Words Used by Nurses Who Explain Medical Procedures to Children with Developmental Disabilities

Miyako, ISHIDATE, RN , EMT, PhD[a] ; C, KATO, RN[b] ; Y, MIKI, RN, PHN, PhD[a] ; K, IWAMI, RN, CNS[a] ; I, SHIBUYA, RN, PHN[a]

[a] *Department of Nursing, Faculty of Medical Technology, Teikyo University, Japan* [b] *School of Nursing, Ichimiya Kenshin College, Japan*

INTRODUCTION

For children with development disability who are not adaptable to new surroundings, it is not easy to take a medical examination. Medical practitioners often cannot find appropriate words and hence feel difficulties in approaching hyperactive children. Past studies of children with intellectual disability in school indicated that onomatopoetic expressions of children's physical motion by teachers worked effectively(Takano,2010). Ishidate (2018) has reported the effectiveness of onomatopoetic expressions in addressing normal children at out-patient clinic.

In this study, onomatopoetic expressions used by nurses who are taking care of children with development disability were investigated to provide basic information for appropriate approach to such children.

METHODS

Ten nurses who works in medical institutions for disabled children in Tokyo having more than 5-year experience in taking care of children with development disability were interviewed according to the method by Ishidate et al (2014,2015). The transcript of the interview recording was analyzed by a text mining software.

RESULTS

Basic statistics values were as follows; Number of total sentences was 1405, average length of a sentence was 15.8 letters, Number of words used was 884 kinds and 4,484 in total. Number of verb, noun, adverb, and adjective were 1,594, 923, 756, and 254 respectively. The type-token ratio was calculated to be 0.194.

The frequency of onomatopoeia in the interview and in the previous study about non-disabled children (Ishidate et al, 2014) was lower.

Table.1 The frequency of Onomatopoeias extracted from the nurse's utterance

	To children with development disability		To non-disabled children	
Order	Onomatopoeia	frequency	Onomatopoeia	frequency
1	チックン chikkun (sticking needle)	37	チックン chikkun (sticking needle)	72
2	ギュッ ghut (grabbing hard)	29	ペッタン pettan (smacking, flattening)	53
3	マキマキ maki maki (rolling bandage)	21	マキマキ maki maki (rolling bandage)	37
4	モクモク moku moku (smoke)	20	ギューッ ghuut (grabbing hard)	33
5	モシモシ moshi moshi (hello)	20	ゴロン golon (lying down)	26
6	ギューッ ghuut (grabbing hard)	19	キレイキレイ kilei kilei (cleaning up)	24
7	チクッ chikut (sticking pain)	18	ネンネ nenne (lie dwon, sleep)	23
8	ジッと jitt (staying quiet)	16	アーン aan (Opening mouth wide)	19
9	ペッタン pettan (smacking, flattening)	15	ギュッ ghut (grabbing hard)	18
10	グー goo (clenched fist)	9	ペッ pett (Spitting out)	18
11	キレイキレイ kilei kilei (cleaning up)	8	モシモシ moshi moshi (hello)	15
12	シュッシュッ shut (spraying)	8	チクッ chikut (sticking pain)	15
13	スーハー suu-haa (inhale exhale)	8	モクモク moku moku (smoke)	13
14	ゴホン gohon (coughing)	7	コンコン kon kon (coughing)	12
15	スッキリ sukkili (refreshed)	7	シュー shuu (hiss, sss)	12
16	ゴロゴロ golo golo (rumbling)	6	ジュルジュル jyulu jyulu (sipping)	12
17	シッカリ shikkali (tightly)	5	フキフキ fuki fuki (wiping)	12
18	シュッシュ shut shut (spraying)	5	ブクブク buku buku (bubbling up)	11
19	チャンと chanto (properly)	5	ジッと jitto (staying quiet)	10
20	ピピッ pipit (beep, bleep)	5	ピッピ pippi (beep, bleep)	10

DISCUSSION

In comparison with the basic statistics in the previous study (Ishidate et al,2014), only the type-token ratio in this study was lower. Since higher type-token ratio indicates that the content of sentence is richer, the lower ratio in this study indicates that even the nurses taking care of children with development disability speak longer sentence, the content of their talk is not richer. In addition, both frequency and kinds of onomatopoetic expression observed in this study were fewer than those in the previous study about non-disabled children, although 10 out of 20 onomatopoeias appeared in both studies in common.

These results suggest that nurses taking care of children with development disability do not depend heavily on verbal communications with them. There have been such reports that show the effectiveness of visual support in dentistry (Hirata et al,2014), and the usefulness of graphic cards in explanation to children with development disability (Vaz,2013). Taking all the results in this study and previous reports into consideration, the author suggests that the development of effective multimodal communication methods with patient children, such as in combination with conversation using onomatopoetic expressions and visual approach, etc., may be possible in the future.

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***Correspondence*: Miyako Ishidate**
2-11-1, Kaga, Itabashi-ku, Tokyo, 173-8605, Japan.
Phone: +81-3-3964-1211 Ext. 41912
Email: mishidate@med.teikyo-u.ac.jp

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