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Experiences of using Bestic, an eating aid for people with intellectual disabilities

Abstract

This article reports on the results of a pilot study exploring if and how the meal situations of persons with intellectual disabilities (PWIDs) in need of help and support during meal situations was affected by an eating aid. This article also analyzes how PWIDs and their assistants perceived their experiences of using an eating aid during meal situations. Data for the study were collected in interviews with PWIDs and their assistants. The results are presented in five themes: Independence in the meal situation, Motivation to use the eating aid, Functions of the eating aid, Social aspects of using the eating aid and Design corresponding to intellectual disability. The eating aid's function, user-friendliness and the assistant's attitudes appear to be crucial for using the eating aid. Another important aspect is the introductory and training phase which must be fundamentally adapted to suit PWIDs learning and understanding abilities. When these aspects are controlled, the eating aid can be a tool for increased independence during meal situations for PWIDs who are unable to move their arms or hands.

Keywords: eating aid, meal situation, independence, intellectual disability, assistants

Introduction

It is an ethical and principled ideal that everyone should have the opportunity to shape and determine their own lives (Henriksen & Vetlesen, 2001). It is well known that intellectual disability can decrease the ability to see the consequences of decision making, which affects autonomy (Beauchamp & Childress, 2001). Applying this to everyday situations, and more specifically to meal situations, which include choosing what to eat, determining what you can manage and making decisions, can increase motivation, engagement and perceived participation (Whinnery & Whinnery, 2012).

Persons with intellectual disabilities (PWIDs) are among the most excluded populations in society (Ditchman, Werner, Kosyluk, Jones, Elg & Corrigan, 2013), and many PWIDs do not have the opportunity to make their own decisions or choices (Whinnery & Whinnery, 2012). In addition, independence and autonomy are two important aspects and concepts regarding decision making, and are considered to be human rights (Devi, 2013). Söder (1989) presents two different meanings of independence and autonomy for PWIDs. Firstly, there is the extent to which a person, independently and without help, can carry out various everyday tasks. Secondly, there is the extent to which a person has opportunities to influence and make independent choices. In addition, Devi (2013) presents varying levels of independent choice making. A person can independently choose by herself, a person can independently choose with the support of another person, or a person cannot or is not allowed to choose because of another person. Furthermore, Barron (1997) highlights various barriers to the autonomy and independence for PWIDs. The power of professionals is one such barrier, which, among other things, may impact on how professional caregivers (assistants) create opportunities for participation. Another barrier is the physical environment, which can be deficient adapted. Everyone is more or less dependent on each other, but PWIDs are in need of assistance in their daily lives and, unlike

persons without intellectual disability, they have a lifelong dependency on help and support. Their everyday lives can contribute to feelings of powerlessness, exclusion and invasion of personal privacy.

In disability research, independence is defined as having control over decisions. This means that focus is not directed at performing activities without assistance, but rather at being able to control and decide what support and assistance is needed in order to achieve chosen goals and do what one wants to do (Brisenden, 1986; Reindal, 1999; Fine & Glendinning, 2005; Deguara, Jelassi, Micallef & Callus, 2012). According to the principle of autonomy, everyone should have the same right to self-determination regardless of disability. In practice, this goal is difficult to achieve living with disability (Back & Grunewald, 2000).

An important aspect that can affect the experience of autonomy and independence is being able to eat independently. People in need of help and support during meal situations can be supported in two ways: with the help and support of another person, or the help and support of an assistive technology eating aid as Bestic. Bestic can best be described as a small, robotic arm with a spoon in the end that can be maneuvered. Bestic is small and compact, has a discreet design and is quiet which makes it blend into the dining environment in a natural way. Bestic is flexible and controlled by the user. By choosing a suitable control device, the user can independently control the movement of the spoon on the plate and choose what and when to eat.

The meal situation and an eating aid

Bestic is an assistive technology eating aid for people who are unable to move their arms or hands. It is designed to function as an integral part of a meal by being easily accessible and

convenient in a manner that does not intrude on a dignified and pleasant eating experience. The eating aid's goal is to increase its user's independence and autonomy.

Independence in meal situations has been discussed as having a great impact on the experience of autonomy (Matson, Fodstad & Boisjoli, 2008). In addition, food, meals and social interactions are inextricably linked to each other in Western culture. Mintz and Du Bois (2002) point out that "next to breathing, eating is perhaps the most essential of all human activities, and one with which much of social life is entwined" (p.102). Going out for lunch or dinner, going to informal and formal events, and inviting people into our home for meals are all ways in which we build social relationships. Meal situations, which have a high cultural value in human life, are not always enjoyable situations for everyone (Mintz & Du Bois, 2002). People may experience difficulties and discomfort during meal situations that affect their self-esteem and social relationships (Balandin et al., 2009). People who need the help of others during meal situations can experience low self-esteem and feelings of stigmatization, which can lead to isolation (Martinsen et al., 2008). Furthermore, Lance (2007) states that people with disabilities who need help and support during meal situations avoid eating in public places because of being fed. In addition, there is more discomfort and difficulty associated with being fed in meal situations in the company of strangers than in the company of friends and family. Experiences of being stared at can increase the risk of stigmatization and feelings of vulnerability. Furthermore, Lance points out that people who need to be fed in public places are forced to become accustomed to other's reactions.

Furthermore, Martinsen et al. state that meal situations for people in need of help and support from an assistant may be experienced as dissatisfying as they can be viewed as mechanical and following certain rules. Nevertheless, meal situations can be intimate when the person in need

of help and support and their assistant sit close together and communicate both verbally and non-verbally. Therefore, meal situations require calm, concentration and good communication. “It is a situation you cannot get away from. You are locked in. You are not free of it until the meal is over. In some ways, it is very intense.” (Martinsen et al., 2008, p. 537).

People in need of help and support during meal situations have two choices: help and support from an informal assistant or professional caregiver, or help and support from an assistive technology device, an eating aid or a robotic device. Robots are becoming more prevalent in this area and are being developed rapidly (Ferneus, Jacobsson, Ljungblad & Holmquist, 2009; Sparrow & Sparrow, 2006). Attitudes towards the increased development of robots in care are bisect. Robots can be appreciated as a means of replacing the need for a human to perform monotonous, boring, repetitive and even dangerous tasks. However, robots can also be viewed as taking jobs from humans and undermining human skills (Ferneus et al., 2009). Moreover, an increased use of robots in healthcare can isolate people from human contact (Sparrow & Sparrow, 2006). However, Beyer and Perry (2013) mean that assistive technology can enhance a person’s independence and autonomy.

Meal situations can be experienced with dissatisfaction and stigmatization. Meal situations are also situations where a person who needs to be fed is dependent on others for help. One way of increasing the independence and autonomy of PWIDs in need of help and support during meal situations is through assistive technology. Bestic is an example of such technology. Bestic is an eating aid that has been developed in order to allow increased autonomy and independence for persons in need of help and support during meal situations.

Rationale and aim

The social construction of meal situations can cause stigmatization for persons in need of support and help as they may depend on others to be fed. Dependence on others can have an impact on autonomy and can cause dissatisfaction during meal situations. Autonomy and independence are important aspects of life, and it must be considered that their meaning as concepts may differ for PWIDs who may need support and help in daily life. Nowadays, technology can increase autonomy and independence in everyday situations; using an eating aid at meal situations is one example of such technology. However, few of these technological devices have been developed specifically for PWIDs. Nonetheless, the eating aid has been constructed with the aim of supporting people who need support and help during meal situations and its functionality has been extended to support PWIDs in meal situations. However, it is a concern that it was not developed in collaboration with the targeted user group. Technology companies often develop different technology devices in engineering facilities, and miss the important factor of collaborating with the representatives of expected end-users.

The purpose of this study was to explore if and how the meal situations experience of PWID, who require help and support during meal situations, were affected with the use of Bestic eating aid. Another aim of the study was to analyze the perceived experiences of PWIDs and their assistants of using an eating aid during meal situations.

Method

The study takes a qualitative research approach. The data collection was conducted through interviews with PWID and their professional caregivers (assistants). The interviews covered

experiences of the eating aid, i.e. its benefits and disadvantages, in terms of autonomy, independence and possible impact on social relationships (see Silverman, 2000; Grinell and Unrau, 2001; Thyer, 2010).

Selection

Six participants were included in the study. The participants consisted of two PWIDs and four assistants who worked with the PWID. Because of verbal communication ability, only one of the PWIDs was interviewed, the other participating PWID could not communicate verbally. The PWIDs were 29 and 60 years old and they resided in a group home. The two PWID were 29 and 60 years and resided in group home. The 29 year old man lived by himself in an apartment together with assistants. The assistants had an own room in the apartment where they could work and sleep, in Sweden this is called a “service home”. The 60 year old women lived in a large group accommodation, with an own apartment. Together with several others, who had their own apartments, they shared a living room and dining room. There was also several assistants with their own lodging and office living in the group accommodation. In Sweden this is called a “group home”. The 60 year old also had difficulties to verbally communicate.

The participants with PWID had, according to WHO’s (1992) International Classification of Diseases (ICD-10), moderate to severe intellectual disabilities, together with the physical disability of difficulty feeding themselves.

The four assistant participants had attended upper secondary school. All of them had more than 10 year’s work experience in various occupations, e.g. personal assistant to people needing individual support or living in group home. In addition, all assistants had various postgraduate qualifications in various occupations. All of them also spoke and understood Swedish.

The interviews were conducted with one PWID and all four assistants. The selection was done with the help of the head of unit for the group home, who had contact details for the participants. Inclusion criteria for the study was that the participants who used Bestic had an intellectual disability and could not eat for themselves; required assistance during meal situations. Initial contact was made with the PWIDs guardians. Then, the PWIDs had the opportunity to try the eating aid and later decide if they wanted to participate in the study. The assistants who were interviewed worked with the PWIDs.

Introducing the eating aid

The eating aid was introduced to the PWIDs in a pilot test where the PWIDs and their assistants were given the opportunity to try the aid. The PWIDs were contacted and asked if they wanted to try the eating aid during a meal. The pilot test meal situation was conducted as normally as possible, but with a Bestic expert present. The Bestic expert was only present during the single pilot test as an instructor of Bestic, after that the Bestic expert was not present during the rest of the meal situations in the study, which lasted for three months. Those who decided to participate in the study were given a brief demonstration of how to use the eating aid.

The participants who used Bestic steered it with a button. It required two clicks on the button to get food from the plate to the mouth. The first click brought the robot arm to the plate. With the second click the participants choose were on the plate they wanted to take food, and then the robot arm brought the food to the mouth. During the meal situations the PWID was accompanied by assistants, who helped during the meal situations.

Analysis

The interviews were analysed using a qualitative descriptive approach (Sandelowski, 2000) as the aim of the study was to explore the effects of the eating aid during meal situations, and present the experiences of PWIDs and their assistants using the eating aid in daily life. Qualitative description was used to concentrate the text and create categories. Choosing a qualitative descriptive approach offers a comprehensive summary of the studied event in everyday terms, a straightforward summary of the informational content of collected data organized in a way that best fits the data (Sandelowski, 2000).

Data were coded in several steps, where all three researchers were involved. None of the researchers have any interest or investment in eating aid Bestic. It should also be emphasized that the interpretation process continued until consensus was reached. The interviews were first coded transparently, then systematically. After transcribing all the interviews, the material was read through in its entirety. Thoughts about the interview itself and the ideas in the interviewee's statements were recorded. After this first reading of the interviews, a brief description of the interviewees including age, gender and education was compiled. After this, the research team looked at the material in its entirety again to also examine and agree on categories and themes that had been identified. The researchers identified five themes from the material: Independence in the meal situation, Motivation to use eating aid, Functions of the eating aid, Social aspects of using the eating aid and Design corresponding to intellectual disability.

After categorization into the various themes, the interviews were read again and questions were asked of the text: What were the experiences of using the eating aid? And what opinions and experiences did the interviewees have regarding support from their social network and their social relationships? (cf. Strauss & Corbin, 1990).

Ethical considerations

Good research was applied throughout the project and the ethical principles (information, informed consent, confidentiality and utilization) of the Swedish Research Council (Vetenskapsrådet, 2011) were followed. Regarding informed consent, all participants gave their consent. However, one participant could not be interviewed due to verbally communication difficulties. The Ethical Board in Uppsala, Sweden, (2014/05) approved the study and informed consent was received from all participants.

When using technology in care, such as that provided by an eating aid, the risk of being viewed as different and feeling infringed on must be taken into consideration. This was discussed in the context of the importance of respecting the integrity of PWIDs, and was emphasized to all staff and trustee. The eating aid was introduced and demonstrated with the purpose of observing reactions and ensuring that no aversion was evident. If the PWID was not able to understand or make decisions on their own, a relative or other legally entitled person could give informed consent on behalf of the PWID. The PWIDs were also assured that they could keep the eating aid after the study if they enjoyed using it and it was meaningful for them.

Results

The experiences of the eating aid's importance for PWIDs and physical disability are presented below in five themes: Independence in the meal situation, Motivation to use the eating aid, Functions of the eating aid, Social aspects of using the eating aid and Design corresponding to intellectual disability.

Independence in the meal situation

There were both similarities and differences in the assistant's definitions of independence. Some assistants discussed independence solely as coping with daily life without help and support. They pointed out that a person should be able to manage their meal situation and their personal hygiene, such as brushing their teeth and going to the toilet, "*Independence for me is when you can do a lot yourself. Being able to manage your personal hygiene, handling a lot yourself. Everything from eating, showering, brushing your teeth and going to the toilet. All the physical stuff.*" (Assistant 1.2). However, the results show that the assistants agreed that the eating aid did not increase the user's independence. Furthermore, all assistants said that the user's autonomy, regarding physical ability, was not affected by the eating aid. In addition, the assistants highlighted that the users had physical difficulties coping with various tasks, "Independence, I don't really know if it has made any difference as things are now, I'm standing right there and pointing out anyway that you have to press it." (Assistant 2.2).

Another aspect of independence that some assistants highlighted and emphasized was the ability to decide and choose for yourself. Assistant 2.2 defined independence as "*Being able to decide for yourself and being able to control your life, the choices you have, what you can do. Yes, it is controlling and deciding for yourself.*" The assistant's views of independence involve aspects of both physical ability, i.e. to physically cope with everyday tasks, and self-determination, i.e. to decide and make choices in everyday life. None of the assistants mentioned the user's self-determination, i.e. to choose or not choose the eating aid, as independence. But the assistants indicated the importance of independence and the eating aid's role in increasing independence. Moreover, according to the assistants, the eating aid contributed to the users deciding how often food was put in their mouth. The users were also perceived as more positive, happier and energetic with the initiation of the eating aid.

Motivation to use the eating aid

To what extent the eating aid was used was mainly determined by the user's current health status. Aspects that influenced whether or not it was used included physical and mental tiredness and excitement. Moreover, the use of the eating aid could also be determined by its functional aspects, i.e. whether it was difficult or cumbersome to use. When Bestic was initially introduced, the users used it frequently, "...more motivated [by the introduction of Bestic] as it was more exciting, I believe. Something new is fun." (Assistant 1.1). However, after the eating aid had been in use for a while, the motivation to use it decreased "...lost the desire to use it. It wasn't as much fun as he thought." (Assistant 1.1). In addition, Assistant 2.1 said, "Pretty often we are told to take it [Bestic] away, I want a normal spoon."

All assistants emphasized the user's right to choose whether to use the eating aid or not, "We have talked to him, asked what he wants to do with Bestic, how he wants it." (Assistant 1.2). Furthermore, both users, after using the eating aid for some time decided not to use it anymore "It doesn't work at all for me." (User). "She prefers to eat without Bestic, using a normal spoon, and when she can't handle that, she wants the staff to help her using a normal spoon." (Assistant 2.1); "He prefers us to feed him." (Assistant 1.1).

Functions of the eating aid

Both users and assistants mentioned that the eating aid can be difficult to use because of its technical limitations, "When you want it to pick up... it just doesn't do as I want." (User). One user mentioned that it was hard to eat with the eating aid, that it was difficult to get food up to their mouth, and that food fell off the spoon, "...harder. I think. Because it falls in my lap." (User).

In addition, several assistants said it would be beneficial if the eating aid could see the food on the plate since it did not pick up food from the plate every time, *“If it could see the plate, where it is. I have experienced that it has picked up everything, but still goes back for more. It works in a pattern.”* (Assistant 2.2). Another assistant also mentioned this and also stated that the staff have to help put food on the eating aid’s spoon, *“Many times staff must be there and put the food on, so the whole function is lost.”* (Assistant 2.1). Another technical limitation mentioned was the eating aid’s rigid positioning, and that it could hurt the user as its movements were restricted, *“He has to open his mouth when the spoon comes, but the spoon doesn’t come straight towards his mouth, maybe at a bad angle or something. So, he got hurt ...your mouth would have been hurt too.”* (Assistant 1.1).

The functionality of the eating aid differed depending on the type of food being eaten. Both users and assistants mentioned porridge and mashed potatoes as foods suitable for eating with the eating aid, *“Porridge is simple, for example, and mashed potato, things that have that kind of consistency.”* (Assistant 2.1). Food perceived as problematic to eat with the eating aid included solid food, such as pieces of meat, *“It is harder to get them on the spoon, to get them to stay on the spoon.”* (Assistant 2.1). Another kind of food that was problematic was rice, *“Rice doesn’t work well, it falls in my lap all the time and I don’t want to...”* (User).

Social aspects of using the eating aid

The analysis of the empirical material shows that the assistants had different experiences regarding the importance of the eating aid for social interaction during meal situations. One experience was that the eating aid caused the user to feel more positive and that conversation during the meal situation could be more pleasant if the user could eat independently. *“I believe*

that the user feels more positive if she can handle more. I think she becomes more alert and feels better ... It's easier if she can handle the meal situation by herself if she eats and I just talk sociably ... It becomes a more pleasant conversation." (Assistant 2.1). Another experience was that the meal situation was perceived as more normal if the user was helped and supported by an assistant rather than by an assistive technology device. Other experiences that emerged from the results were that the user's social interaction during meal situations was not dependent on whether they were helped and supported by an assistant or by the eating aid. This was explained as there always being an assistant present with the user during the meal situation. *"The social situation stays the same thing whether you feed him or the robot feeds him. I sit with him anyway."* (Assistant 1.1).

One negative aspect caused by the eating aid and which the assistants pointed out as a reason why one user chose not to use the eating aid was the aspect of time. According to the assistants and the user, the meal situation took longer with the help and support of the eating aid than with the help and support of an assistant. The negative consequence of the time aspect is that the food got cold, and the user got tired. *"Today, it took a long time, about 40 minutes and it's not okay because the food gets cold."* (Assistant 2.1). The empirical data show that the assistants experienced the time aspect as a barrier to users using the eating aid during the meal situation. Similar responses were given by one user who believed that he got help and support from the assistants because of the time factor, *"Yes, because it takes time for the Bestic to feed me."*

Design corresponding to intellectual disability

This theme discusses the importance of the eating device's reliability as well as the importance that the device corresponds to user's needs, capability and difficulties. The eating device was experienced as inadequate as it was difficult to understand and control. Living with a moderate

or severe intellectual disability (ID) means having problems understanding and, sometimes, remembering. Having to understand and remember that the eating aid was controlled by a bilateral blue control button was not experienced as an optimal situation. Somehow, the connection between the spoon, the food and the control button must be improved, providing the person with ID a signal that these are connected.

“...After a while, she forgets to press the button. She can be seated for a while. Of course, we remind her, and help her press the button. But she can sit for five minutes without pressing the button... so we need to repeatedly remind her...” (Assistant 1.1). The caregivers experienced that the eating aid’s current functionality did not correspond to disabilities related to moderate and severe ID, since it often caused problems with understanding and short-term memory. Having a device controlled by a separate control is not the optimal design.

Discussion

Reflections on the results

The purpose of this study was to explore if and how meal situation experiences of PWID, who require help and support during meal situations, affected by the eating aid Bestic. If we look at the experiences the assistants expressed regarding the eating aid’s importance for the user’s independence during meal situations, we find that the assistants felt that the user’s independence during meal situations was not affected by the aid. The assistant’s definitions of independence focused on physical ability, i.e. the user being able to manage their meal situation without the help and support of an assistant. However, unlike these assistants, several researchers argue that independence is not about doing things yourself, but having control over your decisions (Brisenden, 1986; Fine & Glendinning, 2005).

If we compare Brisenden's (1986) and Glendinning's (2005) definitions of independence to the results of this study, it can be concluded that the users opted out of using the eating aid. **It should be noted that this choice may have been influenced by the assistant's requirement that the users should use the eating aid several times a week if they wanted to keep it and on the fact that their motivation reduced over time because the eating aid was difficult to use.**

The users depend on the help and support of assistants and such dependence is also discussed by Oliver (1996) who argues that the interdependence between people with disabilities and assistants does not take into account individual needs, and that there are administrative procedures that govern the user-assistant relationships. Another barrier to PWIDs independence is what Barron (1997) calls professional power. The professional defines problems and solves them without the involvement of PWIDs.

Despite the assessment that the eating aid had not affected the user's independence during the meal situation, it seems the eating aid could have a positive effect on the users. The assistants stated that it made users feel more positive and energetic and that they had a sense of increased coping. According to the assistants, Bestic had a positive effect on the users. The users used Bestic frequently in the beginning and was motivated and curious. The assistants stated that the motivation to use Bestic decreased over time, largely because of the difficulty to use it. Another reason why users chose not to use Bestic was the requirement of using it several times a week in order to keep it. This was not a problem according to the assistants.

The dissatisfaction one user expressed about the eating aid consisted of two recurring points: that it was difficult to control and that food fell into the user's lap. These two important factors

put the user in an uncomfortable situation during the meal. Difficulties and discomfort during a meal situation have a negative impact on an individual's self-esteem and a negative consequence may be that the meal situation itself becomes associated with discomfort (see e.g. Lance, 2007; Balandin et al., 2009). This lead to unwillingness to use the eating aid, as it may create undignified meal situations. Another aspect that may have influenced the user's willingness to use the eating aid was the assistant's attitudes. The data in this study shows that the assistants experienced help and support provided by them as more dignified than the help and support of a robot during meal situations. Previous research, however, shows the opposite. Lance (2007) and Martinsen et al. (2008) shows that people in need of help and support during meal situation can experience feelings of stigmatization and avoid eating in public places. The data also show that the assistants did not feel that the eating aid affected the user's autonomy and self-determination. This could be related to a longstanding attitude which still exists among some assistants (see Lindqvist, 2008). Lindqvist believes that it is necessary with methods to find out what a person with an intellectual disability thinks and techniques in order to convey information concerning them without creating confusion. The empirical data show that the assistants required the users to use the eating aid several times a week in order to keep it. This requirement may well have confused the users and influenced their choice. According to Lindqvist (2008), PWIDs should be given the opportunity to process and understand information given to them. One possibility that might have a positive impact on the participants experience and independence is if they had been given the opportunity to use Bestic consistently and effectively over a longer period without any requirements.

An aspects that were identified as important in the present study and that can affect the use of an eating aid for the current study group is its design. Problems controlling it can have a ma-

major impact on the acceptance of certain users, as can the eating aid's capacity to cope with various foods without spilling it on the user. The eating aid's functionality, user-friendliness and the assistant's attitudes appear crucial for using the eating aid. Another important aspect is the introductory and training phase, which must be fundamentally adapted to the PWIDs learning and understanding abilities. With these under control, the eating aid could become a tool for increased independence in meal situations for PWIDs who cannot move their arms or hands.

An interesting question in this context is whether giving users a longer training period with no obligation to use the eating aid several times a week would have affected their willingness and motivation to use it. The demand to use the eating aid several times a week may have created feelings of being compelled to use the eating aid; hence lower motivation. Sufficient time for introducing the eating aid and providing training for both users and assistants is an important aspect. It is important to consider and understand that PWIDs often learn and understand differently. Therefore, individually adapted introductions must be developed when introducing any type of assistive technology. Good knowledge of the eating aid, i.e. learning to use it as eating aid while the user has positive expectations and is curious about it. A longer introduction and good knowledge of the eating aid may also affect the assistant's attitudes.

A longer learning period is relevant for the target group of PWIDs. This group needs help and support to make independent decisions, set goals and solve problems. In this context, it is important to highlight the significance of the assistant's attitudes to the PWIDs learning. Assistant's support and encouragement to use technology to enhance the PWIDs self-determination and autonomy is crucial for people with profound intellectual disabilities to feel comfortable with such eating aids, particularly because of the prejudices that exist towards them.

Limitations

Firstly, we must make clear that the study has a methodological limitation in that only two PWIDs and four assistants were included in it. Another methodological limitation is that fewer users than assistants participating in the study. More assistants involved in the study implies that the assistants' experience and perception becomes more prominent than the users. A further limitation that should be mentioned is the introduction of Bestic, a better controlled and individually adapted introduction to the assistive technology must be developed.

Methodological considerations

The study was based on a small sample of participants. Data were collected during one period by interviewing PWIDs and their professional caregivers in order to ensure that the material was sufficient for reliable data analysis. The data collections supplement each other and give the data both depth and breadth, adding strength to the study.

The credibility (LoBiondo-Wood and Haber, 2006, Polit and Beck, 2008) of the data was enhanced by careful data collection and analysis that took account of both content and context. The results cannot be generalized, but are credible if the reader recognizes descriptions or interpretations as comparable to his or her own experiences (Sandelowski, 1994). If this is the case, the results can be transferred to comparable situations and contexts.

Aspects that may have had some impact on the study is that the head of department at the group home gave information about the study and took the client's consent. The head of department knew about the patients who participated in the study may have had a negative impact on the users in the sense that they may not have wanted to express themselves freely. Another aspect that can be highlighted is that the users had no other eating aid to compare with.

Future research

Despite the limited scope of the study, the results indicate that further research is needed to study the value of eating aid. Proposals for further research is to investigate how generalizable the experiences reported here are, and whether there are differences based on disability, gender, age, length of time using the eating aid and a comparison between different eating aids.

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