Use of augmentative and alternative communication in special needs education schools for children in Japan

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Introduction: In Japan, AAC is currently included in the guidelines for education of students with special needs, and it has therefore become widely recognized. Although AAC is actively used in some special needs education schools, its practicality is still of concern in some cases. With rapid increases in the types and availability of AAC systems in recent years, for AAC to be a practical means of communication, it is important to consider the following factors when selecting appropriate AAC systems and assessing their usefulness: users' intellectual ability, communication ability, willingness to communicate, physical ability to operate a device, and physical and human environment.

In this study, we investigated the use of AAC and aspects related to AAC introduction in special education schools that provide continuous education for elementary, junior high school, and high school students in Japan, in efforts to achieve practical use of AAC.

Methods: A questionnaire was sent to the principals of 350 special education schools across Japan in March, 2013. The questionnaire was composed of items related to basic characteristics of the school, use of AAC, introduction of new AAC systems, assessment of suitability of AAC, students' handicaps, and AAC system types.

Results: Among the 444 responses received (Table 1). Status of AAC use: 87.2% of responders indicated use of AAC at school and/or home, 51.6% of whom reported the practical use in their daily life, 13.4% limited use in specific settings, and 35.0% incapable of using effectively (Fig.1). Furthermore, 32.4% of responders believed that some children were not using optimum AAC systems. As the reason of misfit, 65.3% of responders thought “Poor understanding of Yes/No concept” and 52.1% thought “Inconsistency between communication outputs and student’s intentions” (Fig.2).

When they introduce new AAC systems, 70.9% of them reported previously encountering problems or were expecting to encounter problems. As the reason of it, 70.2% selected “There was no procedure for selecting AAC systems suited to the individual user’s intellectual and language development” (Fig.3). About necessity of evaluation system to select AAC, 71.9% of responders thought “extremely necessary or necessary” (Fig.4).

Different AACs according to handicap, for physically challenged students, there are four kinds of high-tech AACs in the top 20, including BigMac, which is 4th (Table 2).

About ISAAC, only 13.1% of responders have knowledge of it.

Discussion: Our questionnaire survey revealed over 80% of special schools were using AAC with at least one students. On the other hand, nearly half of responders had students who did not appear to be fully utilizing AACs to reflect their intentions, because of poor reliability of yes/no answers, and doubt about consistency between communication outputs via the AAC and the user's intentions. These results indicate fundamental problems in the use of AACs suggesting that procedures need to be established to assess how well new AACs work for their students. Furthermore, according to kinds of handicap, there are different AAC systems used. This suggests that the development of an AAC evaluation system include the users' intellectual abilities, physical abilities, and the students' daily life needs.

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