roth & Spekman, 1984a).

The sensitivity of the child to the partner variables such as age, status, level of familiarity, cognitive level, linguistic level and shared past experience and how the child changes his speech in the degree of politeness, intimacy, and linguistic form, pitch and intonation is very important to be considered for evaluation as given by Camaini, 1977 and Gleason, 1973 (Cited in Roth & Spekman, 1984a).

Degree of explicitness of the message should be considered. The child should make modifications that reflect awareness of the channel available for communication and feedback. As the number of channels and the means of communicating are reduced (e.g. face-to-face conversation versus telephonic conversation), there is an increased burden on the speaker to compensate for this reduction of information by making the language used clear and explicit as possible. This depends on the speaker’s ability to assess the listener information needs. The child also should recognize that rules governing behavior might change in difficult social environments such as home, playground and classroom.

3. **Conversational postulates and social organization of discourse:**

The comprehension and production of discourse and conversation requires abilities to relate utterances to each other over time (discourse) and to related utterances between and among speaker's (conversation), McCormick & Schiefelbusch, 1984 (Cited in Roth & Spekman, 1984a) identified several aspects of pragmatics of discourse and conversation like temporal spacing of pauses, asking questions, handling digression, shifting topics, taking turns, entering and initiating conversations, leaving or terminating conversations. It involves a child functioning within both speaker and listener roles and the ability to assume the responsibilities of each alternatively. Partners must address on each other, agree upon topic, take turns developing it and make their contributions intelligible, relevant, truthful, unambiguous and appropriate to the situation and the partner. Whenever there is a communication breakdown, the interlocutors must be adept to initiate, maintain, terminate and shift topics.

4. **Propositions:**

Bates, 1976 (Cited in Miller, 1978) describes it as the ability to use appropriate syntactic devices to signal underlying semantic meaning.

5. **Presumptions:**

According to McCormick & Schiefelbusch, 1984 (Cited in Hess, 1984) presumptions are judgments about the capacity and needs of the listener in different social contexts. Competent communicators decide which of the many possible forms of message will best serve the desired function, considering the participants and the context of particular exchange. The speaker must know how to take into account the information about what the listener already knows and does not know about the particular topic of exchange as well as the information about the context.

6. **Functions of language:**

It may be classified as communicative and non-communicative function. Language that is directed to a listener, which relies on interpersonal information, is called dialogue and has communicative function. According to Rees, 1978 (Cited in Woolfolk & Lynch, 1982) communicative functions are to greet, to regulate, to exchange information, to express feelings and for imaginative function like those used in games and fantasy and in meta-linguistic function.

Some language is not directed to the listener and has no essential communicative function, although it may be social, such language is known, as a monologue is that form of speech that occurs when the speaker ignores the presence of another person and directs the speech to him. Piaget, 1955 (Cited in Woolfolk & Lynch, 1982).

7. **Context of language:**

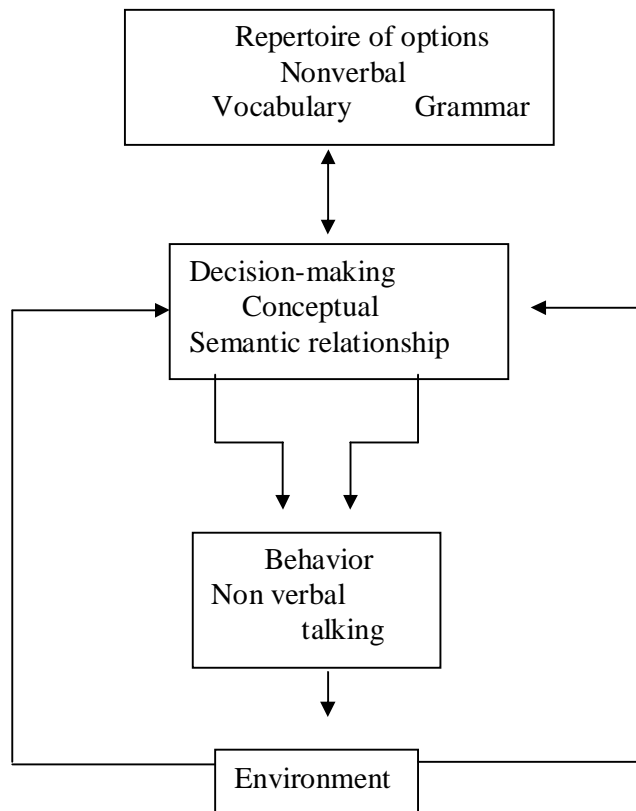
Lund & Duchan, 1983 (Cited in Hess, 1984) discussed the dramatic effects of four contexts on the ways language is cued and interpreted. They are

- The situational context which requires responsiveness to the physical setting, the speech event itself, the relationship between speech event and topic,
- The intentional context which requires knowledge of both possible speaker intentions and the agenda
- The listener context requires a physical perspective for deictic purpose; the background perspective associated with presuppositions and knowledge of role relationships which impact the linguistic code selected.
- The linguistic cohesion devices, ellipses and contrastive stress; and the use of meanings established in previous utterances.

Woolfolk and Lynch (1982) gave another context that is used social context, which influence the form of language performance and comprehension. It includes the listener's relationship with the speaker, the shared intentions between them, the role of participants in the communication acts and the presuppositions that the participants bring to the communication. These contextual variables influence the pragmatics of selection (production and comprehension) or interpretation of context as well as form and style.

Hubbell (1981) proposed a model of pragmatics, which emphasized the role of context or environment, in making communicative decisions. Environment is an all-inclusive term for whatever is present in the communication situation, including listeners and all other stimuli.

In this model, decision affects behavior, which affects the environment. At the same time, the environment affects both conceptual – semantic and relationship decisions. Performatory acts represent by the links between decision-making and feedback from the environment. The environment can vary in how responsive it is, thus influencing the degree and efficiency with which decisions involve new learning. It is of great clinical importance that listeners themselves can be representative environments. The model highlights four areas that are at the heart of intervention. They are the child's repertoire, conceptual semantic decision, relationship decision and environment. Communication behavior represents the dynamic ties among these four. In order to change the behavior we need to change all the four or combination of three.



THEORIES OF PRAGMATICS

Classic theory

In the classic philosophy of language, a well-known distinction is drawn between direct and indirect speech acts (an illocutionary act performed by the execution of another literal illocutionary act, Searle, 1975, 1979). Direct speech acts are those in which a speaker utters a sentence and mean exactly and literally, what she has said, as in “pass me the salt”. In indirect speech acts, the speaker communicates more to the hearer than what is actually stated literally by relying on mutually shared background information and on general power of rationality and inference making. E.g.

1. “Can you please pass me the salt”

2. "Do you mind passing me the salt"
3. "I wonder if you'd be so kind as to pass me the salt"
4. "The soup is insipid"

According to Searle, the differences between direct and indirect speech acts is that direct speech act is straightforward, while indirect speech act relies on some kind of common knowledge. However, the length of the inferential path is not the same for each case; for example, acts, (3) and (4) clearly requires a greater number of inferences than (1).

Searle claims that the primary illocutionary force of an indirect speech act is derived from the literal one via a series of inferential steps. Therefore, according to the classic theory, an indirect speech act is necessarily harder to comprehend than a direct one.

Some authors have criticized this position (Clark, 1979; Recanati, 1995; Sperber & Wilson, 1986). In particular, Gibbs (1994) states that indirect speech acts with a conventionalized meaning are simpler to understand than non-conventional ones. Indeed he proposes that the context specifies the necessity of using a conventional indirect and thus helps the hearer to understand more quickly the intended meaning. Gibbs (1986) claims that the speaker can use an indirect request when he / she thinks that there might be obstacles against granting the request (e.g., when the speaker does not know whether the hearer owns the object she desires). He suggests that the partner infers the meaning of a conventional indirect speech act via a meaning of a conventional indirect speech act via a habitual short cut that facilitates its comprehension.

Theory of cognitive pragmatics

This theory was proposed alternative to the classic theory (Airenti, Bara & Colombetti, 1993a). A major assumption of this theory is that intentional communication requires that the agents act based on a plan that is at least partially shared and is called a behavior game (Airenti, Bara & colombetti, 1984). The actual actions performed by the agents realize the moves of the behavior game they are playing. The meaning of communicative act (either linguistic or extra linguistic or, more often, a mix of the two) is fully understood only in the realization that instantiates a particular move of the behavior game. Through the construction of his first behavior games, the child proceeds from infant interactions to proto conversations to finally reach sophisticated adolescent communication (Airenti, 1998).

Thus, the comprehension of any kind of speech act depends on the comprehension by the speaker of the behavioral game bid. A main consequence is that the distinction between direct and indirect speech acts is uninformative from an inferential point of view. The only distinctions that can be drawn concern the chain of inferences required to pass from the utterance to the game it refers to. Direct and conventional indirect speech acts directly refer to the game, and thus called as simple speech acts. On the contrary, non-conventional indirect speech acts, or complex speech acts, require a chain of inferential steps because it is not immediately clear to which specific behavior game they are associated.

Both simple and complex speech acts represent cases of standard communication because it is possible to infer their meaning by reference to the game bid by the speaker, via default rules of inference.

Speech act comprehension and production require both specific and general knowledge. As for the former, knowledge of meanings of the individual words is an

example; it is the first prerequisite for understanding the overall literal meaning of an utterance. Further, children must also comprehend the speaker's communicative intention, viz. that is the game bid by the speaker. A general knowledge of common behavior games is a further prerequisite for understanding the speaker's meaning (Airenti, 1998).

Hudson & Slackman (1990), who demonstrated that the knowledge of stereotyped events helps children make inferences, found empirical support for this theoretical position consistently. Once specific and general knowledge of the stereotyped events helps children make inferences. Once specific and general knowledge are acquired, children experience more difficulty in dealing with complex speech acts rather than with simple speech acts, either direct speech acts rather than with simple speech acts, either direct speech acts or conventional indirect speech acts.

The final choice among the different proposals is a matter of empirical investigation. Based on the literature on comprehension of direct and indirect speech acts in children. If Searle is correct, then indirect speech acts should always be harder to deal with than direct ones (indirect > direct). If Gibbs is correct, then non-conventional indirect speech acts, which in turn, should be equivalent to the direct ones (non-conventional indirect > conventional indirect > direct). If Airenti et al (1993a) are correct then complex indirect speech acts should be more difficult than simple speech acts, which may indifferently be either direct or indirect (Complex > simple: direct or indirect).

In support of Searle's proposal, Garvey (1984) finds that children under three years have some difficulties understanding conventional indirect requests made by an adult. The explanation is that such requests are ambiguous, in that, according to Searle, they have simultaneously a literal meaning and a direct implicit force.

In support of Gibbs's proposal, Shatz (1978) observed children between 19 and 28 months old playing with their mothers at home and found that they understood

conventional indirect requests like “can you shut the door?” or “are there any more suitcases?” Shatz concludes that very young children are able to map the language they hear on to the familiar nonlinguistic world of actions and objects.

In line with Airenti et al (1993a), Reeder (1980) finds that children between 30 and 36 months old comprehend that, in an adequate context, utterances like “I want you to do that” or “would you mind doing that?” have equal illocutionary force. Furthermore, Becker (1990) and Ervin-Tripp & Gordon (1986) found evidence that two; 6-year-old children already produced different kinds of indirect speech acts. Finally, Bara & Bucciarelli (1998) show that two; 6 to 3 year olds easily comprehend conventional indirect directives (e.g., “would you like to sit down?”) but have difficulty with indirect non-conventional directives (e.g., to understand that answering, “It’s raining” to the proposal “let’s go out and play” corresponds to the refusal to go out and play”.

In essence the theories suggests that two main factors affect the emergence of pragmatic competence: first, the ability to attribute mental states to others (i.e. theory of the mind), and second, the ability to construct and manipulate complex representations of the communicative interaction (i.e. cognitive load).

DEVELOPMENT OF PRAGMATICS

A child acquires language because the usefulness of communication becomes apparent even before he can say any word. Learning to communicate begins with the first social exchange between the infant and the caretaker, and continues until the nuances and subtle rules governing polite forms, humor, and sarcasm are finally mastered late in the school years (Woolfolk & Lynch, 1982).

The use of language begins, as Leopold (1939) noted, with the intention to communicate. Such intention may be clearly identified in children between birth and

eight to ten months. Pointing plus vocalization constitutes a common first step. Halliday (1975) studied the functions of language in a child prior to onset of words. These included:

- Demanding (“give me)
- Regulating (“do that”)
- Interacting (“I see you”) and
- Personal (“that’s nice)

Child’s language progressed through three identifiable phases. The first was preverbal; the next marked the transition to true verbal language at about 16 to 18 months. In this stage, child learned to use grammar and began to engage in verbal dialogue. As this phase progressed, child learned to recite rhymes and social routines, tell stories, and provide information. The last phase is essentially the adult system, wherein the speaker controls devices for humor, sarcasm and indirect requests.

The following traces the development of pragmatics in child language (Woolfolk & Lynch, 1981)

1. **Between 2 and 10 months:** Eye contact and gaze exchange used to regulate joint attention on an activity - a prerequisite to learning reference. Eye contact, smiling and attention indicate that the child takes notice of someone or something. Pointing and vocalization suggest demand for someone or something.
2. **Between 10 and 16 months:** The regulatory function of language is strong at this stage. Gestures of giving, pointing, and showing draw attention to what is wanted. Nonverbal turn taking in play lays the foundation for conversation. Early words are used to express instrumental (“I want”), regulatory (“Do what I’ll tell you”), interactional (“hi”) and several other functions.

3. **Between 18 and 30 months:** In this time period, symbolic play, use of imaginative speech, beginning of discourse, answering questions, use of description, expressing some feeling, deictic use of pronouns, and ability to change topics are present.
4. **Between 3 and 4 years:** Switches code when speaking to a baby; increases ability to maintain conversation beyond several turns, especially if monitored by an adult.
5. **Between 4 and 5 years:** Can give antonyms, synonyms, and rhyming words; meta-linguistic use of language emerges; uses indirect requests.
6. **Grade – School age:** Uses at least three language codes. Can tell puns and stories; follows most rules of discourse.
7. **High – School age:** Artistic use of language begins; understands jokes, sarcasm and social etiquette, but not necessarily debate and parliamentary rules.

Muma (1978) gave the developmental stages in proxemics, an important aspect of pragmatics. It is the proximity or physical distance one has while interacting with another.

The developmental stages are as follows:

From birth to three years: Intimate stage where children learn the closeness of communication with their mothers, other members of their family and caretakers. They touch, desire hugging and profit from “close” communication.

Between 3 years to 7 years: Personal stage - where children talk, but much of their activity is self-centered (egocentric), and they have not acquired an understanding of socialization largely.

From 7 years and above: Social and public stage - where children become more social, learn how to behave in social settings and can understand social relationship. Older children acquire an awareness of a “public” type of communication, particularly if the school settings offer the opportunity for performing in a public situation.

A number of investigators have indicated that there is a core set of intentions communicated by:

- Preverbal children (Bates, Camaione and Voltura, 1975; Coggins and Carpenter, 1981; Dore 1974; Escalona, 1973; Greenfield and Smith, 1976, Halliday, 1975);
- Children at the single word stage of development (Dale, 1980; Dore 1974 and Halliday, 1975) and by
- Children who are beyond the single word stage of language acquisition (Dore, 1977; 1978).

Pre verbal Communicative intentions:

- (i) Attention seeking
 - a. To self
 - b. To events, objects of other people
- (ii) Requesting
 - a. Objects
 - b. Action
 - c. Information

- (iii) Greetings
- (iv) Transferring
- (v) Protesting/ Rejecting
- (vi) Responding/ Acknowledging
- (vii) Informing

Communicative intentions expressed at single word level

- (i) Naming
- (ii) Commenting
- (iii) Requesting object
 - a. Present
 - b. Absent
- (iv) Requesting action
- (v) Requesting information
- (vi) Responding
- (vii) Protesting/ Rejecting
- (viii) Attention seeking
- (ix) Greeting

Communicative intentions expressed at the multi word stage of language development

- (i) Requesting information
- (ii) Requesting action
- (iii) Responding to requests
- (iv) Stating or commenting
- (v) Regulating conversational behavior
- (vi) Other performatives (to tease, warn, claim, exclaim or convey humor)

It can therefore be concluded that as the linguistic sophistication of a child increases, the range of communicative intentions also expand.

Leonard et al (1975) conducted two experiments to examine whether four, five and six year old children understand indirect requests. The experimental tasks required the children to judge the appropriateness of a listeners response to indirect requests involving in affirmative syntactic instructions (can you shut the door?), requests containing a negative element (Can't you answer the phone?) and requests for the state of affairs mentioned in the predicate to be changed (must you play the piano?). Even the youngest age group exhibited an understanding of the first two types of indirect requests however; only the six-year old showed any understanding of requests for a change in the state of affairs mentioned in the predicate. The authors state that only when children reach the age of six years do they possess knowledge that certain indirect require a modification of the behavior specified in predicate. Several factors are accounted for this including:

- (i) such indirect requests require a different type of response on the part of the listener from most indirect requests,

- (ii) Unlike most requests, no parallel exists between the negative and affirmative counterparts for these indirect requests, and
- (iii) These indirect requests differ from most indirect requests in their presupposition characteristics.

Reeder (1978) conducted a psycholinguistic experiment to elicit highly reliable judgments from young English speaking children aged 2 years 6 months to 3 years about illocutionary force of utterances presented in controlled contexts. The illocutionary acts considered were 'requests' and 'offer'. The experimental data bear upon two questions:

- (i) What set of features, linguistic and pragmatic, constitute cues for the discrimination of illocutionary force by young children?
- (ii) What is the lower developmental bound of emergence of discrimination of illocutionary force for requests and offers?

Results indicated that while grasp of illocutionary force was well established by 2 years 6 months discrimination skills for requests probably continues to develop between 2 years 6 months and 3 years.

The ability to differentiate the directive senses of 'ask' and 'tell' was investigated by Bock and Hornsby (1981) using a production task in an experimental setting with children between the ages 2 years 6 months and 6 years 6 months. Results showed that the children at all ages distinguished the verbs along dimensions similar to adult ratings of politeness. There was a band towards increased politeness with age under 'ask' instructions, but not with 'tell' instructions. Analysis of structural features of the directives produced showed that the interrogative form of sentence was more likely to be used with 'ask' instructions, as was the word 'please', while 'tell' instructions elicited the

imperative form of sentence with less frequent use of 'please'. The findings suggest that children before the age of 7 years are able to differentiate the illocutionary forces of utterances, which have the same communicative intention.

Conversation repair sequences are an important aspect of communication interaction. These sequences may occur in the event of communication failure if a listener requests clarification of a previous aspect of the speaker's message. Langford (1981) analyzed the responses of 4-year-old children to requests for clarification produced by their adult caregivers. He noted that the children were responsive to the requests, and that they were sensitive to indications from the adults and that the requests had been satisfied.

James and Seebach (1982) investigated the pragmatic function of preschool children's spontaneously produced questions. Twenty-four normal children between and ages of two and five years were observed in a variety of situations at their day care centers. Questions produced during these observation periods were categorized by pragmatic function. The three functional categories were information seeking, conversational and directive. Results indicated that the three pragmatic functions differed with age. The major function of the questions produced by the two and three year old subjects was clearly information seeking but the four and five year olds; questions were more evenly distributed among the functional categories. The 4 years olds used a higher percentage of conversational questions in comparison to the other age groups. The children's questions use appeared to follow the principle of using new forms for old functions and old forms for new functions.

Brinton et al (1986) investigated the repair strategies employed in conversation by 40 linguistically normal children at four age levels: 2 years 7 months to 3 years 10

months; 4 years 10 months to 5 years 10 months; 6 years 10 months. Results indicated that subjects at all age levels complied with the initial request for clarification the majority of the time. However, with increasing age, subjects became more adept at handling the sequence of requests for clarification. Older children were more responsive to the request. Varieties of repair strategies (repetition, revision, addition and cues) were elicited and the use of these strategies differed according to subject age, with 9-year-old subjects demonstrating a wider range of strategies on providing repairs.

Brinton, Fujiki, Loeb and Winkler (1986) investigated repair strategies employed in conversation by children at four age levels (2; 7 to 3; 10, 4; 10 to 5; 10, 6; 10 to 7; 10, and 8; 10 to 9; 10 years; months), subjects at all four age levels seemed to recognize the obligatory nature of neutral requests for clarification. The children demonstrated sensitivity to this type of listener feedback by employing strategies to provide conversational repairs in response to the requests. While a variety of repair strategies were elicited, the use of these strategies differed according to subject's age and the position of request within the sequence; it seemed likely that the position of the request was extremely important. Younger subjects had increasing difficulty providing repairs as the sequence progressed, while older subjects usually responded appropriately to all the requests in a sequence. In addition, the 9-year-old subjects demonstrated a wide variety of repair strategies. In some cases, the older subjects attempted to identify the source of breakdown and selected repair strategies accordingly.

Luszez and Bacharach (1983) manipulated implicit linguistic topics by prefacing each of a series of pictures with structured comments that topicalized either the actor, action or object portrayed by the pictures. Various control conditions were included to obtain baseline information about conversational responses made when no implicit

linguistic information was available and in cases where the topic was explicitly identified. Extra linguistic information was manipulated by having two renditions of each picture. One emphasizing and the other de-emphasizing action states. The subjects were either between the ages of 2; 6 and 3; 6 or 4; 6 and 5; 6.

Results indicate that, by 5 years of age children readily detected and used an implied topic. Explicit topic definition also increased the use of sentential devices (e.g. pronominalization). The communicative competence of older children was reflected pragmatically by their topic choice and syntactically by their choice of appropriate sentential devices. It appears that between three and five years of age children acquire sensitivity to linguistic inference that is reflected in their conversational rejoinders. A necessary precursor to this is sensitivity to explicit topic definition, a skill mastered by age three.

Alexander, Wetherby and Prizant (1997) studied the emergence of repair strategies in infants and toddlers in terms of emergence of communicative intentionality, the development of socio emotional perspective taking and the acquisition of effective communication means. Due to limited research in the emergence of preverbal communicative repairs, the authors conducted a cross sectional study on the ontogeny of repair strategies using the normative samples from the communication and symbolic behaviour scales (Wetherby and Prizant, 1993). Patterns of early repair behaviors of typically developing children, as well as those of small groups of children with hearing impairments and pervasive developmental disorders were presented.

The findings of the study suggest that the ability to repair communicative breakdowns develops at the same time, as intentional communication and that gesture are integral to pre conversational repairs.

This study also provided information about the types and patterns of repair behaviors utilized by children in the prelinguistic, early one-word, late one word and multiword stages of language development. The percentage of repair attempts ranged from 88% in the prelinguistic stage to 93% in the multiword stage. The use of repetition as a repair strategy increased from the prelinguistic to the early one-word stage, and then decreased. The use of modification was predominant in the prelinguistic stage and increased in frequency through the multiword stage. Repetition, as an overall repair strategy, was used by 49% of the total subjects. Thus, repetition as the only primary repair strategy appeared to decrease with development; exclusive use of modification to repair increased with development.

A comparison of three findings with those reported by Golinkoff (1986) and Gallagher (1977) reveals the following developmental patterns of repair strategies for typically developing children.

1. Preverbal communicators frequently attempted to repair failed communicative messages
2. Children's vocal and verbal repairs were more likely to contain modifications than repetitions.
3. Children were more likely to repeat than modify gestures to repair.
4. With increasing development, children have at their disposal increasing number of strategies for repair.
5. Children increase in their coordination of gestural plus vocal and then verbal repairs with advancing language skills.

Table 1 illustrates the frequency and percentage of occurrence of number of repairs, repetitions and modifications out of total repair opportunities for each language stage.

| | Prelinguistic | Early one word | Late one word | Multiword |
|---------------|----------------------|-----------------------|----------------------|------------------|
| No repairs | 11(12%) | 4(4%) | 13(12%) | 7(7%) |
| Repetitions | 27(29%) | 42(40%) | 25(19%) | 17(14%) |
| Modifications | 54(59%) | 60(57%) | 69(64%) | 78(76%) |
| Total repairs | 81(88%) | 102(96%) | 94(88%) | 95(93%) |
| Total repair | 92 | 106 | 107 | 107 |

These studies documented the persistence and creativity of very young preverbal communicators and demonstrated the effectiveness of verbal repairs as children became verbal communicators.

Luszez and Bacharach (1983) studied the use of linguistic and extra linguistic information in identifying conversational topics in three and five year old children. Pictures portraying an actor-action-object relation were used to guide conversations. Both active pictures, emphasizing an action relating actor and object via postural cues, and static pictures, which did not were used. Linguistic topics were implied by prefacing each picture with comments topicalizing actor, action or object. In neutral control groups no topic was implied, in an explicit control group of three year olds the actor's action on the object was directly topicalized.

The results reveal that, while implicit topic definition was sufficient for 5 year olds production of contingent replies, explicit definition of a topic was necessary to evoke a similar pattern of replies from 3 years olds. Although children as young as three could comment on actors, actions and object prolonged in pictures, they tended usually to comment on actors alone. The tendency to make actor comments could be over ridden linguistically by explicitly stating the conversational topic and extra linguistically by providing explicit perceptual cues. Explicit topic definition also increased the use of other sentential devices, e.g. pronominalization

By five years of age, children readily detected and used an implied topic. The communicative competence of the older children was reflected pragmatically by their topic choice and syntactically by their choice of appropriate sentential devices. It appears that between three to five years of age children acquire sensitivity to linguistic inference that is reflected in their conversational rejoinders and necessary precursor to this is sensitivity to explicit topic definition, a skill mastered by age three.

Anderson, Clark and Mullin (1994) investigated the development of interactive communication skills in 170 children aged seven to thirteen. Using a communication task that allowed extended dialogues between pairs of young speakers, they were able to assess both the overall communicative success achieved by any pair and from an analysis of the dialogues; they could identify several interactive strategies that characterize older and more successful communicators. Successful communication involves the active involvement of participants, asking and answering questions, volunteering information and responding sensitivity to contributions from their partners.

In contrast to the process of language acquisition, the development of these interactive skills takes place over an extended time and subjects vary greatly in their

ability to communicate effectively. For many analyzes differences in the communicative success achieved by subjects differ more within than between age groups. For example, a substantial minority of their oldest subjects communicate no better than children six years younger.

Bock and Hornsby (1981) studied the ability to differentiate the directive senses of ask and tell using a production task in an experimental setting with children between the ages of 2; 5 and 6; 6. This study suggests that children in the age range of 2; 6 to 6; 6 understand the difference between the directive sense of ask and tell. This was revealed in directives that were adjusted in accordance with instructions to ask or tell, reflect different illocutionary forces while achieving the same illocutionary point.

Thus, children were more polite when asking than when telling, as determined from adult ratings of their directives, and different sentence types predominated in the two instruction conditions - interrogatives for asking, and imperatives for telling. Across ages, children became progressively more polite when instructed to ask, but not when instructed to tell. Thus, there results indicate that young children differentiate utterances with the same directive intention along the dimension of illocutionary force.

Munoz, Gillam, Pera and Gulley-Fachnle (2003) conducted a preliminary study to determine whether commonly used measures of language productivity, sentence organization and story structure were sensitive to developmental differences in narratives produced by Latino pre school children from a low socio economic status (SES) community. They took twenty-four children, divided equally into younger and older groups, who produced oral narratives, were analyzed.

Results indicated that the length of children's narratives did not differ significantly by age. However, older Latino children produced stories that contained

longer sentences, a higher proportion of grammatically acceptable sentences, and more complete episodes than did younger children, these were taken as valid indicators of developmental changes in these children's narrative abilities.

Lloyd (1991) studied the strategies used to communicate route directions by telephone; he compared the performance of 7 year olds, 10 year olds and that of adults. A standard outcome measure used is a referential communication (route finding) task showed that 7 year olds were inferior to 10 year olds and adults in terms of adequacy of messages provided (as speakers) and selection of referent (as listeners). Because the task involved negotiation of route directions by a telephone, a richer dialogue resulted than usual referential communication studies. This made possible an analysis of the strategies used and revealed differences untapped by the standard measures.

The results indicated that the types of strategies used (components, numbering, directional, minimal) varied as a function of age, with the adults using much directional information than children. Much of the younger children's description was either minimal or used, inadequately specified mature strategies.

Adults frequently used dual strategies (e.g. directional and numbering). Older children showed little evidence of these individually but achieved them, in practice, through dialogue with their partners. Age differences in quantity of communication (number of turns) were linked to strategy use.

Bates, et al (1994) reported stylistic and developmental aspects of vocabulary composition for 1, 803 children and families who participated in the Mac Arthur Communicative Development Inventories. They replicate the previous studies with small samples showing extensive variation in use of common nouns between age 0;8 and 1;4 (i.e. 'referential style') and in the proportion of vocabulary made up of closed-class words

between 1;4 and 2;6 (i.e. 'analytic vs. holistic style'). However, both style dimensions are confounded with developmental changes in the composition of the lexicon, including three 'waves' of re-organization (1) an initial increase in percentage of common nouns from 0 to 100 words, followed by a proportional decrease; (2) a slow linear increase in verbs and other predicate, with the greatest gains taking place between 100 and 400 words (3) no proportional development at all in the use of closed-class vocabulary between 0 and 400 words followed by a sharp increase from 400 to 680 words. When developmental changes in noun use are controlled, referential-style measures do not show the association with developmental precocity reported in previous studies. By contrast, these authors report that when developmental changes in grammatical function word use are controlled, high closed class scores are associated with a slower rate of development. The authors suggest that younger children may have less perceptual acuity and/or shorter memory spans than older children with the same vocabulary size. As a result, the younger children may ignore unstressed function words until a later point in development while the older children tend to reproduce perceptual details that they do not yet understand.

Longitudinal data show that early use of function words (under 400 words) is not related to grammatical levels after the 400-word point, confirming stylistic interpretation of early closed class usage. These may be attributed to individual differences in language development.

In addition to the various studies, which track the development of various pragmatic skills, studies have also focused upon the emergence of pragmatic comprehension. One such study by Paul (1984) on third and fifth grade children, who had

passed pretests of comprehension, were tested on their ability to assign given/ new roles in active, passive and cleft sentences controlled for stress.

The experimental task involved a test-fit judgment task (that required the child to decide which one of two content sentences was the first part of a story continued by the target sentence).

Results indicated a significant difference in response to passive and cleft sentences, as opposed to actives. The results also indicate that comprehension of the meaning of sentences is not sufficient to ensure understanding of the topic/ comment marking in the test sentences. Twenty five percent of the subjects, performed near chance in the given/ new interpretation test. It appears that, for passives and clefts, at least, children do not necessarily master syntactic and pragmatic interpretations simultaneously. Some children learn to decode the meaning of these sentences before they understand their use; these findings fail to provide support for the functionalist hypothesis proposed by Mac Whinney and Bates (1978) that children do not use marked sentences forms until they have acquired knowledge of their pragmatic function.

An overview of all these studies thereby indicates that pragmatics follows a developmental trend of increasing linguistic sophistication with increasing age.

ASSESSMENT OF PRAGMATICS

Measures of children's comprehension and production skills for vocabulary and syntax are now common, both in clinical practice and in basic research on individual differences. However, it is becoming increasingly clear that adequate mastery of language includes many other skills, particularly ones that contribute to communicative competence (Campbell and Wales, 1970; Garvey 1975; Gleason and Weintraub, 1978).

The pragmatics of language is of particular interest for several reasons. First children may have command over a number of pragmatic functions at a time when their vocabulary and syntax are quite limited (Dore, 1974, 1975, Ingram 1974; Greenfield and Smith, 1976). Ingram has drawn together several lines of evidence to suggest a rapid expansion of the range of pragmatic functions during one word and very early two word phrases. However, the evidence for this proposal is based on several distinct investigations rather than upon a broad assessment of the same children. Halliday (1975) and Greenfield & Smith (1976) have argued based on intensive studies of one and two children respectively that a relatively universal sequences of emergence of functions can be observed. Thus, development may be manifested more in functions than in lexical or syntactic form. Second, there is some empirical evidence that pragmatic development is (statistically) independent dimension of development. Synder (1978) compared language-delayed children with normal children matched for mean length of utterance with respect to their ability to produce declarative and imperative functions in structured elicitation conditions, and found that the language-impaired children were even more delayed pragmatically than they were syntactically. Blank, Gessener and Esposito (1979) provided a case study of a boy with an almost total deficit in the ability to use language socially and approximately, despite relatively well-developed syntactic and semantic systems. Third, pragmatic development is often hypothesized to be the aspect of language most closely tied to cognitive development (Bates 1976).

Most of what we know about language and its use in children has been gained by observing children's behavior in spontaneously occurring events (Bloom and Lahey, 1978; Ochs, 1979). For last three decades, low structured observations have been the predominant research methodology for investigating language and language development in normal and impaired children (Aram and Nation, 1982; Bloom and Lahey 1976,

McNeil 1970). These assessment techniques include observing children in relaxed naturalistic or semi naturalistic social contexts (Ochs, 1979), having children interact with a familiar person (Cazden, 1970) and allowing children to converse about topics of their own liking (Miller, 1981). It is widely assumed that the non-obtrusive nature of low structured observation provides the best opportunity to obtain a representative sample of the child's language use (Coggins, et al 1987)

Although low structured observations remain the major means of sampling a child's spontaneous language, the techniques may, provide an incomplete picture of the child's typical language use. Language use has been found to vary substantially as a function of context and this variability appears difficult to control (Gallagher, 1987).

An alternative method for obtaining information about children's language use is the elicited approach production task (Miller 1981). In this approach, the experimenter structures the context to elicit a particular behavior of interest. Although the elicitation task does not guarantee a response, it clearly increases the probability that a child will produce a desired behavior in a given situation. The structured elicitation technique has been used with young children to elicit Wh-questions, negative structures, relational meanings and early communicative intents successfully (Snyder, 1978; Miller 1981).

Using structured tasks to assess a child's emerging communicative behavior has some inherent risks. If, elicitation is the major means of acquiring information, one may compromise the integrity of the behavior under study (Bloom and Lahey, 1978, Prutting 1982). Lund and Duchan (1983) maintain that children may perform differently in contrived, structured contexts than they do under natural, unstructured conditions. Thus, when the examiner structures a context, constraints an interaction the representativeness of the sample may be jeopardized.

Investigators have used low structured observations (Halliday, 1975) or elicited tasks (Synder, 1978) to examine the reasons or intentions regarding why children communicate. Coggins, et al (1987) made a longitudinal study (15 months) of the communicative intentions in 35 normally developing, nine month old children and compared their intentional requests and comments produced during low structured play session and structured elicitation tasks. Results indicated that the majority of subjects produced comments spontaneously in a low structured context by their first birthday yet few produced spontaneous requests. The structured elicitation tasks were found to be more successful in sampling requests than comments from children during the second year of life. The results of this study suggest that a single method or approach is unlikely to yield a representative sample of children's communication in a clinical setting.

There have been few attempts to organize the pragmatic aspects of language for clinical application (Curtiss, Kemper and Yarmda 1981; McTear 1985; Penn, 1983 Roth and Spekman 1984) Curtiss; et al (1981) suggested a conversational analysis that includes 16 categories representing discourse functions. Prutting and Krichner (1983) designed a protocol that proposed the use of a speech act theory as a means of organizing pragmatic parameters and offered the following sub domains, utterance acts, propositional acts illocutionary and perlocutionary acts.

Penn (1983) developed a profile of communicative appropriateness that accounts for the following pragmatic parameters; nonverbal communication, sociolinguistic sensitivity, fluency, cohesion, control of semantic content, and responsiveness to the interlocutor. She examined 40 parameters grouped under these five broad categories for clinical purposes.

Roth and Spekman (1984) constructed an organizational framework for analyzing performance in the area of pragmatics. Such a framework can aid the practitioners in fulfilling the two major objectives of assessment

- a. to determine the effectiveness of a child as a communicator and
- b. To provide recommendations regarding appropriate intervention strategies.

According to Roth and Spekman (1984), there are different levels at which communication skills can be analyzed and any one message can be classified differently depending upon the level of analysis selected.

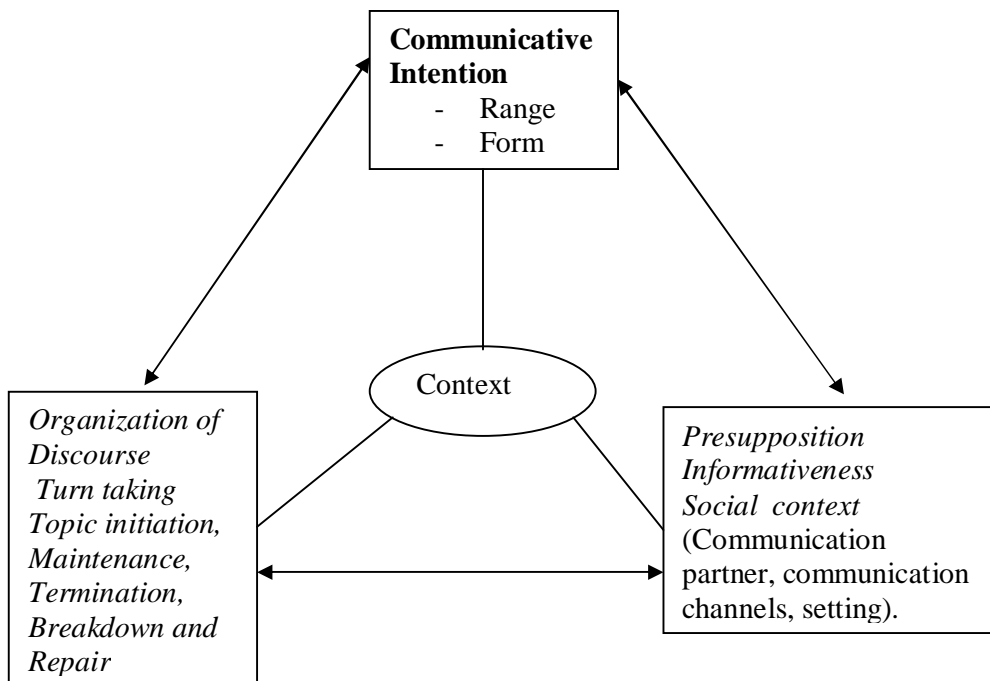
The first level involves an examination of the communicative intentions that a speaker wishes to convey. For e.g. a message may be used to comment, request, greet, protest or direct the behavior of others (Austin, 1962; Searle, 1969). At this level of analysis, the focus is on a single message, which is encoded by a speaker and/or interpreted by a listener.

The second level of analysis, presupposition, broadens this focus to encompass a speaker's message in relation to the specific information needs of a listener. Presupposition involves that information which is not necessarily explicit in a message but which must be shared by the communication partners if a message is to be understood (Bates, 1976; Rees, 1978).

The third area, social organization of discourse, has to do with maintaining a dialogue between and among partners over several conversational turns. This level expands the analysis further as focus on the dynamic and reciprocal nature of an ongoing social interaction.

To analyze the communication behavior at any one of these level, the context in which an interaction occurs must be considered (Bloom 1970; Halliday 1975; Keller-Cohen, 1978; Ochs, 1979). The channels available for communication and feedback, the physical environment itself, influence the nature of interaction for example, and the characteristics of communication partners. Context is thus viewed as a variable that affects the type and form of communicative interactions conveyed the information that must be presupposed and the manner in which conversations are organized.

ORGANIZATIONAL FRAMEWORK FOR ASSESSING PRAGMATIC ABILITIES (Spekman & Roth, 1982)



McTear (1985) separated the pragmatic aspects of language into an instructional component and a transactional component. The instructional component accounts for turn taking acts and exchange structure where as the transactional component

is used to denote the propositional content of discourse such as relevance, cohesion and coherence.

All of the above approaches evaluate the parameters within a conversational setting and/or clinician constructed task.

The problem with all these approaches has to do with the boundaries that are drawn between intentionality and the necessary presuppositions, propositional knowledge of social values of discourse needed to carry out the intentions (Prutting and Kirchner, 1987). Prutting and Kirchner (1987) have abounded the discrete classification of parameters under one of the speech act categories and have recognized the lack of boundaries that distinctly separate propositional knowledge from say, illocutionary function. In normal children, the period of one-word utterances (very roughly, 12 to 20 months) coincides with major cognitive changes according to Piaget. Pragmatic measures, if feasible, might be much more fruitful for investigating the relationship of language and cognitive development than are measures of vocabulary and syntax. All three of these issues could be investigated more effectively if adequate measures of pragmatic development were available and useable.

The following are the test tools, which are contemporarily used in assessing the pragmatic abilities in children.

- The pre assessment questionnaire (Gallagher, 1983)
- The pragmatic profile for communication skills (Dewart and Summers, 1998)
- Assessing the pragmatic ability of children (Roth and Spekman, 1984)
- An approach to developing conversational competence (Bedrosian, 1985)

- Towards a profile of conversational ability (McTear 1985a)
- Test of Pragmatic skills (Schulman, 1985)
- The pragmatic protocol (Prutting and Kirchner, 1987)
- Analysis of language impaired children's conversation ALICC (Adams and Bishop 1989; Bishop and Adams 1989)
- BLADES - Bristol language development scales, (Gutfreund, Harrison and Wells, 1989)
- Test of pragmatics (Sundaram, 1997)
- Test of pragmatic skills (Thankam, 2002) standardized tests

All the above tests help the speech language pathologist, profile or chart the pragmatic abilities of children, but none of them provides norms or the developmental sequence. Therefore, more research is required to provide age specific information.

COMPARISON OF PRAGMATIC SKILLS IN NORMAL AND LANGUAGE DISORDERED CHILDREN

Numerous studies have classified various aspects of the normal development of discourse skills, however, little is known about the manner in which language disordered children function in conversational interaction. It is well known that children with language deficits also have difficulty with language function. The area of pragmatics has become a focus of some of the more recent research in language-disordered children's early communicative development.

Most of the studies focus on conversational repairs, conversational turns and politeness. The greatest amount of research in this area has dealt with the performative and presupposition skills of language-disordered children.

Discourse characteristics: Revision and Repair Behaviors

Gallagher and Darnton (1978) investigated the revision behaviors in the speech of language-disordered children. Subjects were 12 children, four at each of Brown's language stages. I, II and III. The results indicated a significantly greater use of revisions than repetitions or no responses at each stage and a pattern of revision behavior that was uniform across stages and qualitatively different from the previously recorded (Gallagher, 1977) patterns of normal children.

Language-disordered children across stages phonetically changed utterances significantly more often than normal stages II and III children. Gallagher (1977) hypothesized that the normal child revised by changing the phonetic shape of utterances when his language system is so primitively organized that other structural options are not as readily available to him, and such utterances decreased dramatically at stage II, when the child's utterance becomes sufficiently complex to facilitate other structural modifications. Language disordered children, however, revised phonetically at approximately the same frequency across language stages even though their increasing structural knowledge from stage III and I provided successively greater and greater opportunities for other types of structural revision.

Language disordered and normal children differed in their use of constituent reduction and constituent elaboration revisions. Language disordered children across stages reduced response utterances significantly more frequently than normal stage I children. Normal children did not employ constituent reduction revisions with this

frequency until their utterances had reached the complexity of stages II and III. Gallagher (1977) interpreted the behavior of normal children as reflecting the structural limitations of stage I utterances, on the frequency with which elements could be detected while still preserving the intent of the message. Language disordered children did not seem to be sensitive to these constraints.

Comparisons of the constituent substitutions of normal and language-disordered children also revealed differences between the two groups. Language disordered children across stages substituted elements significantly less frequently than normal children at stage I. Language disordered children seem to have a great deal of difficulty analyzing semantic and syntactic equivalencies.

The language-disordered child, according to Gallagher and Darnton (1978), is therefore employing his language structural knowledge to meet conversational demands in a qualitatively different manner from the normal child.

Van Kleeck and Frankel (1981) investigated how discourse devices used by language-disordered children relate to those that have been noted in normally developing children. It was observed that language disordered children use these devices to relate to utterances to ongoing discourse, focus and substitution operations. Focus operations merely repeat while substitutions repeat part but also alter previous utterances in some way. Research with normal language children shows that the predominant devices a child uses change developmentally with focus operations more frequently used early and substitution operations emphasized later. The use of these devices was observed in the spontaneous conversations of three language-disordered children. Two were at a lower linguistic level (MLU's of 1.8 and 2.2) than the third (MLU of 3.2). A developmental trend reflecting that of normally developing children emerged. These results indicate that

language disordered children are not qualitatively different from normally developing children in their ability to use these particular devices for learning to participate in conversations.

Brinton, Fujiki and Sonnenberg (1988) compared the conversational repair strategies employed by 8 language impaired children (mean chronologic age of 9.2 years) and their linguistically normal age and language age matched peers in response to a stacked series of requests for clarification (Huh?; 'what?' and 'I' didn't understand that). All subjects seemed to recognize the obligatory nature of the requests and were able and willing to adapt their contributions in discourse according to listener feedback, the majority of the time. However, a number of differences were noted among the three groups, many of which seemed tied to the language level of the subjects. It was noted that the language impaired (LI) and language matched (LA) subjects tended to repair by revising from alone more often than did the chronological age matched (CA) subjects. The CA matched subjects more often used repairs that supplemented the information in the original message with either an addition or cue strategy. Further, the LI subjects found the task more taxing than did either LA or CA subjects as evidenced by the fact that LI subjects produced more inappropriate responses than did the other two groups. Sometimes, these subjects ignored the second or third request and continued their discourse. Other times, they quit talking altogether for a moment. On other occasions, subjects indicated that they know that some kind of adjustment was needed, but they did not provide it. The authors state that it was not the case that impaired subjects lacked repair strategies but rather that they lacked persistence in applying them. In addition, the LI subjects failed to compensate for their difficulties with increased use of supra segmentals or gestures when compared with normal subjects.

Prather et al (1989) studied the types of repairs used by normally developing and language impaired preschool children in response to clarification requests. It was observed that all the children in this study overwhelmingly used revisions to repair their original utterances. Further, the repair strategies used by language-impaired children in this study did not differ from the normal controls. Previous researchers (Gallagher and Darnton, 1978) suggested that types of repair were different for language-impaired children. It may be that differences in pragmatic behavior between language impaired and normal children decrease with age. Another possible explanation is that differences in the subject selection process between the two studies affected the results.

Purcell and Liles (1992) studied the self-indicated repairs produced by 14 normal language and 14 language disordered children during a story-retelling task. When grammatical repairs and repairs to text meaning were analyzed, both groups initiated significantly more repairs to text meaning. Results indicated that the normal language and language-disordered children appear to share similar strategies for monitoring narrative discourse, but they differ in their abilities to actualize their monitoring attention.

Discourse Characteristics: Speech Style modification

The ability to make modification in speech style based on the listener's age and linguistic abilities is common to all adult speakers. Studies by Shatz and Gelman (1973) and Sachs and Devin (1976) have demonstrated that children as young as four years of age can make relatively consistent modifications in their speech to babies that roughly parallel the modifications of adults addressing young children.

Fly, Leonard and Wilcox (1981) observed six language-impaired children in dyadic interactions with (i) normal language children of similar chronological ages and (ii) normal language children who were younger but exhibited similar MLU's. Eight

measures analyzing overall sentence complexity, sentence form and features of discourse were used to compare the subject's linguistic behaviors in the two conditions. Across conditions the subjects made changes in their speech that were consistent with the speech style modifications made by normal language children. Lower mean pre verb length, a greater degree of conversational assertiveness, and a higher frequency of internal state questions were characteristic of subjects in the MLU matched conditions as compared to the age-matched conditions.

Discourse Characteristics Request-Response Sequences

Brinton and Fujiki (1982) considered several types of request-response sequences of linguistically normal and language-disordered children. These included choice questions, product questions, requests for clarification and the responses elicited by these speech acts. It was noted that the normal children were much more aware of the interactive nature of discourse than language disordered children. Normals often responded within the boundaries of an acceptable adult response. Language disordered children frequently ignored and responded inappropriately to requests. Their responses were occasionally contrary to fact or totally unrelated to the expected information. Some language-disordered children also demonstrated linguistic strategies that facilitated the flow of conversation, but showed no understanding of the content of the communicative interchange.

Discourse characteristics: Performative and Presupposition studies

Snyder (1975, 1978) was the first investigator to examine the performative and presupposition ability of language-disordered children. She compared the performative and presupposition behavior of normal (aged 0; 11 - one; 6) and language disordered (aged one; eight - 2; 6) children operating at the one-word utterance level of linguistic

development. Snyder's findings indicated that the language-disordered children generated both imperative and declarative performatives. However, they are more likely to do so through non-linguistic means such as pointing or showing, whereas normal children expressed performatives more frequently through words. With regard to presuppositions, both groups of children demonstrated a tendency to encode situational new (changing) elements rather than old (unchanging) elements.

Skarakis and Greenfield (1977) investigated presupposition skills in language-disordered children who were at a more advanced stage of development than the children studied by Snyder (1975). Normal children were matched to three language-disordered children with respect to the linguistic levels. The results indicated that both normal and language disordered children encoded predominantly new information and that there were no differences in the strategies used to encode this new information.

Leonard, Cole and Steckol (1979) examined presupposition ability in mildly mentally retarded children (aged 2:3-3; 10 years) with speech limited to single word utterances. Results indicated that these children were more likely to label objects that represented new situational information. When the new situational element was an exemplar that had not been seen before, the frequency of labeling was especially high.

Rowan et al (1983) compared the presupposition and performative abilities of language disordered and normal children. Subjects were 36 children, 18 normal and 18 language disordered, functioning at single word level of linguistic development. Results revealed that both the language disordered and the normal children showed a tendency to encode changing rather than unchanging situational elements. The two groups of children also demonstrated similar levels of imperative and declarative performative intent. For both groups, performative and presuppositional behaviors were usually in the form of

word productions. This study suggested that language disordered children were not particularly restricted in the way they put their lexicon to communicative use. Further studies are required to support the above conclusion.

Discourse characteristics: Non-verbal Behavior

The main channel of communication in prelinguistic children is a non-verbal one. Their non-verbal pragmatic behavior has been shown to be systematic and to function to express different intentions (Stern, 1974). These non-verbal behaviors decrease with age as children use the verbal channel of communication with greater frequency and competency (Poom and Butler, 1972).

Rom and Bliss (1983) investigated the use of six non-verbal pragmatic behaviors (distance, physical contact, vocalization, looking and smiling) for three groups of subjects. The experimental group (LI) consisted of twenty language impaired children who were in stage III and IV of linguistic development. One of the control group (NSY) consisted of 20 normal speaking children equated with the experimental group based on MLU. Another control group (NSD) consisted of 20 normal speaking children equated with the experimental group based on chronological age. The results indicated that the non-verbal behavior was not affected by language impairment. One reason may be that all these non-verbal behaviors are developed in some form before the emergence of verbal pragmatics. The authors state that language impaired children thus acquire the earliest pragmatic behavior where as they are difficult in the later developing ones.

Investigators have also identified early manifestations of comprehension monitoring in the non-verbal behavior of young children. Eye contact, response latency and facial expression have been shown to change following ambiguous versus

unambiguous messages (Bearison and Lewey 1977; Havell, et al 1981; Ironsmith and Whitehurst, 1978).

Revelle, Wellman and Karabenick (1985) proposed that if children developing strategies for seeking clarification cannot do so verbally, non-verbal strategies might be employed for that purpose. This may also be true of language-disordered children.

Skarakis-Doyle, Mac Lellan and Mullin (1990) investigated normal and language disordered children's patterns of non-verbal behavior in response to messages varying in degree of ambiguity. Each language disordered (LD) child was matched to two normally developing children. One for comprehension level (CM) and the other for chronological age (CA). Results demonstrated that all subjects increased their non-verbal behaviors (e.g. eye contact) from unambiguous to ambiguous message conditions, suggesting awareness in these message types at a rudimentary level. Most often non-verbal indication was the only signal of ambiguity detection exhibited by LD children and their CM peers. Only the CM children concurrently indicated awareness through more direct means (i.e. verbalization and pointing to all possible referents) in a consistent and accurate manner.

Discourse Characteristics: Humor Comprehension

The ability to comprehend and relate jokes and puns is one of the last stages of pragmatic development, usually by grade school or high school age.

Many language impaired children experience difficulty comprehending puns and riddles because of the sophisticated level of language knowledge required (Kamhi, 1987).

Spector (1990) compared the ability of normally achieving and language impaired adolescents to comprehend linguistic humor in a decontextualised situation. The two

groups of subjects were 12 normally achieving and 12 language impaired high school students from grades 9-12. Results indicated significantly poor comprehension of the humor elements by the language-impaired group than the normally achieving group. Especially poor was their ability to grasp the nature of multi meaning words and their ability to segment and redefine phonological strings.

Pragmatics in Autistic Children

Clinical studies on pragmatics have predominantly focused on autistic children. Problems in social relatedness, in insistence on preservation of sameness and severe limitations in language and communication were the three cardinal features of the autistic syndrome as originally described by Kanner (1943). Yet interestingly, few studies have investigated directly the social communicative function of autistic children (Layton and Stutts, 1985).

Discourse Characteristics Echolalia

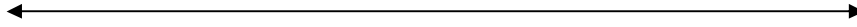
Echolalia behaviors are probably the most frequently discussed speech and language characteristic of autistic speech most likely due to their high prevalence among verbal autistic persons, as well as their 'ear-catching' quality (Prizant, 1983). Until recently, the predominant position was that echoic utterances are produced automatically, with little or no communicative intent as opposed to utterances, which are more creative and are thus believed to be produced with communicative intent; Prizant (1983) depicted this figuratively.

ECHOLALIA

(FORM)

CREATIVE LANGUAGE

(Automatic speech)



LACK OR COMMUNICATIVE

INTENTIONAL

INTENT

Immediate echolalia although viewed meaningless (Fay and Schuller, 1980) however, explanation of immediate echolalia as a coping strategy or as a primitive attempt to maintain social interaction have appeared in the literature (Prizant, 1983)

Based upon videotape analyses of 1009 echoic utterances of four autistic children, Prizant and Duchan (1981) derived seven function categories of immediate echolalia.

| CATEGORY | DESCRIPTION |
|--------------------|---|
| INTERACTIVE | |
| 1. Turn Taking | Utterances used as turn features in an alternating verbal exchange |
| 2. Declarative | Utterances labeling objects, actions or location (Accompanied by demonstrative gestures) |
| 3. Yes answer | Utterances used to indicate affirmation of prior utterance |
| 4. Request | Utterances used to request objects or others actions |

| | |
|------------------------|--|
| | usually involves mitigated echolalia |
| NON INTERACTIVE | |
| 5. Non focused | Utterances produced with no apparent intent and often in states of high arousal “(e.g.: fear, pain) |
| 6. Rehearsal | Utterances used as a processing aid, followed by utterances or action indicating comprehension of echoed utterance |
| 7. Self regulatory | Utterances which serve to regulate own actions, Produced in synchrony with motor activity |

Delayed echolalia has also been recently investigated for its functional usage. Videotape analysis of 400 delayed echoic utterances and co-occurring non-verbal behaviors by Prizant and Rydell (1981) revealed 14 functional categories of delayed echolalia.

| Category | Description |
|--------------------|---|
| INTERACTIVE | |
| 1. turn taking | Utterances used as turn feters in alternating verbal exchange |

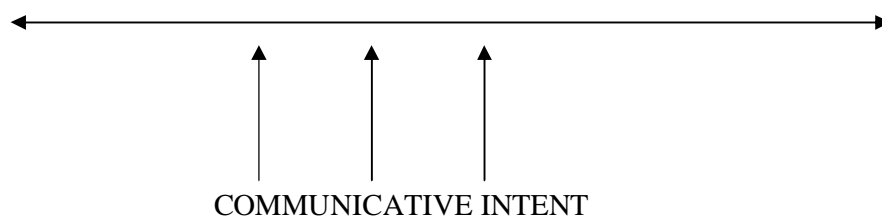
| | |
|--------------------------|---|
| 2. Verbal completion | Utterances, which complete familiar verbal routers initiated by others. |
| 3. Providing information | Utterances offering new information not apparent from situational context (may be initiated or respondent) |
| 4. Labeling | Utterances labeling objects or action in environment |
| 5. Protest | Utterances protesting actions of others may be used to prohibit others actions |
| 6. Request | Utterances used to request objects |
| 7. Calling | Utterances used to call attention to oneself or to establish/ maintain interaction |
| 8. Affirmation | Utterances used to indicate affirmation of previous utterances |
| 9. Directive | Utterances (Often imperatives) used to direct others actions. |
| NON INTERACTIVE | |
| 10. non focused | Utterances with no apparent communicative intent or relevance to the situational context, may be self stimulatory |

| | |
|---------------------------|---|
| 11. Situation Association | Utterances with no apparent communication intent which appear to be triggered by an object, person, situation or activity |
| 12. Self directive | Utterances, which serve to regulate one's own actions. Produced in synchrony with motor activity`. |
| 13. Rehearsal | Utterances produced with low volume followed by louder interactive production. Appears to be practice for subsequent production |
| 14. Label | Utterance labeling objects or actions environment with no apparent communicative intent. May be a form of practice for language learning. |

The studies of early 1980's therefore suggests that some form of echoic utterances may be produced with intent i.e., the utterances are produced as a means to an end or for accomplishing some goal. Prizant (1983) depicts this figuratively

ECHOLALIA (FORM) CREATIVE LANGUAGE

(Automatic speech)



Few studies have investigated directly, the social-communicative functions of autistic children. McHale, Marcue, Simeonson and Olley (1980) investigated the

influence of social partner on the communicative behaviour of autistic children. Their autistic children were observed under two experimental conditions : (1) during a teacher-parent situation where the teacher could initiate communicative interchange, provided the child was allowed to end the interaction if desired and (ii) during a teacher-absent situation where the teacher was replaced by an observer who interacted with the child only for the Child's well being.

The results demonstrated that the autistic children did not direct the majority of communicative functions towards another person. However, there was an increase in the communicative interaction during the teacher-present situation. In addition, there was an increase in communicative behavior as the children become more interactive over an eight-month period.

Bernard-Optiz (1982) analyzed videotapes of an eight-year old autistic boy interacting with various communicative partners: Child-mother waiting, child-mother interacting, child-stranger waiting, and child-stranger interacting and child-clinician discourse. The waiting situation required that the communicative person could not initiate communication but could respond to the child's intuitions, while the interacting situation allowed the communicative person to initiate the interaction. The discourse condition required the clinician to engage the subject in conversation. Results of this study indicated that the autistic child responded differently to the various experimental conditions and with different communicative partners. The child communicated more often with the mother and the clinician than with the stranger, and tended to use requests more with the mother and statements with the clinician. In addition, more overall communicative functions were observed during the 'same partner' situation than during the 'same setting' situation.

These studies, demonstrate, that autistic children do have a sense of social communicative awareness, which is regulated by the identity of the communicative partner.

Prizant and Wetherby (1985) put forth a review of the communicative intent in children with autism. Intentional communication is the ability to use expressive signals in a pre-planned manner in order to affect the behavior or attitudes of others.

Cunningham (1966) noted that autistic children provided less information than normal children at the same linguistic level provide and rarely asked questions of others. Cunningham (1968) compared the language of psychotic (autistic) and 'non psychotic' retarded children and found that psychotic children used more demands and requests than the retarded children did.

Carparulo and Cohen (1977) noted that 'the referential, informative function is missing in the early language of autistic children.

Curcio (1978) found that the autistic children displayed some request, protest, and greeting gestures, but did not display any pointing or showing gestures to label or comment.

Pacci-Cooper, Curcio and Sachasko (1981) compared the "speech acts" (Dore, 1974) of eleven autistic children, ages 5 to 12 years old to eleven normal children, ages 3 to 5 years based on sex and developmental sentence scoring (Lee, 1974).

Results indicated no difference between the autistic children and the normals on the relative frequencies of various initiation types. However, the autistic children did interrupt the adults about twice as often as did the normals. In addition, the autistic children's interruptions were inappropriate or irrelevant to the topic, while the normal

children's interruptions were appropriate. The autistic children also changed the topic twice as much as did the normal children.

Pacci-Cooper et al (1981) also analyzed response dialogues in terms of obligatory and optional conditions. It was found that the autistic children used three times the inappropriate responses, as did the normals during the obligatory conditions. In addition, the autistic children were more likely not to respond to all in either condition.

These results suggest that, despite being at a comparable grammatical level, the autistic children differed from the normal children on specific social-communicative functions.

Prizant (1978, 1983) focused on the acquisition of communicative intent rather than language structure alone in considering the role of echolalia in development. He delineated a series of stages that marked the progression, from echolalia produced with no underlying communicative intent; to echolalia produced with communicative intent, with little knowledge of linguistic structure or specific word meaning encompassed in the utterances; to utterances produced with communicative intent and greater appreciation of the internal linguistic structure and specific word meaning produced in such utterances. This progression reflects movement from perlocutionary or pre-intentional communicative acts to illocutionary or intentional communicative acts to illocutionary or intentional prelinguistic communicative acts, to locutionary, or intentional communicative acts produced with some underlying linguistic knowledge.

| | |
|----------------|--|
| PERLOCUTIONARY | Utterances repeated without communicative intent (frequently as a turn fillers) unintended effect on listener is due to listener's assigning of intent |
|----------------|--|

| | |
|---------------|---|
| ILLOCUTIONARY | Utterances repeated with communicative intent, but with minimal appreciation of internal linguistic structures and semantic functions or relationships |
| LOCUTIONARY | Utterances repeated with communicative intent with greater appreciation of internal linguistic structure and semantic functions or relationships. Rule governed changes are often imposed (mitigated echolalia) |

Wetherby and Prutting (1984) studied the communicative behavior of autistic and language age matched normal children functioning in the pre-linguistic stage and early stages of language development based on videotape analysis of spontaneous communicative acts. It was found that the autistic children displayed at least as many communicative acts as the normal children. However, the autistic children showed a more limited repertoire of communicative functions. They found that in spite of variability in level of language development and degree of mental retardation, the autistic subjects displayed a relatively homogenous profile of communicative functions that was distinct from normal subjects. That is the autistic subjects showed a much high proportion of communicative acts used to regulate the adults behaviors to achieve an environmental end than the normal subjects and a lack of or a very low proportion of acts to attract and direct the adults attention to them or an object. The authors stated that this aspect might be acquired by autistic children, but at a higher level of language and communicative development.

Wetherby (1986) state that in contrast to the synchronous development of communicative function by normal children and other language impaired children (Wollner, 1983), the autistic child appears to acquire the functions of communication one at a time. Wetherby (cited in Prizant and Wetherby, 1985) put forth a model of ontogeny of communicative function in autistic children.

ONTOGENY OF COMMUNICATIVE FUNCTIONS (Wetherby, cited in Prizant and Wetherby, 1985)

FOR NON –SOCIAL ENDS

1. To regulate another's behavior to achieve environmental end (non-social motivation)
 - a. Request object
 - b. Request action
 - c. Protest

FOR QUARSI-SOCIAL ENDS (Focused on self or self-needs)

2. To attract another's attention to one's self
 - a. Request social routines
 - b. Greeting... may be learned as ritual/ routine
 - c. Calling ... may be used as means to obtain environment end
 - d. Showing off

FOR SOCIAL ENDS (focused on interaction/ sharing of topic)

3. To direct another's attention to an object/ event
 - a. interactive label
 - b. comment
 - c. request information

A pragmatic skill discussed in recent research of normal language use is the masking of new information in verbal interactions. The notion of new and old information is based upon the assumption that communicative language is used primarily to impart new information, achieved through lexicalization, or the selection of the lexical items and through contrastive stress, as a means to high light new information.

McCaleb and Prizant (1985) conducted a preliminary study focused upon describing autistic children's verbal performance concerning the pragmatic ability of encoding new versus old information. Four autistic children with MLU's of 1.96 – 2.82 were videotaped on two occasions in interactions with their teachers or speech language pathologists. All of the subject's referential utterances, including referential echolalia utterance were categorized as the encoding of new or old utterances. Two prominent means that speakers used for encoding new versus old information were examined, the encoding of new information through single word utterances (i.e. a lexicalization strategy) and the use of contrastive stress to highlight new information in multi word utterances.

Results revealed that the four subjects did encode new information lexicalization in single word utterances and through contrastive stress in multiword utterances.

However, subjects encoded old information almost as frequently as they encoded new information. The encoding of a new action or state change was marked relatively infrequently by the subjects, and they consistently produced repetitions of previously encoded information when they failed to offer new information to their listeners.

Semantic Pragmatic Disorders/ Pragmatic language impairment (SPD/PLI)

Several authors have suggested that this constitutes a specific subtype of language disorder, variously termed “semantic-pragmatic syndrome” (Rapin and Allen, 1983), “Semantic pragmatic disorder” (Bishop and Rosen Bloom, 1987) or “conversational disability” (Conti-Ramsden and Gunn, 1986).

Rapin (1987) includes the following in her characterization of semantic pragmatic syndrome:

- Speech fluent with adequate articulation;
- Verbose;
- Comprehension deficits for the meaning of verbal messages, notably questions;
- Tendency to interpret messages quite literally;
- Tendency to respond to 1 or 2 words in a sentence rather than to the entire message,
- Incessant chatter,
- Perseveration

- Use of circumlocutions, semantic paraphasia and lack of semantic specificity,
- Impairment in the ability to take turns and to maintain a topic in discourse.

A more recent clinical account by Rapin (1996) lists the clinical characterization of SPD disorders. These include verbosity, comprehension deficits for connected speech, atypical word choices, phonology and syntax unimpaired, inadequate conversational skills, speaking aloud to no one in particular, poor maintenance of topic, answering besides the point of question.

There has been much debate in the literature as to whether “semantic pragmatic disorder” is a part of the autistic continuum (Boucher 1998); there has been little evidence on which to base an argument.

Neuropsychological tests and measures of social cognition showed close overlap in test profile between a group with SPD and children with high functioning autism, both of who contrasted with children with a typical form of SLI. (Shields, Varley, Broks and Simpson 1996a)

Botting & Conti-Ramsden (1997) carried out a survey where a subset of children were assessed on a checklist that included scales assessing aspects of structural language, pragmatic skills, social interaction and restricted interests. Children whose records indicated a definite or possible diagnosis of “SPD” obtained lower scores on the pragmatic scales. None of these children had a diagnosis of autism, but a subset was thought to have possible or definite autistic features or asperser syndrome. This study supported the view that while pragmatic impairments and other autistic features tend to

co-occur, there are children with significant pragmatic difficulties who do not have any marked difficulties in the domain of peer relations and interests.

Clinical classifications have stressed the contrast between SPD and more typical SLI which typically corresponds to what Rapin (1996) would term phonologic syntactic deficit disorder. On this basis, one anticipates dissociation between both kinds of impairment.

However, Bishop (2000) had found that there do exist children who have relative good mastery of syntax and phonology and poor pragmatics and others who showed, the opposite picture, yet there were other cases who had poor ratings on language form and language use.

Results of the study by Bishop (2000) also indicate that there was no positive correlation between semantic and pragmatic difficulties, semantic impairments being common in all language-impaired children. The notion of a distinct syndrome of SPD may have come about just because pragmatic problems are much more obvious and hard to explain away when they occur in the context of good formal language skills suggested (Bishop 1998, 2000).

Bishop and Adams (1989) listed the pragmatic problems faced by children with SPD

- Violation of exchange structure, failure to obey conversational rules about what types of utterances may follow one another to make for coherent communication.
- Failure to use context in comprehension, child shows adequate understanding of the literal meaning of an utterance, but misses the adults

intended meaning because the linguistic, environmental or social context is not taken into account this can lead to an over literal interpretation missing the illocutionary force of the adult's utterance.

- Provides too little information to partner and fails to make conversations as informative as is required for purpose of exchange thereby rendering the meaning unclear.
- Provides unnecessary information to the partner.
- Inadequate information responses that seem to reflect the fact that they did not know enough to be able to provide an adequate response.

PRAGMATIC INTERVENTION

Linguistic variation is the result of skills in pragmatics or language use. The constitution of effective communication varies with the communication situation and with the age of the child. Intervention may begin at the point of communication breakdown (Nippold, 1993).

Continuum of approaches: Discrete Trial- Traditional behavioral (DTB) to development social – pragmatic (DSP)

DT-TB Lovaas, 1977, 1981 at 1 end and DSP include “relationship based” approaches that are individualized and grounded in a transactional model. Contemporary behavioral approaches fall between these two ends of the continuum, incorporating aspects of each (Warren, 1993).

Discrete Trial- Traditional Behavioral Approach (DT-TB)

Several methods that increase the likelihood that a child will give the desired response, so that it can be reinforced that is operant behavior explanations (Anderson, Tavas and cannon, 1996, Page 187).

A trial is considered a “single teaching unit” (Lovaas, 1981) that begins with the presentation of a stimulus (the teacher’s instruction) the child’s response, the consequence and a pause (between trial interval) before presentation of the next stimulus by the teacher (Anderson et al 1996)

Proponents of DT-TB indicate that is just a strategy for teaching new skills (Anderson et al, 1996). The primary descriptive DT-TB includes the following:

1. The teaching structure is highly prescribed including choice of the stimuli presented, the response targeted and the consequences provided.
2. There is a focus on teaching discrete and objectively defined behaviors. Traditionally there has been a focus on speech as a primary communicative mode, beginning with vocal imitation and followed by word imitation.
3. The learning context involves a one to one child to teacher ratio, with the adult determining the activity and focus of attention and following a prescribed sequenced curriculum.
4. Predetermined criteria are provided for correctness of response. Each response is evaluated as correct or incorrect, with predetermined consequences following the

response. “Off task” responses, even if communicative or relevant to some aspect of the training context, are ignored, or the child’s behavior is redirected.

5. Initial focus is on adult control and child compliance. Lovaas (1981) outlined his rationale for initially providing “structured and authoritative environments followed by lessening adult control.
6. Literature on sequences or processes on child language may not inform curriculum used in discrete trial programs and communication development may not inform curriculum used in discrete trail programs, unless the curriculum chosen are developmentally based.
7. There is a minimal use of contextual supports, such as accompanying use of gestures by the clinician/ educator (unless specified in a hierarchy of prompts) activity boards, or picture schedules. Teaching is largely organized and directed through oral language.

The Middle Ground (Contemporary Applied behavioral Analysis)

In response to the persistent problem of a lack of generalization of trained skills “noted time and time again” in the behavioral literature. (Schreibman and Pierce, 1993, P. 184).Applied behavioral analysis (ABA) literature are incidental language teaching (Hart 1985), natural language paradigm (NLP) including pivotal response training (Koegel and Johnson 1989; Schreibman and Pierce, 1993) and enhanced Milieu approaches (Kaiser, Yoder and Keetz, 1992).

There are a number of striking and significant distinctions between these more contemporary ABA approaches and traditional DT-TB approaches.

1. “Control” of the teaching interaction is either shared (Schreibman and Pierce, 1983) or shifted from “trainers” to children. Teachers are encouraged to follow the child’s lead to encourage initiation and spontaneity in communication.
2. Child-preferred and child-selected activities provide the primary contexts and topic for communicative exchange (Schreibman and Pierce, 1993). The trainer provides choice making opportunities rather than select and impose teaching tasks.
3. Because a child’s attentional focus and preferences are following, interactions are more natural and loosely structured rather than unfolding according to a prescribed training protocol followed in a contrived one to one teaching setting.
4. In incidental teaching, NLP, or milieu teaching, it is most preferable for communicative exchanges to be initiated by the child with the adult being highly responsive to children’s spontaneous communication (Whether verbal, vocal or gestural).

Developmental Social Pragmatic Model

Caregiver’s styles of interaction and responsibility in interactions have important influence on language and communication development (Hart and Risley, 1995).

The transactional nature of communication development indicates that with caregiver’s appropriate modifications of interactive style, children develop a sense of efficacy and competence (Dunst, Lowe, Bartholomew, 1990).

SCERTS model for enhancing communication and socio-emotional abilities

It is believed that this model addresses in a comprehensive manner the core, underlying deficits affecting children with ASD and that it reflects recommended practices (Dawson and Osterling, 1997) as well as the greatest challenges faced by families and all communicative partners.

These components an individualized approach focusing on communication, social relatedness and sensory processing, and family centered practices and support, reflect “best-practices” in the contemporary literature on ASD’s (Dawson and Osterling, 1997; Wetherby and Prizant, 1994).

The effectiveness of this approach is supported by research on children with ASD and other developmental disabilities) (McLean and Gripe, 1997). Including validated and effective strategies to support the use of non-speech communication systems such as picture symbols.

Social pragmatic approaches are now practiced in both contemporary ABA programs as well as developmentally based programs (Prizant and Wetherby, 1998).

Deficits in social relatedness and socio-emotional reciprocity are addressed through strategies developed as a part of Greenspan’s developmental individual relationship (DIR) based model (Greenspan, 1992; Greenspan and Wieder, 1998).

The effectiveness of the target outcome research sample to date, supported by follow up research on 200 children with ASD, (Greenspan and Wieder, 1997a)

Sensory integration therapy in ASD supports with the SCERTS model (Fallon, Mauer, and Weinkirch, 1994), intervention occurs in natural situations across home,

school and community environments to support the development (Prizant and Meyer 1993).

This family centered practice is recognized as another core characteristic of effective programs of children with ASD (Dawson and Osterling, 1997).

If we provide the children with the tools and an opportunity to be successful communicators, the child has been given a purpose to maintain linguistic communication (Lucas, 1980, pg.201). These tools might take the form of speech acts or conversational abilities.

Vishnupriya (2004) developed a treatment kit for advanced pragmatic skills based on the test of pragmatic skills developed by Thankam, (2002). The treatment kit included the following:

1. Speech acts

Repair/ revision

Stylistic variation

Referential communication

Turn taking

Closing a conversation

2. Non verbal

Proximity

The material comprised of color pictures, which depicted events that were culturally relevant, a minimum of 6 pictures, were designed for each skill and were administered on 10 children with PDD. After to hours of training the children were re-assessed.

The results indicated a high level of significance between pre therapy and post therapy results in aspects of revision, turn taking, referential communication stylistic variation, proximity.

Intervention in the domain of pragmatics in the literature is scattered and general guidelines exist predominantly. However, details regarding the “when to start pragmatic intervention?” is lacking as there exists no developmental data on pragmatic abilities.

NEED FOR THE STUDY

Pragmatics, within the Indian context can be aptly described by quoting Ervin-Tripp (1978). “Pragmatics is everything we used to throw out when we analyzed language”. Although understood as a major entity within the realm of language, pragmatics until today remains a very slightly explored area. Among the few isolated studies on pragmatics (in Indian context) are the development of a test of pragmatics in Tamil (Sundaram, 1994); some aspects of pragmatics in the mentally retarded adults (Reddy, 1998); Test of Pragmatic skills (Thankam, 2002); Comparison of pragmatic abilities of autistics and normals (Anjana, 1999); A kit for advance pragmatic skill building (Vishnupriya, 2004).

Research based on developmental sequence of acquisition of pragmatic skills is lacking and it remains as an untouched sphere in the Indian context.

The present work is the first of its kind, in an attempt to provide a developmental protocol of pragmatic skills, It was hoped this would be of use in assessing as well as improving pragmatic skills / deficits.

The aim of the study is three fold:

1. Developing a pragmatic protocol, this would help to identify sequential pragmatic milestones.
2. Assessment, identification, and diagnosis of pragmatic disabilities.
3. Providing provision for intervention based on the developmental schedule.

METHOD

Aim

The aim of the present study was to construct a developmental protocol for pragmatic skills.

Material

As this study aimed to construct a developmental protocol for pragmatic skills, the review constituted a vital part and first step of the study.

Item Pooling

A review about different assessment scales / tools / protocols / journal articles and web-based search was employed. All the items that were pooled from the literature were classified under different domains Viz. perlocutionary skills, speech acts, topic, turn taking, discourse and verbal or paralinguistic, etc.,

Appendix. A Shows the various pragmatic skills pooled and grouped in these domains.

Based on this item pool, a questionnaire comprising of one hundred questions was prepared specific for this study, which served as the material.

Subjects

Hundred and thirty subjects were selected in the age range of 0 to 8 years; grouped into 6 months interval up to 5 years of age and one-year intervals from five years to eight years of age for convenience were studied.

Subject selection criteria included the following:

1. No history of any speech, language, cognition or hearing disturbances, based on reports by the pediatrician and by history taking.
2. All subjects taken were from the SES III (Socio-economic status III); this was obtained by administering the NIMH Socio-economic status scale, revised version; Arya and Venkatesan (1992). See appendix.C for the same.

Procedure

Phase I

Ten Speech Language Pathologist’s (SLP’S) subjected the items in the pool to content validation. All the SLP’S were masteral students of Speech Language pathology.

They rated the items on its relevance in measuring pragmatic abilities. They rated the items on a two point rating scale (0 indicating not relevant, and 1 indicating that the item is relevant).

Appendix B. shows the questionnaire for content validation.

Items that were in 60% agreement across the raters were taken for the next phase of the study and the items that did not meet this criterion were dropped.

Phase II

The items selected based on the ratings in phase I of the study was administered across 130 normally developing children. In the administration of these items, the ordinal scale was used to rate the presence of the behavior, which is as follows:

| | | |
|---|-------------|-------------------------------|
| 0 | would imply | almost never / not present |
| 1 | would imply | very rare / 25% present. |
| 2 | would imply | sometimes / 50% present. |
| 3 | would imply | often / 75% present. |
| 4 | would imply | almost always / 100% present. |

The investigator administered all the questions by parental interview.

Analysis:

The scores obtained by parental interview were totaled for each of the subjects taken, across all the thirteen groups.

The mean pragmatic scores of the children within and across groups were compared and tabulated. The paired t test was administered to compare any statistically significant difference across the age groups.

In addition, the age of acquisition of acquisition of the pragmatic skills was also derived and normatives were established.

Phase III

The items that were selected from phase II were incorporated and drawn up into the final checklist in a development sequence.

RESULTS

The aims of the study were to

- Develop a pragmatic protocol that would help to identify sequential pragmatic milestones.
- Aid in the assessment, identification and diagnosis of pragmatic disabilities.
- Allow intervention based on a developmental schedule.

The data obtained through parental interview were analyzed, and the parental ratings were rated on a five point likert scale (i.e. 0- indicating absent; 1- indicating 25% present; 2- indicating 50% present; 3- indicating 75 % present and 4- indicating 100 % present). These scores were summed up to arrive at a total score for each child under study, and this was labeled as the pragmatic quotient.

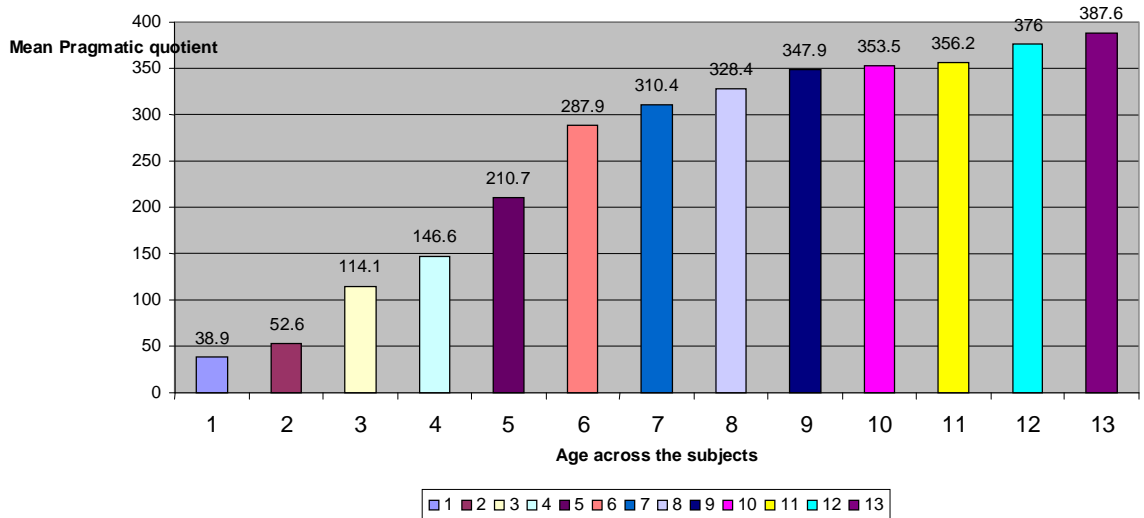
On such a rating, the maximum total score would be equal to 400 (if the child illustrates all the skills at a 100 % level) corresponding to the hundred items in the questionnaire. Therefore, for every individual child, the total pragmatic quotient was calculated (for all the 130 children studied). The total pragmatic quotient scores were tabulated and the mean pragmatic scores were computed for each age group.

The mean pragmatic scores were found to increase as a function of age, indicating that, pragmatic abilities follow a developmental continuum. Table 1 represents the mean pragmatic scores versus age. Figure 1 illustrates the same graphically.

Table 1: Mean pragmatic scores across age.

| S.No. | Age group in Years | N | Mean pragmatic quotient |
|-------|-----------------------|----|-------------------------|
| 1 | 0.0 -0.6 | 10 | 38.9 |
| 2 | 0.7 – 1.0 | 10 | 52.6 |
| 3 | 1.1 – 1.6 | 10 | 114.1 |
| 4 | 1.7 – 2.0 | 10 | 146.6 |
| 5 | 2.1 – 2.6 | 10 | 210.7 |
| 6 | 2.7 – 3.0 | 10 | 287.9 |
| 7 | 3.1 – 3.6 | 10 | 310.4 |
| 8 | 3.7 – 4.0 | 10 | 328.4 |
| 9 | 4.1 – 4.7 | 10 | 347.9 |
| 10 | 4.7 – 5.0 | 10 | 353.5 |
| 11 | 5.1 – 6.0 | 10 | 356.2 |
| 12 | 6.1 – 7.0 | 10 | 376.0 |
| 13 | 7.1 – 8.0 | 10 | 387.6 |

Figure 1: Mean pragmatic scores across age



The 13 groups were subjected to statistical analysis using paired t-test to find if there is a significant difference between them. (i.e. at 6 – month’s age intervals). The results revealed significant group differences between group 2 and group 3 (i.e. between the ages 7 months to 1 year and year 1 month to 1-year months) at 0.5 level of significance, for a two-tailed distribution. There was no statistically significant difference between other groups as shown in table 2. (Blank row in the table indicates that there was no room for comparison)

Table 2: Pragmatic skills comparison at six months - age intervals.

| S.No. | Age in years | Group | Group comparison | t- value | Significance |
|-------|--------------|-------|------------------|----------|--------------|
| 1 | 0.0 – 0.6 | 1 | - | - | - |
| 2 | 0.7 – 1.0 | 2 | 1 & 2 | 0.127 | NS |
| 3 | 1.1 – 1.6 | 3 | 2 & 3 | 2.162 | S |
| 4 | 1.7 – 2.0 | 4 | 3 & 4 | 0.409 | NS |

| | | | | | |
|----|-----------|----|---------|-------|----|
| 5 | 2.1 – 2.6 | 5 | 4 & 5 | 0.009 | NS |
| 6 | 2.7 – 3.0 | 6 | 5 & 6 | 0.008 | NS |
| 7 | 3.1 – 3.6 | 7 | 6 & 7 | 0.178 | NS |
| 8 | 3.7 – 4.0 | 8 | 7 & 8 | 0.438 | NS |
| 9 | 4.1 – 4.6 | 9 | 8 & 9 | 0.298 | NS |
| 10 | 4.7 – 5.0 | 10 | 9 & 10 | 0.627 | NS |
| 11 | 5.1 – 6.0 | 11 | 10 & 11 | 0.680 | NS |
| 12 | 6.1 – 7.0 | 12 | 11 & 12 | 0.001 | NS |
| 13 | 7.1 – 8.0 | 13 | 12 & 13 | 0.017 | NS |

NS – not significant; S – significant.

Therefore statistical comparison was performed across one – year age intervals (i.e. 0 months to 1 year; 1 year one month to 2 years; 2 years 1 month to 3 years etc.,). Statistically significant differences were present between 0 months to 1 year of age and 2.1 to 3.0 years of age, at 0.5 level of significance for a two-tailed distribution. Table 3 shows the statistical significance for groups at age intervals of 1 year, using the paired t test.

Table 3: Pragmatic skills comparison at 1-year intervals.

| S.No. | Age in years | Group | Group compared | t- value | Significance |
|-------|--------------|-------|----------------|----------|--------------|
| 1 | 0.0 – 1.0 | 1 | - | - | - |
| 2 | 1.1 – 2.0 | 2 | 1 & 2 | 2.492 | S |
| 3 | 2.1 – 3.0 | 3 | 2 & 3 | 5.271 | S |

| | | | | | |
|---|-----------|---|-------|--------|----|
| 4 | 3.1 – 4.0 | 4 | 3 & 4 | 0.000 | NS |
| 5 | 4.1 – 5.0 | 5 | 4 & 5 | 0.0217 | NS |
| 6 | 5.1 – 6.0 | 6 | 5 & 6 | 0.451 | NS |
| 7 | 6.1 – 7.0 | 7 | 6 & 7 | 0.001 | NS |
| 8 | 7.1 – 8.0 | 8 | 7 & 8 | 0.017 | NS |

NS – not significant; S – significant.

As the data up to three years of age were significant when compared to intervals at one year of age; statistical analysis was done using the paired t test from three years to eight years grouped at age intervals of 2 years, but there was no statistically significant difference. The results are illustrated in table 4.

Table 4: Pragmatic skills comparison across two years.

| S.No. | Age in years | Group | Group's compared | t - value | Significance |
|-------|--------------|-------|------------------|-----------|--------------|
| 1 | 3.1 – 5.0 | 1 | - | - | - |
| 2 | 5.1 – 7.0 | 2 | 1 & 2 | 0.000 | NS |
| 3 | 7.0 – 8.0 | 3 | 2 & 3 | 0.000 | NS |

NS – not significant

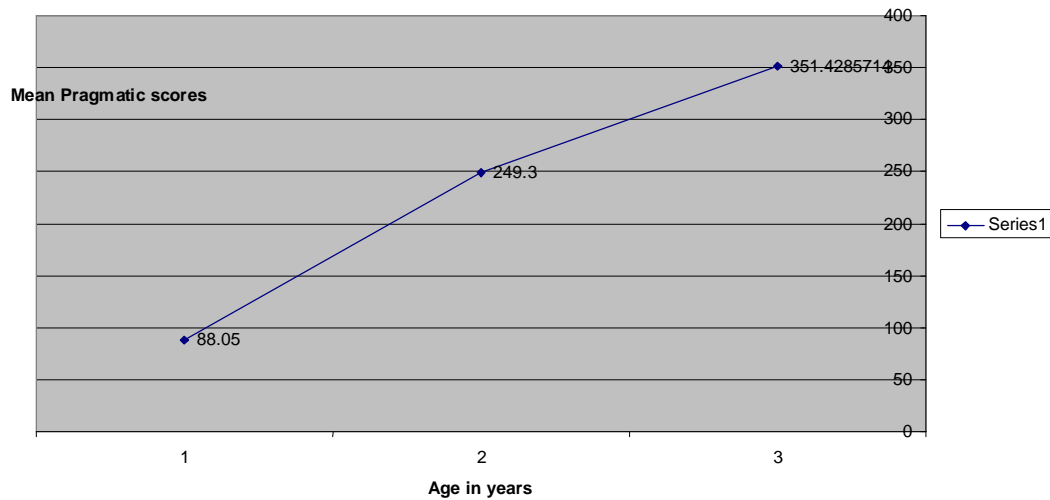
A comparison was made on the results of statistical data obtained from the paired t test, administered in three different conditions. Viz. between 6 months age intervals, between 1-year age intervals, and between 2 years age intervals. It was clear that, there were significant between group differences at 0.5 level of significance, for two-tailed distribution between the following age groups:

1. Zero to one year.
2. One year one month to two years.
3. Two years to three years.

Therefore, these three age groups exhibited statistically significant between-group difference, that is, there existed a significant improvement in pragmatic abilities in these three groups with advancing age, birth to three years respectively

In essence, the present study reveals that the three empirical groups form hallmark in the sequence of development of pragmatic abilities, after which there is a plateau until 8 years of age. Figure 2 shows the graphical representation of the development of pragmatic abilities at these three age levels.

Figure 2: Pragmatic quotient – 3 empirical groups



In addition, the data was analyzed to find out, if there existed differences in pragmatic abilities across gender both within groups and across the groups. Table 5 shows the results of statistical analysis using the paired t test across the different age groups and gender.

Table 5: Age vs. Gender comparison

| S.No. | Age in years | No of male subjects | No. of female subjects | t-value | Significance |
|-------|--------------|---------------------|------------------------|---------|--------------|
| 1 | 0.0 – 1.0 | 8 | 10 | 0.101 | NS |
| 2 | 1.1 – 2.0 | 12 | 6 | 0.200 | NS |
| 3 | 2.0 – 8.0 | 45 | 44 | 0.000 | NS |

NS – not significant

The findings revealed that there exists no significant differences across groups and gender, that is, male and female subjects performed in a similar fashion with respect to the pragmatic skills studied.

Standardization

The standard deviations of the scores were computerized and the norms were established at the level of two standard deviations. Table 6. shows the standard deviation and the normative range of +/- 2 SD, which can be used as a norm for administering this data to clinical population, across different ages.

Table 6: Standardization of the protocol

| S.No. | Age in years | Mean | SD | 2SD | Normative – 2SD | Normative +2SD |
|-------|--------------|-------|-------|--------|-----------------|----------------|
| 1 | 0.0 – 0.6 | 38.9 | 18.83 | 37.66 | 1.3 | 76.5 |
| 2 | 0.7 – 1.0 | 52.6 | 15.03 | 30.16 | 22.44 | 82.76 |
| 3 | 1.1 – 1.6 | 114.1 | 26.99 | 53.98 | 60.30 | 168.08 |
| 4 | 1.7 – 2.0 | 146.6 | 38.76 | 77.52 | 69.08 | 224.12 |
| 5 | 2.1 – 2.6 | 210.7 | 67.91 | 135.82 | 74.88 | 346.52 |
| 6 | 2.7 – 3.0 | 287.9 | 57.80 | 115.60 | 172.30 | 403.50 |

| | | | | | | |
|----|-----------|-------|-------|--------|--------|--------|
| 7 | 3.1 – 3.6 | 310.4 | 54.0 | 108.00 | 202.40 | 418.40 |
| 8 | 3.7 – 4.0 | 328.4 | 48.45 | 96.90 | 231.50 | 425.30 |
| 9 | 4.1 – 4.6 | 347.9 | 28.24 | 56.48 | 290.52 | 404.38 |
| 10 | 4.7 – 5.0 | 353.5 | 24.98 | 49.96 | 303.54 | 403.46 |
| 11 | 5.1 – 6.0 | 356.2 | 12.20 | 24.4 | 331.8 | 380.6 |
| 12 | 6.1 – 7.0 | 376.0 | 16.03 | 32.06 | 343.94 | 408.06 |
| 13 | 7.1 – 8.0 | 387.6 | 11.71 | 23.42 | 364.18 | 411.02 |

While administering to clinical population, any score, which falls below -2SD as per the established norms, may be taken as an indicator of pragmatic disability for that particular age range.

From the data, the age of acquisition of the pragmatic skills can be interpreted. For such mastery, a fifty percent criteria was used, that is within the empirical group, for each question the mean value was obtained, and if that value equals '2', then that particular skill is said to be acquired. Table 7 shows the acquisition of different pragmatic skills across age.

Table 7: Acquisition of Pragmatic skills

| S.No | Age in years | Pragmatic skills |
|------|--------------|---|
| 1. | 0.0 – 1.0 | Physical proximity. Communicative intent. Eye contact. Gaze exchange. Body posture. Smiling. Attention. |

| | | |
|---|-----------|--|
| | | Facial expression. |
| 2 | 1.1 – 2.0 | <p>Communicative intent</p> <p>Joint attention.</p> <p>Giving.</p> <p>Pointing (visual gesture cues)</p> <p>Nonverbal turn taking.</p> <p>Requesting objects, actions and information.</p> <p>Refusing / Rejection / Denial.</p> <p>Greeting</p> <p>Communicative games &</p> <p>Intelligibility.</p> |
| 3 | 2.1 – 8.0 | <p>Commenting objects and actions.</p> <p>Communicative games.</p> <p>Informing.</p> <p>Acknowledging.</p> <p>Answering questions.</p> <p>Topic initiation.</p> <p>Topic maintenance.</p> <p>Change.</p> <p>Selection / Choice making.</p> <p>Continuation</p> <p>Adding new information.</p> <p>Response.</p> <p>Clarification.</p> |

| | | |
|--|--|---|
| | | Repairs / Revisions. Pause time. Interruption / Overlap. Feedback to speakers. Adjacency. Contingency. Quantity and Conciseness. Presupposition. Code switching. Politeness. Reciprocity. Anticipation. Proxemics. Permission directives. Indirect responses. Stylistic variations. Narratives. Perspective taking. Persuasion. Opining. Referential communication. |
|--|--|---|

Combining the results from table 7 and the questionnaire, which was developed and used in this study (as shown in appendix D), an age wise checklist for testing

pragmatic skills, was framed and incorporated specific questions, which can be used with clinical population. (as shown in appendix E.).

This is termed as the “Developmental Pragmatic Protocol” which can be used in assessment and identification of pragmatic disabilities, by using the normative (i.e. – 2SD) established in this study. This would also help the Speech language pathologist to provide intervention services along the developmental continuum, which could be implemented by selecting age appropriate pragmatic abilities as goals in the intervention process.

DISCUSSION

The objective of the study was to develop a pragmatic protocol that would help to identify sequential pragmatic milestones; to aid in the assessment, identification and diagnosis of pragmatic disabilities, and to allow intervention based on a developmental schedule. A protocol was developed specific to the present study, in order to study the emergence of pragmatic abilities in normally developing children across a wide age range from birth to 8 years. One hundred and thirty children, grouped into thirteen groups were administered the questionnaire by means of parental interview; the pragmatic abilities were compared across age and gender. The obtained data was standardized for its use in the assessment of pragmatics.

The results revealed several points of interest; the mean pragmatic quotient was found to increase with increase in the subject's age. This is very important, simply because it proves the basic assumption of the study indicating that the pragmatic abilities follow a developmental continuum. This finding is in consonance to the studies conducted by Woolfolk & Lynch (1982); wherein the pragmatic abilities increased gradually from two months of age to the high – school age level. Gallagher (1977) Golinkoff (1986); Brinton, et al (1986); Alexander, Wetherby & Prizant (1994), studies wherein the conversational repair strategies increased gradually with age support this finding. James & Seebach (1982) found that older children (4.5 years) performed better than 2.3 years olds in terms of information seeking and conversational directives. Lloyd (1991) reported gradual improvement in the nature of referential communication skills in children between 7 and 10 years of age. In the present study, also there was an increment in the mean pragmatic quotients as a function of age, in each of the thirteen groups studied. The mean pragmatic scores however, were not statistically significant for

comparison across all the age groups (at intervals of 6 months of age). A significant difference was present between the age intervals of 0.7 months to 1 year versus 1.1 to 1.6 years. Such a finding is interesting as it indicates significant transition from 6 months to 1 year with respect to the emergence of pragmatics, when compared with existing western studies (Woolfolk & Lynch, 1982).

In Woolfolk & Lynch's, study there exist differences among two months to ten months (eye contact, gaze exchange, joint attention, smiling, pointing and vocalization); 10 months to 16 months (giving, nonverbal turn taking, speech acts, etc.); eighteen months to thirty months (symbolic play, imaginative speech, beginning of discourse, answering questions, topic change, etc.). In the same study, between three and four years (code switching, conversational turn taking), four and five years (antonyms, synonyms, meta-linguistic functions, indirect requests), grade school age (using puns, stories and discourse), etc., seemed to develop.

In elaboration, the present findings reveal pragmatic skills like physical proximity, communicative intent, eye contact, gaze exchange, body posture, smiling, attention and facial expression, to develop within *one year of age*. Skills like communicative intent, joint attention, giving, visual gestures, non verbal turn taking, requesting, greeting, communicative games and intelligibility, develop between *one and two years* of age; all the other parameters studied emerge between *two and eight years* of age. The present finding clearly reveals the acquisition of pragmatic abilities along a developmental continuum with increasing maturity of the pragmatic skills.

There is a considerable amount of overlap in the acquisition of pragmatic abilities noticed between the current study and the one conducted by Woolfolk & Lynch (1982), although they differ in terms of chronological manifestation. For example, skills like pointing, visual gestures (are developed between 1 to 2 years in the current study, and

between 10 to 16 months in Woolfolk & Lynch's study and narrative discourse abilities are developed after 2 years in the current study, whereas between 18 and 30 months in Woolfolk & Lynch's study. Therefore, it may be assumed that these skills develop much later in Indian children (at least of the current investigation) than western children. It may also be observed that this variability may be throwing light on the cultural variations and child rearing practices during the developmental period. Owens, 1998, states that, within the Asian context, children are expected to be seen and not heard, and they are not supposed to talk during meals and in school, children are discouraged from interrupting teachers generally and therefore may appear passive when compared to the western data.

Comparison of the mean pragmatic scores at age intervals of one year revealed some interesting findings like, the perlocutionary skills (e.g. physical proximity, eye contact, smiling., etc.) are developed by one year of age, and speech acts (e.g. requesting, greeting, commenting., etc.) begin to develop although not completely, between one and two years of age. This clearly indicates a clear significant and noticeable transition between the first and second year of development. Similarly, significant difference was present between the second and third years of development. This finding is in agreement with that of Woolfolk & Lynch (1982); where the pragmatic abilities differ between ten and sixteen months and between eighteen and thirty months of age; with respect to speech acts, turn taking and discourse skills.

Another comparison of pragmatic abilities at age intervals of two years revealed no significant difference among children of three and five years of age; five and seven years of age, as well as six and eight years of age. This is in consonance to that of Muma (1978), where the study revealed differences only between three and seven years versus behaviors above seven years.

Such a comparison indicates that pragmatic abilities, show probably culture related hallmarks in their development specific to the Indian context, and these steps occur at one-year age intervals up to three years of age. After the age of three years, although major / significant triggers do not take place, there is a linear increase in pragmatic maturity. There exists a qualitative difference in the mean pragmatic quotients across six-month age interval with respect to various discourse abilities.

This finding throws light on the fact that, there is a smooth blending in the developmental maturity of pragmatic abilities after three years of age up to adolescence though with steady linear increase. For instance perlocutionary skills emerge within one year of age and within this one-year interval, children above six months show better performance than children below six months; like wise speech acts are acquired between one and two years, and narratives and discourse abilities emerge between two and eight years, and correspondingly older children perform better than younger ones gradually. Probing into the details of social and discourse abilities, these phenomena explain lags in pragmatic emergence in Indian children. Skills like bedtime story reading do not generally exist in the Indian context, but in western counterparts, such routines receive emphasis; such experience probably enriches the meta-linguistic maturity earlier in western children. In addition, Indian children, attend schooling at a very young age, this may have a bearing on the child's socialization, and discourse abilities, within the social milieu (non-peer groups and social groups). This finding can be correlated with the south Indian culture and its practices, where, children are expected to be passive, indicating culture has a major influence on pragmatic language functions.

The present study finds that there is no difference in pragmatic abilities across gender, up to eight years of age, but there may be gender differences beyond that period and it needs to be explored in the future. Such differences may exist, owing to societal

differences such as, giggling which may indicate shyness for female children, but for male children, inhibition for example may be an indication of shyness. Such differences may occur in the adolescent and pre adolescent stages too but need to be explored in the future.

The obtained results, with respect to the acquisition of pragmatic skills, would be useful in assessing children with pragmatic language impairments (PLI). In this perspective, the present study standardized the mean pragmatic quotient using $-2SD$ criteria, therefore any child performing below $-2SD$ from the mean pragmatic scores, can be labeled as pragmatic language impaired. Literature on the assessment of pragmatic abilities, till date has failed to correlate developmental sequence in assessment especially so in the Indian context. In the western data, the checklists intend to identify presence or absence of pragmatic behavior's rather than identifying developmental sequences. The current study is the first of its kind to integrate developmental sequence in assessing pragmatic abilities. However, the findings require further empirical clinical support to obtained administering the protocol across different varieties of clinical population, paving way for further research investigations.

The results also provide stages or milestones of pragmatic skills across the age groups investigated in the present study. This by itself would serve as a preliminary or screening tool to identify PLI. In addition, the skills enlist a developmental order, which would help Speech-language pathologists to frame appropriate goals in planning intervention for children with PLI.

SUMMARY AND CONCLUSIONS

The study of child language, with the advent of the pragmatic revolution (Dunchan, 1984) has taken a turn towards an understanding of the rules governing the use of language in a social context. It is now realized that in addition to learning the phonologic, semantic and syntactic rules of language, a child must also master the rules that underlie how language is used for the purpose of communication (Hymes, 1971). Pragmatic accounts of language development try to characterize children's growing communicative competence (Bates, 1976). There is an intricate relationship between pragmatic and communicative context in any community implying that pragmatic behavior is culture – specific. Pragmatics can be studied along the domains of perlocutionary (e.g. physical proximity, attention, eye contact, etc.) locutionary (e.g. speech acts, topic, turn taking, discourse skills, and verbal or paralinguistic aspects), and illocutionary skills (speakers reason for communicating).

Assessment in the area of pragmatics is still in infancy and knowledge of pragmatics is far from complete. There are not many studies available on pragmatics in Indian languages; even in western countries, standard assessments are very few. Though plenty of research literature is available for western population, there are hardly any reported studies in our subcontinent. Hence, this study was the first of its kind to explore the development of pragmatics and utilize the developmental norms in assessment of pragmatic abilities in the Indian context.

The aim of the study was to develop a protocol for pragmatics, which would help to identify sequential pragmatic milestones; help in identification and diagnosis of pragmatic disabilities and allow intervention based on a developmental schedule, hence

the review constituted a vital part of the study. Based on the review, different pragmatic skills were pooled, a hundred item questionnaire along the domains of perlocutionary, locutionary and illocutionary

was developed by the investigator and was subjected to content validation by ten Speech-Language pathologist's (SLP's). Questions that were in 60 percent agreement across SLP's were taken in the final protocol.

The validated protocol was administered across 130, normally developing children from birth to eight years by means of parental interview. Each item was scored an ordinal scale for the degree of presence of the behavior. The mean pragmatic scores of the children within and across groups were compared, and statistically analyzed using the paired 't' test. In addition, the age of acquisition of the pragmatic skills was derived and the normative data for the same was established.

The results indicated that the mean pragmatic quotient scores increased linearly with increase in age, thereby indicating a developmental trend. (i.e. the mean pragmatic scores increased gradually across the 13 groups of subjects). This finding is in consonance to the studies conducted by Woolfolk & Lynch (1982); Gallagher (1977) Golinkoff (1986); Brinton, et al (1986); Alexander, Wetherby & Prizant (1994); James & Seebach (1982) and Lloyd (1991).

In the present study, the mean pragmatic scores however, were not statistically significant for comparison across all the age groups (at intervals of 6 months of age). A significant difference was present between the age intervals of 0.7 months to 1 year versus 1.1 to 1.6 years. Such a finding is interesting as it indicates substantial transition from 6 months to 1 year with respect to the emergence of pragmatics, when compared with existing western studies.

A quantitative difference present for three age groups (birth to 1 year; one to two years, and two to eight years) may reflect hallmarks in the development of pragmatic skills. Results also indicate that pragmatic development reaches a plateau after three years of age up to eight years of age and pragmatic development after eight years of age needs further exploration.

The pragmatic quotient scores were compared across gender under two conditions viz. in general for all the 130 subjects studied, and for each group taken separately. There exists no significant difference in the pragmatic abilities across gender, in the Indian context.

Mastery of pragmatic abilities was also explored with criteria of 50 percent accuracy (see table 9). The obtained pragmatic scores were standardized to $\pm 2SD$ level, this can be used with different clinical population, a score anywhere below $-2SD$ can be labeled as pragmatic impairment.

The outcome of the study is the protocol focusing on the development of pragmatic skills that can be used, across a wide variety of clinical populations, thereby aiding in diagnosis / assessment. The milestones checklist can be also used for screening purposes. Based on the mastery criteria, clinical goals for therapy can be taken up from the protocol.

The present study was based on normally developing Tamil speaking children, hailing from a middle socio economic status, but there may be deviances observed across different languages, cultures as well as different socio economic strata and these aspects require further exploration.

LIMITATIONS OF THE STUDY:

1. The parental interview method was used in the present study. If videotaped samples were analyzed different / better outcomes would have been derived; and this procedure may exclude parental bias.
2. Only Tamil speaking children were taken.
3. All the children studied were from a social economic status III (SES III = middle class).

IMPLICATIONS FOR FURTHER RESEARCH:

1. Different socio-economic stratus groups can be compared using the protocol.
2. Different regional and cultural populations can be compared.
3. Validity across different clinical populations can be done.
4. The same study may be taken up using a different methodology (i.e. video recording of the child's behavior) along with parental interview.

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Appendix: A

POOLED ITEMS FOR THE PROTOCOL

Perlocutionary: The effect of the utterance on the listener, evaluated in terms of listener's action, thoughts, acts, belief's etc.

1. Physical proximity.
2. Communicative intent.
3. Eye contact.
4. Gaze exchange.
5. Body posture.
6. Smiling.
7. Attention.
8. Facial expression.
9. Joint attention.
10. Giving.
11. Pointing (visual gesture cues)
12. Nonverbal turn taking.

Locutionary & Illocutionary: The act of speaking is the locutionary act, the speaker's reason for communicating.

A. SPEECH ACTS:

1. Requesting objects, actions and information.
2. Refusing / Rejection / Denial.
3. Greeting.
4. Commenting objects and actions.
5. Communicative games.
6. Informing.

7. Acknowledging.
8. Answering questions.

B. TOPIC:

1. Initiation.
2. Maintenance.
3. Change.
4. Selection / Choice making.
5. Continuation
6. Adding new information.

C. TURN TAKING:

1. Response.
2. Clarification.
3. Repairs / Revisions.
4. Pause time.
5. Interruption / Overlap.
6. Feedback to speakers.
7. Adjacency.
8. Contingency.
9. Quantity and Conciseness.
10. Presupposition.
11. Code switching.
12. Politeness.
13. Reciprocity.
14. Anticipation.
15. Proxemics.

16. Permission directives.

17. Indirect responses.

D. DISCOURSE:

1. Lexical selection and use.

- Specificity.
- Accuracy

2. Lexical cohesion.

3. Stylistic variations.

4. Narratives.

5. Perspective taking.

6. Persuasion.

7. Opining.

8. Referential communication.

E. VERBAL OR PARALINGUISTIC:

1. Intelligibility.

2. Vocal intensity.

3. Voice quality.

4. Prosody.

5. Fluency.

Appendix. B.

CONTENT VALIDATION

The following are either question aimed to track the pragmatic abilities of children, please rate them as **appropriate** (indicated as 1) or **inappropriate** (indicated as 0). Please tick whichever is appropriate.

Physical proximity: The distance that the speaker and listener maintain during conversation.

1. Does your child sit close to you, while talking with you?

0 inappropriate 1 appropriate

2. Does your child call out for you, to tell you about an event or ask for help when you are in another corner of the house?

0 inappropriate 1 appropriate

Communicative intent: A speaker's goal or objective in formulating a linguistic message.

3. Does your child convey to you, any need or help during play, or conversation?

0 inappropriate 1 appropriate

4. Does your child indicate his or her needs or desires by means of gestures or when talking?

0 inappropriate 1 appropriate

Eye contact: Looking at the listener while communicating.

5. Does your child look in the eye while talking?

0 inappropriate 1 appropriate

6. Does your child turn the head towards the speaker (father, mother, sister, grandmother etc., when spoken to?

0 inappropriate 1 appropriate

Gaze exchange: A gaze pattern in which caregivers and infants maintain contact in long alternating intervals.

7. Does your child look at your eye while engaged in play for longer periods?

0 inappropriate 1 appropriate

8. Does your child look at your eyes when attempting to communicate with you?

0 inappropriate 1 appropriate

Body posture:

9. Does your child lean forward or maintain any other body posture appropriate to the situation?

0 inappropriate 1 appropriate

10. Does your child maintain a formal balanced posture while talking with superiors and composed posture at home and friends?

0 inappropriate 1 appropriate

Smiling:

11. Does your child smile appropriately while greeting others?

0 inappropriate 1 appropriate

12. Does your child attempt to smile when encountering known people?

0 inappropriate 1 appropriate

Attention:

13. Does your child attend to the speaker while listening to them, or while engaged in a conversation?

0 inappropriate 1 appropriate

14. Does your child pay attention to the message that is being conveyed?

0 inappropriate 1 appropriate

Facial expression:

15. Does your child maintain appropriate facial expressions?

Example, a positive expression as in the corners of the mouth turned upward, a negative expression as a downward turn & a neutral expression as the face is in resting position.

0 inappropriate 1 appropriate

16. Does your child change his / her facial expression with respect to his emotion or as per the situation at?

0 inappropriate 1 appropriate

Joint attention: Communicative acts used to direct other's attention to an object, event, or topic of a communicative act.

17. Does your child signal you to attend to an object, event, or topic during play / interaction or conversation?

0 inappropriate 1 appropriate

18. Does your child seek your / attendants attention into his / her play or communication?

0 inappropriate 1 appropriate

Giving:

19. Does your child give you an object or toy when asked for? (whether the child likes it or not)

0 inappropriate 1 appropriate

20. Does your child give things when required & during mutual play?

Example: As if asking for it.

0 inappropriate 1 appropriate

Pointing / Visual gestures:

21. Does your child point to the desired object to indicate needs or express likes?

0 inappropriate 1 appropriate

22. Does your child point to an object or event in an attempt to describe the event?

0 inappropriate 1 appropriate

Nonverbal turn taking:

23. Does your child wait for his or her turns while engaged in play?

Example: waiting for a turn when throwing a ball and catching it.

0 inappropriate 1 appropriate

24. Does your child use eye contact, or gestures to signal his turn?

Example: waving the hand to indicate that it is his or her turn.

0 inappropriate 1 appropriate

Requesting objects, actions and information: Gestures and / or utterances, those direct the listener, to provide information about an object, action or location.

25. Does your child use gestures or use utterances that require an answer with regard to the information involved in the event or object?

0 inappropriate 1 appropriate

26. Does your child request for or ask appropriate question to obtain information about objects, actions or events?

0 inappropriate 1 appropriate

Refusing / Rejection / Denial: Gestures and / or utterances that indicate unwillingness to accept or consider.

27. Does your child expresses dislike (gestures, vocalization or utterances) and denies undesirable objects or things?

0 inappropriate 1 appropriate

28. Does your child reject toys and / or eatables, which he or she does not like?

0 inappropriate 1 appropriate

Greeting:

29. Does your child convey greetings like “good morning”, “hello” etc., in appropriate situations?

Example: “good morning” when he sees his or her teacher: “hi” or “hello” when he or she sees his or her friend etc.

0 inappropriate 1 appropriate

30. Does your child convey wishes appropriately while conversing?

0 inappropriate 1 appropriate

Commenting on objects and actions:

31. Does your child comment on objects, actions, or locations?

Example: Showing a dirty dress and commenting that it is very dirty etc,

0 inappropriate 1 appropriate

32. Does your child use utterances that serve to describe or comment on the nature of the objects, actions and locations?

0 inappropriate 1 appropriate

Communicative games:

33. Does your child play games, which require participation by a group of children / players?

Example: Peek-a- boo, hides and seek etc,

0 inappropriate 1 appropriate

34. Does your child involve in playing games as a group, which includes group cooperation and communication?

Example: Throwing the ball.

0 inappropriate 1 appropriate

Informing: Utterances that state facts express beliefs, attitudes & emotions in order to describe an event.

35. Does your child use utterances, which state facts, expresses beliefs, attitudes, or emotions that serve to describe an event?

0 inappropriate 1 appropriate

36. Does your child use utterances that provide information on an object, event or location?

0 inappropriate 1 appropriate

Acknowledging:

37. Does your child use utterances or gestures that serve to appreciate the other person?

Example: Saying, "Thank you".

0 inappropriate 1 appropriate

38. Does your child appreciate the help he / she received by using appropriate utterances?

0 inappropriate 1 appropriate

Answering questions:

39. Does your child use gestures and / or utterances that acknowledge the speaker's statements, questions or requests?

0 inappropriate 1 appropriate

40. Does your child answer question put forth to him / her appropriately?

0 inappropriate 1 appropriate

Topic initiation: Introduction of a new topic in discourse

41. Does your child attempt to start a conversation, which is appropriate to the context?

0 inappropriate 1 appropriate

42. Does your child indulge in beginning a new topic in continuing conversation?

0 inappropriate 1 appropriate

Maintenance: Coherent maintenance of topic throughout discourse.

43. Does your child stick to a relevant topic without deviating from it during conversation?

0 inappropriate 1 appropriate

44. Does your child return to a relevant topic in spite of the changes or shift in the conversation?

0 inappropriate 1 appropriate

Change:

45. Does your child move from one topic to another over a course of conversation?

0 inappropriate 1 appropriate

46. Does your child talk about a different topic from the current if the situation demands?

0 inappropriate 1 appropriate

Selection / Choice making:

47. Does your child select a topic appropriate to the context?

0 inappropriate 1 appropriate

48. Is your child able to choose one topic against many others for purpose of conversation?

0 inappropriate 1 appropriate

Continuation:

49. Does your child continue with the topic in existence even in changing conversation?

0 inappropriate 1 appropriate

50. Is your child able to maintain the topic throughout the course of conversation?

0 inappropriate 1 appropriate

Adding new information:

51. Does your child contribute more information to existing information during conversation?

0 inappropriate 1 appropriate

52. Does your child offer new information with connection to the previous information in a conversation?

0 inappropriate 1 appropriate

Response: Responding as a listener to speech acts.

53. Does your child listen to requests, denials and comments in appropriate situational contexts?

0 inappropriate 1 appropriate

54. Does your child pay attention to what others tell him / her?

Example: listening to someone who is narrating an event etc,

0 inappropriate 1 appropriate

Clarification:

55. Does your child stop during conversation to enquire his / her doubts with respect to the topic?

0 inappropriate 1 appropriate

56. Does your child clarify his / her doubts while engaged in a conversation appropriately?

0 inappropriate 1 appropriate

Repairs / Revisions:

57. Can the child rephrase the question if the listener has not understood?

0 inappropriate 1 appropriate

58. Is your child able to self-correct his / her mistakes and make appropriate changes during conversation?

0 inappropriate 1 appropriate

Pause time:

59. Does your child maintain appropriate pause time as too short pause time between words in a sentence and a longer pause time between sentences?

0 inappropriate 1 appropriate

60. Does your child use pause / stop appropriately while speaking?

0 inappropriate 1 appropriate

Interruption / Overlap:

61. Does your child talk in between when you are still talking and not finished talking?

0 inappropriate 1 appropriate

62. Does your child indulge in talking along with you?

0 inappropriate 1 appropriate

Feedback to listeners:

63. Does your child use utterances / gestures to show positive or negative reactions?

Example: “yeah”, “really” or head nod to indicate positive reaction.

0 inappropriate 1 appropriate

64. Does your child indicate to you that he / she is not comfortable with what is been said or that he / she likes the situation etc,

0 inappropriate 1 appropriate

Adjacency:

65. Does your child use utterances immediately after the finish of the partner’s utterance?

0 inappropriate 1 appropriate

66. Is your child able to start of the conversation immediately after the speaker ends?

0 inappropriate 1 appropriate

Contingency:

67. Does your child use utterance that adds information to the previous utterance?

0 inappropriate 1 appropriate

68. Does your child offer additional information to a topic while talking?

0 inappropriate 1 appropriate

Quantity / conciseness:

69. Does your child provide the required information up to the point rather than too much of information while engaged in a conversation?

0 inappropriate 1 appropriate

70. Is your child able to answer up to the point?

0 inappropriate 1 appropriate

Presupposition: Assumptions made about the beliefs and intentions of other people.

71. Does your child assume the intentions of the communicating partner?

0 inappropriate 1 appropriate

72. Does your child understand the intentions of the partner and respond appropriately during discourse?

0 inappropriate 1 appropriate

Code switching:

73. Does your child simplify his speech when talking to young children?

0 inappropriate 1 appropriate

74. Does your child talk differently to young children, peers and older individuals?

0 inappropriate 1 appropriate

Politeness:

75. Does your child always use polite forms when talking to elders and in formal contexts?

Example: usage of “please”

0 inappropriate 1 appropriate

76. Does your child talk politely whenever appropriate?

0 inappropriate 1 appropriate

Reciprocity:

77. Does your child indicate opinions, intentions as a response to what you had told or meant to explain to your child?

0 inappropriate 1 appropriate

78. Does your child respond mutually when talked to?

0 inappropriate 1 appropriate

Anticipation:

79. Does your child extend his / her arm to indicate that he needs to be picked up?

0 inappropriate 1 appropriate

80. Does your child use gestures or indicate to you verbally that he / she anticipate (a certain thing / sequence to follow)?

0 inappropriate 1 appropriate

Proxemics: The communicative use of interpersonal space.

81. Does your child maintain distance with the communicating partner appropriately in terms of the language?

Example: The usage of kinship terms with peers and formal language with superiors and adults.

0 inappropriate 1 appropriate

82. Does your child use appropriate space with the communicating partner?

0 inappropriate 1 appropriate

Permission directives:

83. Does your child ask permission when necessary?

Example: Asking permission to go out and play late in the evening.

0 inappropriate 1 appropriate

84. Does your child hesitate to ask you permission, predicting that you may not allow?

0 inappropriate 1 appropriate

Indirect response:

85. Does your child use verbal strategies, which do not directly refer to what he/ she wants?

0 inappropriate 1 appropriate

86. Is your child able to indicate intentions in an indirect fashion?

0 inappropriate 1 appropriate

Lexical selection and use: Lexical items of best fit considering the text.

87. Is your child able to be specific and make appropriate lexical choices in discourse to convey information clearly?

0 inappropriate 1 appropriate

88. Does your child use words appropriately with respect to the context?

0 inappropriate 1 appropriate

Stylistic variations: Adaptations used by the speaker under various dyadic conditions.

89. Does your child adapt his / her speech under different conditions?

Example: polite forms, different syntax, changes in voice quality etc,

0 inappropriate 1 appropriate

90. Does your child speak differently in different situations?

0 inappropriate 1 appropriate

Narratives: Taking an extended turn in discourse to tell a story, explain an event.

91. Is your child able to narrate an event?

Example: Tell directions as how to go to a place, explain an observed phenomenon like an accident, which he/ she had experienced.

0 inappropriate 1 appropriate

92. Does your child narrate stories?

0 inappropriate 1 appropriate

Perspective taking:

93. Is your child able to support for one side of an issue by judging its logic over another?

0 inappropriate 1 appropriate

94. Does the child make observations of situations or events?

0 inappropriate 1 appropriate

Opining:

95. Is your child able to offer his / her opinion when a problem situation arises?

0 inappropriate 1 appropriate

96. Does your child opt to give opinions in everyday situations?

0 inappropriate 1 appropriate

Referential communication: Providing too much or too little information for adequate processing by the listeners.

97. Does your child provide adequate information as per the situational demands?

Example: Providing extensive explanation to an unclear situation.

0 inappropriate 1 appropriate

98. Does your child explain in detail about the topic when the conversation partner does not agree with him / her?

0 inappropriate 1 appropriate

Intelligibility: The extent to which the message is understood. (Includes vocal intensity, vocal quality, prosody, fluency etc.)

99. Does your child use speech that is acceptable; not too loud or too soft; appropriate in quality, and shows use of intonation, stress and pitch to support the communicative / linguistic intention of the message?

0 inappropriate 1 appropriate

100. Is your child able to talk clearly?

0 inappropriate 1 appropriate

Appendix. C

NIMH SOCIO-ECONOMIC STATUS, REVISED VERSION (2004)

| A. | Pooled Monthly Income | | Score |
|-----------|------------------------------|--|--------------|
| | 1. | Rs. 5000 or below | 1 |
| | 2. | Rs. 5001 – Rs. 10000 | 2 |
| | 3. | Rs. 10001 – Rs. 15000 | 3 |
| | 4. | Rs. 15001 – Rs. 20000 | 4 |
| | 5. | Rs. 20001 & above | 5 |
| B. | Highest Education | | Score |
| | 1. | Illiterate | 1 |
| | 2. | Primary / Secondary School | 2 |
| | 3. | Matriculation | 3 |
| | 4. | Graduation | 4 |
| | 5. | Post Graduation & Above | 5 |
| C. | Occupation | | Score |
| | 1. | Unskilled labor/unemployed/Daily Wager | 1 |
| | 2. | Semi-skilled Worker/Class IV Service | 2 |
| | 3. | Skilled/Technical/Class III Service | 3 |
| | 4. | Professional/Class II Service/Blue Collared Jobs | 4 |
| | 5. | Specialized/Class I Services/White Collared Jobs | 5 |

| D. | Family Properties (Immovable & Movable) | | Score |
|-----------|--|------------------------|--------------|
| | 1. | Nil or Below Rs. 50000 | 1 |

| | | | |
|--|--------|--|---|
| | 2. | Between Rs. 50000 to Rs. 1.5 Lakhs | 2 |
| | 3. | Between Rs. 1.5 Lakhs to Rs. 2.5 Lakhs | 3 |
| | 4. | Between Rs. 2.5 Lakhs to Rs. 5.0 Lakhs | 4 |
| | 5. | Above Rs. 5.0 Lakhs | 5 |
| | Total: | | |

(Circle the appropriate score and enter sum into the cell against 'Grand Total'; Interpretative Norms for Obtaining Overall SES: 0-4 is SES I; 5 – 8 is SES II; 9 – 12 is SES III; 13-16 is SES IV; 17-20 is SES V)

Reference:

“NIMH Socio Economic Status Scale (1992)”. Developed & Standardized by Arya, S., and Venkatesan, S. (1992) as part of USAID Project on “A Model of Services for Preschool Children with Handicaps in Rural Areas”. Secunderabad: NIMH.

Appendix. D

PROTOCOL FOR PRAGMATIC SKILLS

The following questions are aimed to track the development of pragmatic skills, please rate the questions based on the following criteria:

| | |
|---|-------------------------------|
| 0 | Almost never / not present. |
| 1 | Very rare / 25% present |
| 2 | Sometimes / 50% present |
| 3 | Often / 75% present |
| 4 | Almost always / 100% present. |

Physical proximity: The distance that the speaker and listener maintain during conversation.

1. Does your child sit close to you, while talking with you?

0 1 2 3 4

2. Does your child call out for you, to tell you about an event or ask for help when you are in another corner of the house?

0 1 2 3 4

Communicative intent: A speaker's goal or objective in formulating a linguistic message.

3. Does your child convey to you, any need or help during play, or conversation?

0 1 2 3 4

4. Does your child indicate his or her needs or desires by means of gestures or when talking?

0 1 2 3 4

Eye contact: Looking at the listener while communicating.

5. Does your child look in the eye while talking?

0 1 2 3 4

6. Does your child turn the head towards the speaker (father, mother, sister, grandmother etc., when spoken to?

0 1 2 3 4

Gaze exchange: A gaze pattern in which caregivers and infants maintain contact in long alternating intervals.

7. Does your child look at your eye while engaged in play for longer periods?

0 1 2 3 4

8. Does your child look at your eyes when attempting to communicate with you?

0 1 2 3 4

Body posture:

9. Does your child lean forward or maintain any other body posture appropriate to the situation?

0 1 2 3 4

10. Does your child maintain a formal balanced posture while talking with superiors and composed posture at home and friends?

0 1 2 3 4

Smiling:

11. Does your child smile appropriately while greeting others?

0 1 2 3 4

12. Does your child attempt to smile when encountering known people?

0 1 2 3 4

Attention:

13. Does your child attend to the speaker while listening to them, or while engaged in a conversation?

0 1 2 3 4

14. Does your child pay attention to the message that is being conveyed?

0 1 2 3 4

Facial expression:

15. Does your child maintain appropriate facial expressions?

Example, a positive expression as in the corners of the mouth turned upward, a negative expression as a downward turn & a neutral expression as the face is in resting position.

0 1 2 3 4

16. Does your child change his / her facial expression with respect to his emotion or as per the situation at?

0 1 2 3 4

Joint attention: Communicative acts used to direct other's attention to an object, event, or topic of a communicative act.

17. Does your child signal you to attend to an object, event, or topic during play / interaction or conversation?

0 1 2 3 4

18. Does your child seek your / attendants attention into his / her play or communication?

0 1 2 3 4

Giving:

19. Does your child give you an object or toy when asked for? (whether the child likes it or not)

0 1 2 3 4

20. Does your child give things when required & during mutual play?

Example: As if asking for it.

0 1 2 3 4

Pointing / Visual gestures:

21. Does your child point to the desired object to indicate needs or express likes?

0 1 2 3 4

22. Does your child point to an object or event in an attempt to describe the event?

0 1 2 3 4

Nonverbal turn taking:

23. Does your child wait for his or her turns while engaged in play?

Example: waiting for a turn when throwing a ball and catching it.

0 1 2 3 4

24. Does your child use eye contact, or gestures to signal his turn?

Example: waving the hand to indicate that it is his or her turn.

0 1 2 3 4

Requesting objects, actions and information: Gestures and / or utterances, those direct the listener, to provide information about an object, action or location.

25. Does your child use gestures or use utterances that require an answer with regard to the information involved in the event or object?

0 1 2 3 4

26. Does your child request for or ask appropriate question to obtain information about objects, actions or events?

0 1 2 3 4

Refusing / Rejection / Denial: Gestures and / or utterances that indicate unwillingness to accept or consider.

27. Does your child expresses dislike (gestures, vocalization or utterances) and denies undesirable objects or things?

0 1 2 3 4

28. Does your child reject toys and / or eatables, which he or she does not like?

0 1 2 3 4

Greeting:

29. Does your child convey greetings like “good morning”, “hello” etc., in appropriate situations?

Example: “good morning” when he sees his or her teacher: “hi” or “hello” when he or she sees his or her friend etc.

0 1 2 3 4

30. Does your child convey wishes appropriately while conversing?

0 1 2 3 4

Commenting on objects and actions:

31. Does your child comment on objects, actions, or locations?

Example: Showing a dirty dress and commenting that it is very dirty etc,

0 1 2 3 4

32. Does your child use utterances that serve to describe or comment on the nature of the objects, actions and locations?

0 1 2 3 4

Communicative games:

33. Does your child play games, which require participation by a group of children / players?

Example: Peek-a- boo, hides and seek etc,

0 1 2 3 4

34. Does your child involve in playing games as a group, which includes group cooperation and communication?

Example: Throwing the ball.

0 1 2 3 4

Informing: Utterances that state facts express beliefs, attitudes & emotions in order to describe an event.

35. Does your child use utterances, which state facts, expresses beliefs, attitudes, or emotions that serve to describe an event?

0 1 2 3 4

36. Does your child use utterances that provide information on an object, event or location?

0 1 2 3 4

Acknowledging:

37. Does your child use utterances or gestures that serve to appreciate the other person?

Example: Saying, “Thank you”.

0 1 2 3 4

38. Does your child appreciate the help he / she received by using appropriate utterances?

0 1 2 3 4

Answering questions:

39. Does your child use gestures and / or utterances that acknowledge the speaker's statements, questions or requests?

0 1 2 3 4

40. Does your child answer question put forth to him / her appropriately?

0 1 2 3 4

Topic initiation: Introduction of a new topic in discourse

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49. Does your child continue with the topic in existence even in changing conversation?

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51. Does your child contribute more information to existing information during conversation?

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53. Does your child listen to requests, denials and comments in appropriate situational contexts?

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54. Does your child pay attention to what others tell him / her?

Example: listening to someone who is narrating an event etc,

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Clarification:

55. Does your child stop during conversation to enquire his / her doubts with respect to the topic?

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57. Can the child rephrase the question if the listener has not understood?

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Example: “yeah”, “really” or head nod to indicate positive reaction.

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68. Does your child offer additional information to a topic while talking?

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Quantity / conciseness:

69. Does your child provide the required information up to the point rather than too much of information while engaged in a conversation?

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Presupposition: Assumptions made about the beliefs and intentions of other people.

71. Does your child assume the intentions of the communicating partner?

0 1 2 3 4

72. Does your child understand the intentions of the partner and respond appropriately during discourse?

0 1 2 3 4

Code switching:

73. Does your child simplify his speech when talking to young children?

0 1 2 3 4

74. Does your child talk differently to young children, peers and older individuals?

0 1 2 3 4

Politeness:

75. Does your child always use polite forms when talking to elders and in formal contexts?

Example: usage of "please"

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76. Does your child talk politely whenever appropriate?

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Proxemics: The communicative use of interpersonal space.

81. Does your child maintain distance with the communicating partner appropriately in terms of the language?

Example: The usage of kinship terms with peers and formal language with superiors and adults.

0 1 2 3 4

82. Does your child use appropriate space with the communicating partner?

0 1 2 3 4

Permission directives:

83. Does your child ask permission when necessary?

Example: Asking permission to go out and play late in the evening.

0 1 2 3 4

84. Does your child hesitate to ask you permission, predicting that you may not allow?

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Indirect response:

85. Does your child use verbal strategies, which do not directly refer to what he/ she wants?

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86. Is your child able to indicate intentions in an indirect fashion?

0 1 2 3 4

Lexical selection and use: Lexical items of best fit considering the text.

87. Is your child able to be specific and make appropriate lexical choices to convey information in the discourse clearly?

0 1 2 3 4

88. Does your child use words appropriately with respect to the context?

0 1 2 3 4

Stylistic variations: Adaptations used by the speaker under various dyadic conditions.

89. Does your child adapt his / her speech under different conditions?

Example: polite forms, different syntax, changes in voice quality etc,

0 1 2 3 4

90. Does your child speak differently in different situations?

0 1 2 3 4

Narratives: Taking an extended turn in discourse to tell a story, explain an event.

91. Is your child able to narrate an event?

Example: Tell directions as how to go to a place, explain an observed phenomenon like an accident, which he/ she had experienced.

0 1 2 3 4

92. Does your child narrate stories?

0 1 2 3 4

Perspective taking:

93. Is your child able to support for one side of an issue by judging its logic over another?

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94. Does the child make observations of situations or events?

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Opining:

95. Is your child able to offer his / her opinion when a problem situation arises?

0 1 2 3 4

96. Does your child opt to give opinions in everyday situations?

0 1 2 3 4

Referential communication: Providing too much or too little information for adequate processing by the listeners.

97. Does your child provide adequate information as per the situational demands?

Example: Providing extensive explanation to an unclear situation.

0 1 2 3 4

98. Does your child explain in detail about the topic when the conversation partner does not agree with him / her?

0 1 2 3 4

Intelligibility: The extent to which the message is understood. (Includes vocal intensity, vocal quality, prosody, fluency etc.)

99. Does your child use speech that is acceptable; not too loud or too soft; appropriate in quality, and shows use of intonation, stress and pitch to support the communicative / linguistic intention of the message?

0 1 2 3 4

100. Is your child able to talk clearly?

0 1 2 3 4

Appendix. E

DEVELOPMENTAL PROTOCOL FOR PRAGMATIC SKILLS

How to score:

| | |
|---|-------------------------------|
| 0 | Almost never / not present. |
| 1 | Very rare / 25% present |
| 2 | Sometimes / 50% present |
| 3 | Often / 75% present |
| 4 | Almost always / 100% present. |

0 to 1 year:

Physical proximity: The distance that the speaker and listener maintain during conversation.

1. Does your child sit close to you, while talking with you?

0 1 2 3 4

2. Does your child call out for you, to tell you about an event or ask for help when you are in another corner of the house?

0 1 2 3 4

Eye contact: Looking at the listener while communicating.

3. Does your child look in the eye while talking?

0 1 2 3 4

4. Does your child turn the head towards the speaker (father, mother, sister, grandmother etc., when spoken to?

0 1 2 3 4

Gaze exchange: A gaze pattern in which caregivers and infants maintain contact in long alternating intervals.

5. Does your child look at your eye while engaged in play for longer periods of time?

0 1 2 3 4

6. Does your child look at your eyes when attempting to communicate with you?

0 1 2 3 4

Body posture:

7. Does your child lean forward or maintain any other body posture appropriate to the situation?

0 1 2 3 4

8. Does your child maintain a formal balanced posture while talking with superiors and composed posture at home and friends?

0 1 2 3 4

Smiling:

9. Does your child smile appropriately while greeting others?

0 1 2 3 4

10. Does your child attempt to smile when encountering known people?

0 1 2 3 4

Attention:

11. Does your child attend to the speaker while listening to them, or while engaged in a conversation?

0 1 2 3 4

12. Does your child pay attention to the message that is being conveyed?

0 1 2 3 4

Facial expression:

13. Does your child maintain appropriate facial expressions?

Example, a positive expression as in the corners of the mouth turned upward, a negative expression as a downward turn & a neutral expression as the face is in resting position.

0 1 2 3 4

14. Does your child change his / her facial expression with respect to his emotion or as per the situation at?

0 1 2 3 4

1 to 2 years:

Joint attention: Communicative acts used to direct other's attention to an object, event, or topic of a communicative act.

15. Does your child signal you to attend to an object, event, or topic during play / interaction or conversation?

0 1 2 3 4

16. Does your child seek your / attendants attention into his / her play or communication?

0 1 2 3 4

Giving:

17. Does your child give you an object or toy when asked for? (Whether the child likes it or not)

0 1 2 3 4

18. Does your child give things when required & during mutual play?

Example: As if asking for it.

0 1 2 3 4

Pointing / Visual gestures:

19. Does your child point to the desired object to indicate needs or express likes?

0 1 2 3 4

20. Does your child point to an object or event in an attempt to describe the event?

0 1 2 3 4

Nonverbal turn taking:

21. Does your child wait for his or her turns while engaged in play?

Example: waiting for a turn when throwing a ball and catching it.

0 1 2 3 4

22. Does your child use eye contact, or gestures to signal his turn?

Example: waving the hand to indicate that it is his or her turn.

0 1 2 3 4

Requesting objects, actions and information: Gestures and / or utterances, that directs the listener, to provide information about an object, action or location.

23. Does your child use gestures or use utterances that require an answer with regard to the information involved in the event or object?

0 1 2 3 4

24. Does your child request for or ask appropriate question to obtain information about objects, actions or events?

0 1 2 3 4

Refusing / Rejection / Denial: Gestures and / or utterances that indicate unwillingness to accept or consider.

25. Does your child expresses dislike (gestures, vocalization or utterances) and denies undesirable objects or things?

0 1 2 3 4

26. Does your child reject toys and / or eatables, which he or she does not like?

0 1 2 3 4

Greeting:

27. Does your child convey greetings like “good morning”, “hello” etc., in appropriate situations?

Example: “good morning” when he sees his or her teacher: “hi” or “hello” when he or she sees his or her friend etc.

0 1 2 3 4

28. Does your child convey wishes appropriately while conversing?

0 1 2 3 4

Commenting on objects and actions:

29. Does your child comment on objects, actions, or locations?

Example: Showing a dirty dress and commenting that it is very dirty etc,

0 1 2 3 4

30. Does your child use utterances that serve to describe or comment on the nature of the objects, actions and locations?

0 1 2 3 4

Communicative games:

31. Does your child play games, which require participation by a group of children / players?

Example: Peek-a- boo, hides and seek etc,

0 1 2 3 4

32. Does your child involve in playing games as a group, which includes group cooperation and communication?

Example: Throwing the ball.

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Intelligibility: The extent to which the message is understood. (Includes vocal intensity, vocal quality, prosody, fluency etc.)

33. Does your child use speech that is acceptable; not too loud or too soft; appropriate in quality, and shows use of intonation, stress and pitch to support the communicative / linguistic intention of the message?

0 1 2 3 4

34. Is your child able to talk clearly?

0 1 2 3 4

2 to 8 years:

Communicative intent: A speaker's goal or objective in formulating a linguistic message.

35. Does your child convey to you, any need or help during play, or conversation?

0 1 2 3 4

36. Does your child indicate his or her needs or desires by means of gestures or when talking?

0 1 2 3 4

Informing: Utterances that state facts express beliefs, attitudes & emotions in order to describe an event.

37. Does your child use utterances, which state facts, expresses beliefs, attitudes, or emotions that serve to describe an event?

0 1 2 3 4

38. Does your child use utterances that provide information on an object, event or location?

0 1 2 3 4

Acknowledging:

39. Does your child use utterances or gestures that serve to appreciate the other person?

Example: Saying, "Thank you".

0 1 2 3 4

40. Does your child appreciate the help he / she received by using appropriate utterances?

0 1 2 3 4

Answering questions:

41. Does your child use gestures and / or utterances that acknowledge the speaker's statements, questions or requests?

0 1 2 3 4

42. Does your child answer question put forth to him / her appropriately?

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