



## Analysis of Metacommunicative Episodes between Nurses and Children

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### = Abstract =

**Purpose:** The purpose of this study was to analyze metacommunicative episodes comprised of nurses' metacommunicative behavior and children's responses occurring in the dyads of nurse-child within the context of an inpatient pediatric unit. **Methods:** Twelve dyads of nurses and children were videotaped for four hours each day over a two-day period as they interacted with each other on the inpatient unit. The metacommunicative episodes were recorded from the videotapes. The metacommunicative behavior was categorized within Shin's metacommunicative behaviors. **Results:** The total number of episodes between the nurses and children included in this study was 242. The most frequently used metacommunicative behavior was 'reflection', followed by tagging, baby talk, approaching, mediating eye level, friendly demand, encouraging, description of acts, symbolization, turnabouts, touching, and mimic voice, respectively. The most common response to the nurses' metacommunicative behavior was agreeing, followed by tension release. **Conclusion:** Young children responded positively to metacommunicative behavior by the nurses. Understanding metacommunicative behavior may help nurses approach their young patients more easily and with confidence.

**Key words :** Communication, Nurse-patient interaction, Nurse-patient relationship, Child nursing, Child behaviour

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## INTRODUCTION

Hospitalization of a child is a stressful event for child. In a study by Rossen and McKeever(1996), preschoolers demonstrated distress one week after hospital discharge, including irritability, nightmares, appetite changes, and separation anxiety.

Frequent hospitalization may negatively impact their psychological wellbeing and increase the risk for long-term emotional and behavioral difficulties (Wright, 1995). In addition, developmental level has a significant impact on a child's response to hospitalization (Carney et al., 2003; Holden, 1995). In general, verbal interactions occur frequently in busy hospital environment. However, purely verbal interactions are often inadequate for young children because they are unable to abstract and synthesize beyond what their senses tell them.

The health care professionals' attitudes and familiarity may impact a child's coping process during hospitalization (Espezel & Canam, 2003; Hockenberry, 2005). Staff attitudes can either enhance a child's coping ability or cause additional stressors. Hospital personnel who are supportive and who communicate openly help to ease the stressors of hospitalization for these children. In addition, familiarity is an important aspect in alleviating a child's level of distress during hospitalization.

According to Park, Suk and Jung(1997), communicating with pediatric patients has been reported as one of the most difficult parts in nursing care, so pediatric nurses tend to communicate with caregivers(mothers) rather than with patients. Furthermore, at times, the significance of the role of the child in the interaction is systematically neglected. As a result, they cannot empathize with their pediatric patients well.

Given that nurse-patient interaction is essential factor in nursing care, the ability to interact with patient is the one of the important characteristics as a professional nurse. Children's method of communicating with others is different from adults, so nurses caring for children need to understand that method in order to effectively communicate with young clients and develop appropriate strategies.

Bateson (1955) introduced metacommunication as a bargaining process to achieve shared meaning between communicators. Metacommunication is the message about how to interpret what is going on. Metacommunicated messages may be hidden within verbalizations or be conveyed as nonverbal gestures and expressions (Mitchell, 1991). It has been investigated as a skill or basic concept in various disciplines in which handling

interactions is essential including child communication. Farver (1992) found that children created shared understanding through the exchange of metacommunicative signals conveying the delivered message.

In a preliminary qualitative study on metacommunicative behaviors (Shin, 2002), eighteen metacommunicative behaviors in nurses interacting with young patients were identified. This study only focused on the nurses' metacommunicative behaviors.

Given that metacommunicative episodes involve a shared meaning interaction, the children's responses as well as nurses' behaviors should be analyzed.

### Purpose

This study aimed to evaluate the metacommunicative episodes in the nurse-child dyads, in specific,

- To analyze the type of nurses' metacommunicative behaviors
- To identify the relative contributions of the metacommunicative behaviors via immediate responses of the young patients on the nurses' metacommunicative behaviors

## METHODS

### Research Design

This descriptive, observational study was designed to identify metacommunicative episodes in nurse-patient interaction. A non-structured, non-participant observation method was used.

### Participants

Research participants were 12 nurse-patient pairs. A convenience sample of Registered Nurses and four-to-six year old boys and girls admitted in the pediatric unit of one hospital in Seoul from February, 2002 to March, 2002 was recruited. The nurse-patient pairs can be continued over two consecutive days.

This study was conducted on a general inpatient pediatric unit of a tertiary medical center in Seoul, Korea. Participants were selected from patients who were admitted to the sixty bed pediatric unit. Children between four and six years of age were eligible to participate in the study. Nurses who had over two-years of pediatric experience were included for this study because of their level of clinical expertise. The nurse-patient

dyads were eligible if they could be available for two consecutive days.

Twelve children and eight nurses participated in the study. The mean age of the children was four years with a range of four to six years. Eight of the children were boys and four were girls. Most of the children had been hospitalized for acute illness including acute gastroenteritis and pneumonia. Eight nurses participated in the study. All were female nurses and had a minimum of two years clinical experience (mean: three years, range: two-7 years) in caring for pediatric patients. Mean age of the nurses was 27 years (range: 25-32 years).

### Procedure

Dyads were videotaped while engaging in spontaneous interactions during routine nursing activities. Total interaction was videotaped for four hours (between 2 pm to 6 pm) on two consecutive days. During the videotaping, the observer sat quietly nearby videotaping contextual interaction in the patient room and nursing station with a compact mobile (remote-controlled) video-recorder to videotape the nurse-patient interactions.

The primary researcher and a second observer viewed the videotapes and identified metacommunicative behavior segments and both verbalizations and descriptions of nonverbal behavior were written. Distinct units of metacommunicative episode were identified and marked by two researchers.

An episode was defined as an interactive sequence occurring between a nurse and a child containing three or more exchanges of continuous interaction with a shared theme or topic. An episode began when either a nurse or child verbalized about an object, action, activity, or feeling state, and terminated when the partner's attention was directed away from the interaction for longer than 30 seconds or one of them physically moved away from the interaction.

All episodes containing metacommunicative behaviors were isolated. A metacommunicative episode was defined as an interactive sequence occurring between two participants, and it contained nurse's metacommunicative behaviors and patient's responses. Metacommunicative behavior was developed in the preliminary study (Shin 2002) and it has eighteen individual behaviors and was organized into four categories.

242 interactive episodes out of 300 nurse-child interaction for onemonth observation period were analyzed.

### Instrument

#### ● Metacommunicative behaviors

Eighteen metacommunicative behaviors identified in the preliminary study (Shin 2002) were considered. Metacommunicative behaviors were scored for the number of times each occurred during a specific turn at interaction within each episode. In the preliminary qualitative study, eighteen metacommunicative behaviors identified and organized into four categories; call for attention, facilitating response, empathy, and tension release.

1. Call for attention
  - A. Approaching: coming or going near or nearer to the partner
  - B. Mediating eye level: bending A's knees to reach the partner's eye-level
  - C. Eye contact: A looks at the partner's eye
  - D. Touching: spontaneous and affective touch, not instrumental touch which is necessary in performing the nursing task
2. Facilitating response
  - A. Encouraging: giving courage, confidence, or hope
  - B. Turnabouts: a shift or change in the topic
  - C. Mimic voice: change in intonation and pitch to mimic the partner's voice
  - D. Giving choices: permit a child to choose
  - E. Friendly demand: asking a child to do something in a friendly way
  - F. Expansion: adding new semantic elements to partner's previous contribution.
  - G. Tagging: verbal devices placed at the end of a conversational turn to elicit a response or acknowledgement.
  - H. Repeating and confirming.: repeating partner's prior utterances
3. Empathy
  - A. Identification: the act of designating
  - B. Reflection: a remark expressing careful consideration
4. Tension release
  - A. Symbolization: representing or identifying by a symbol
  - B. Description of acts: declarative statements accompanying ongoing activity or describing past or future action. For example, A says, "I'm touching your hand," as she puts her hand on the B's hand.
  - C. Baby talk: an imitation of the speech of a young child
  - D. Relaxed posture: posture which is free from strain or tension, such as head nods, forward leaning, or sitting

beside the partner

- Child response

Bales interaction analysis (1950, 1970) was used to assess children's responses (Shin & White-Traut, 2005). Transcripts of the verbal and nonverbal responses were reviewed and subdivided into units. The unit of analysis is the smallest speech segment or action that could be assigned a classification. A unit may be as short as a single word or as long as a lengthy sentence. Patient's behavior was classified into 12 categories and these are: seems friendly, shows tension release, shows agreement, ask for suggestions, ask for opinion, ask for information, gives information, gives opinion, gives suggestion, shows disagreement, shows tension, and seems unfriendly. The data categories were classified into two groups: affective behavior that is considered either positive or negative and included behaviors that show emotion (Seems Friendly, Shows Tension Release, Agrees, Disagrees, Shows Tension, and Seems Unfriendly). The second data category, neutral behavior, includes behaviors that involve neutral emotions or exchange of information (giving information, opinion, and suggestion, and asking for information, opinion, and suggestion). The negative affect was found to correlate inversely with patient satisfaction and compliance. A unit could be assigned to one category only.

In this study, verbal behavior was the smallest distinguishable speech segment, and paralinguistic behavior contained repeating partner's prior utterances, changes in intonation and pitch, sound of pretend activity, and the use of high or low voices. Nonverbal behavior contained directed gaze, affirmative head nods, smiling, forward leaning, touch, distance, and eye contact.

### Reliability

In order to increase the reliability of the coding, a trained observer and the author coded the data independently with Shin's categories. The categorized data were compared and adjustments were made. The observer used the videotapes as well as the transcripts. The inter-rater agreement was averaged and ranged from 0.7 to 0.9 across all the behavioral categories.

### Ethical Considerations

The study was approved by the Committee for Medical

Research in the hospital prior to data collection. Participants were provided with detailed information about the study and were assured that confidentiality would be maintained and they could withdraw their participation anytime. After the parents gave written informed consent and the children gave their assent, they were enrolled into the study. The nurses working at the inpatient unit were also informed of the study purpose and gave written informed consent. Videotapes were stored in locked office to assure confidentiality.

## RESULTS

The metacommunicative episodes were comprised of two distinct categories, that is, nurses' initiations called as metacommunicative behaviors and children's responses. Each type of metacommunicative episodes was further categorized according to Shin's typology of metacommunicative behaviors and Bales' categories of interaction analysis.

### Nurses' metacommunicative behaviors in the episodes

The total number of episodes between the nurses and children included in this study was 242 which mainly occurred in order for nurses to call for children's attention, to share meaning, and to make their patients relaxed. The profile presented in Table 1 summarizes the frequency of metacommunicative behaviors during the videotaped interactions.

The most frequently used metacommunicative behaviors were 'reflection', followed by tagging, baby talk, approaching, mediating eye level, and friendly demand, encouraging, description of acts, symbolization, turnabouts, touching, and mimic voice, respectively. In contrast, eye contact, repeating and confirming, expansion, relaxed posture, giving choices, and turning away were rarely used. For example, a nurse using reflection might have talked "You look angry because A is going to leave you.", whereas the nurse using tagging to her patient might have stated "You're doing ..... right?" "I'll put this here, OK!"

### Children's responses

Children's responses in the metacommunicative episodes were defined as behaviors in which children would step out of that

Table 1. Nurses' Metacommunicative Behaviors

Nurses' metacommunicative behaviors	Frequency	Percentage (%)
<b>A. Call for attention</b>		
1. Approaching	19	8
2. Mediating eye level	18	8
3. Eye contact	7	3
4. Touching	12	5
<b>B. Facilitating response</b>		
1. Encouraging	15	6
2. Turnabouts	12	5
3. Mimic voice	10	4
4. Giving choices	4	2
5. Friendly demand	20	7
6. Expansion	7	3
7. Tagging	22	9
8. Repeating and confirming	10	4
<b>C. Empathy</b>		
1. Identification	0	0
2. Reflection	36	14
<b>D. Tension release</b>		
1. Symbolization	12	5
2. Description of acts	15	6
3. Baby talk	19	8
4. Relaxed posture	4	2
<b>Total</b>	<b>242</b>	<b>100</b>

encounter to respond physically or verbally to the comments and behaviors of nurses. Responses most frequently followed immediately nurses' initiations, but were also included following responses to previous initiations.

Nurse: (scrooching in front of A) Time to hear how you breathe.

Child A: (frowning at the nurse and trying to move backward)

Nurse: I am putting this stethoscope on your chest. You don't hurt.

Child A: (nodding with sighing)

When the episode was initiated by nurses, the children showed responses by actively paying attention to nurses as well as by not resisting.

The most common response on the nurses' metacommunicative behaviors was "agree (65%)" followed by tension release (11%). In a few episodes, children showed other responses such as seems friendly (3%), giving opinion (3%), ask information (5%), and giving suggestion (1%). Showing tension (10%) was presented in a few episodes but it was resolved usually with following behaviors like agree and other positive or neutral behaviors.

Table 2. Children's Responses in the Metacommunicative Episodes by Bales

Response	Subcategory	Frequency	Percentage (%)
Positive	Seems friendly	7	3
	Shows tension release	27	11
	Giving agrees	157	65
Neutral	Giving suggestion	4	1
	Giving opinion	7	3
	Giving information	4	1
	Asking for information	12	5
	Asking for opinion	0	0
	Asking for suggestion	0	0
Negative	Disagrees	0	0
	Shows tension	24	10
	Seems unfriendly	0	0
<b>Total</b>		<b>242</b>	<b>100</b>

## DISCUSSION

This study was conducted to analyze the metacommunicative episodes including nurses' metacommunicative behaviors and children's responses occurring in the dyads of nurses and children within the context of an inpatient pediatric unit.

The most frequent metacommunicative behaviors by pediatric nurses were 'reflection'. According to Price, Rogers, Stanton, and Smith (2003), reflection as verbal expression and a form of externalization is instrumental in the interactive process and facilitate the advancement of participants' understanding. This finding illustrates the effort of pediatric nurses to facilitate their young partners' understanding in this study.

Following behaviors were tagging, baby talk, approaching, mediating eye level, friendly demand, encouraging, description of acts, symbolization, turnabouts, touching, and mimic voice, respectively. These metacommunicative behaviors by nurses could be compared with the persuasion and entertainment by public health nurse (Vehvilainen-Julkunen, 1992), several comfort strategies by nurses in Morse, Havens, and Wilson's study (1997), and Lotzkar and Bottorff (2001)'s social exchange, trust, and humor. Vehvilainen-Julkunen (1992) identified the relationship between child and public health nurse as one of persuasion and entertainment. She reported that the persuasion contained nurse's attempts to get the child to do something, to complete the rituals or explain to the child what the nurse was going to do to her/him, while the entertainment included whistling to the child or praising the child. In that qualitative study, nurses used communicative strategies of entertainment

usually to prevent crying and keep the child co-operative. In a study of Morse, et al.(1997), a lot of comfort strategies toward adult patients used by nurses in the nurse-patient interaction were identified. They reported comfort strategies are actions used by the nurse to make the patient comfortable. Strategies were direct or indirect and the direct strategies are touching, talking, listening, and posturing. Indirect strategies included providing warmth or controlling lighting, or ensuring. In their study, nurses develop the bank of comforting strategies with experience.

Compared with that persuasion, entertainment, comfort, and trust from the previous studies, the metacommunicative behaviors in this study showed that the developmental level of the children influenced the nurses' communicative strategies. In this study, nurses' metacommunicative behaviors, especially, turnabouts, repetition and expansion, description of act also represent the characteristics of adults who spoke at a level of that they each understood and made the child partners feel less threatened than in usual adult-child educational atmosphere. Also, some temporary agreement in the nurse-child interaction was found in this study. For example, friendly demand, identification, reflection, baby talk, and symbolization mostly occurred in this context. These efforts represented nurses' reciprocal agreement, meaning that nurses recognized and tried to apply age-appropriate strategies to their young clients. Trawich-Smith (1998) reported that preschoolers were likely to use tagging to get peers' compliance and agreement. This might reflect similar effort by nurses in this study.

Pediatric nurses also devoted a high percentage of metacommunicative behaviors to getting empathy and facilitating interaction, such as reflection and tagging, whereas nurses interacting with adult patients in the study of Kruijver, Kerkstra, Bensing and Wiel (2001) showed dominantly instrumental communication rather than affective communication.

Although some metacommunicative behaviors, such as eye contact, repeating and confirming, expansion, relaxed posture, giving choices, and turning away were performed at a relatively low rate by nurses, they still have importance because one behavior by a nurse were assigned in one individual category, and these behaviors usually occur at the same time with previous frequently occurred behaviors.

It appears that nurses may use different communication skills toward pediatric patients when compared with adults. In this study, nurses used metacommunicative behaviors frequently

when they are interacting with their young patients showing effective communication between the professional and the patient.

Michell(1991)'s definition of metacommunication included verbal and nonverbal, and paralinguistic behaviors and especially focused on the importance of nonverbal behaviors. However, in this study, verbal behaviors were dominant among nurses. This was because during the transcription of behaviors, researchers might give attention to the verbal behaviors too much or nurses in this study had not used nonverbal behaviors actively. This was partly due to the cultural difference between the western society where the previous studies were conducted and Korean where the abstinence was considered of value. Further study is recommended to identify the Korean nurses' expression styles.

Unlike previous studies that argued nurses rarely invited patients to participate in the conversation, (Caris-Verhallen, Kerkstra, Heijden, & Bensing, 1998; Baggens, 2001) a larger proportion of nurses in this study attempted to engage their pediatric patients in the interaction. A number of distinct metacommunicative behaviors were observed in this study. Descriptions of these have allowed the formulation of hypothesis regarding the differentiated communication styles in nurses working with children.

When the episode was initiated by nurses, the children showed responses by actively paying attention to nurses as well as by not resisting. The most common response on the nurses' metacommunicative behaviors was "agree" followed by tension release. Children's responses were less frequent than nurses' initiations in this study. This was partly due to the age differences with which children might not know how to react to the initiatives of their adult counterparts. According to Tates and Meeuwesen (2001), the interaction between a child and adult was not balanced, resulting from not only their age differences but also the quantity and quality of their experiences in their world. Also, nurses' initiations usually contained multiple units of behaviors, whereas children's responses were more often simple, single-unit enactments. These findings may be related to the vulnerable aspects of these patient populations related to their developmental level and related communication barriers.

On the contrary, although the form of nurse-child interaction seemed to be not balanced, the metacommunicative episodes represented the characteristics more in peer relationship rather than in educational atmosphere in most context of adult-child

interaction. Researches on preschoolers (Trawich-Smith, 1998) have shown the reciprocal agreement occurred in their conversations with peers. In this study, most behaviors by nurses, in specific, tagging, baby talk, description of acts, symbolization, mimic voice, repeating, and expansion showed this reciprocal agreement between nurses and children.

The study findings show that nurses caring for pediatric patients use different communication skills based on the age-appropriate strategies. These metacommunicative strategies were the methods how to get those young children involved as well as how to encourage their pediatric patients to actively participate in the interaction. Though these strategies, nurses can give young children some control over the unsecure, unfamiliar situations. These can be used in the current pediatric practice in which people are seeking more qualified and effective relationships.

### Study limitation

There were several limitations with respect to the data that may affect the generalization of this study due to the small number of participants. In addition, the participants have been undergoing videorecording which may influence the participants' interaction styles. However, the study was conducted over a five-month period including the preliminary study and thus they may have developed a familiarity with the recording. Furthermore, the nurses confirmed with the investigator that their behaviors during video-recording were comparable to their usual behaviors.

### CONCLUSION

Nurses in this study used metacommunicative behaviors frequently and it contributed to positive response in hospitalized children. The metacommunicative strategies identified in this study can be used to establish the nurse-patient relationship when pediatric nurses encounter healthy children in communities as well as hospitalized children. Further research is required to refine the pediatric nurses' metacommunicative behaviors and the contributing factors that influence those behaviors. It is suggested that any educational programs to teach communication skills to nurses need to include techniques on metacommunicative behaviors, so nurses can be more sensitive to different characteristics of their patients. Also, quantitative studies with

larger samples concentrated on nurses' verbal and nonverbal metacommunicative behaviors may provide a more comprehensive analysis and may extend our nursing strategies.

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