

SELF-HELP SKILLS OF PUPILS WITH INTELLECTUAL DISABILITY: A QUASI EXPERIMENTAL RESEARCH

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Abstract

Children with intellectual disabilities risk becoming physically and emotionally dependent on adults because they cannot care for themselves. This study examined how play ways, social stories, and parents' socioeconomic status affect self-help skills among pupils with intellectual disability. This study used a 3 x 2 factorial design as part of a quasi-experimental pretest-posttest and control group research design. Purposive sampling was used to select thirty pupils with intellectual disability (N = 30, M = 13, F = 17, Mean age = 12.3) from three government-owned primary schools. The play way and social story method instructional packages on self-help skills were two treatment packages. Performance Assessment of Self-care Skills (PASS) and parental socioeconomic scales was used to collect data. Analyses of covariance (ANCOVA) and marginal mean scores were conducted at a significance level of 0.05 to test for the significance of the data collected. Self-help skills of pupils with intellectual disability were significantly affected by treatment [$F(1,10) = 2.866$ $p > 0.05$; partial $\eta^2 = 0.193$], while the adjusted Marginal Mean revealed that play way was the most effective treatment. Furthermore, the result demonstrates that parents' socioeconomic status substantially enhanced the self-help skills of pupils with intellectual disability. A high parent's socioeconomic status influenced participants' self-help skills more. Results from the study suggest that children with intellectual disability can benefit from a play-way approach, social stories, and parental socioeconomic status.

Keywords: Gender, Intellectual Disability, Playway, Self-help Skills, Social Stories

INTRODUCTION

Living as independently as possible is critical for individuals with intellectual disability (ID) if they want to improve their outcomes. Children's independence begins with developing self-help skills (Drahota et al., 2011).

Adaptive skills include self-help skills such as dressing, eating, toileting, and personal hygiene (Mash & Wolfe, 2005). In addition to enhancing independence, daily living skills are crucial to a person's ability to participate in the broader community (Liss et al. 2001). Self-sufficiency and autonomy are achieved through age-appropriate daily living skills. To reduce their dependence on adults regarding physical care, children must be able to care for themselves (Dowling, 2000). It is the ability of school-age children with or without ID to care for themselves independently. King (2010) defines *self-help skills* as meeting one's needs and acting independently.

As children grow, they acquire skills for dressing themselves, setting the table, or pouring juice. The ability to toilet, brush, bathe, dress, and eat are typical examples of self-help skills. It is a natural part of growing up for most children to desire independence. These skills are often not learned by children with intellectual disability (Cook, Klein, & Tessier, 2008). All these activities demonstrate the development of self-help skills and maturity. A person's ability to self-help is essential to their ability to live independently. The current stage in special education develops pupils' appropriate and self-dependent activity as a significant life competency as one of its primary goals. A person with an intellectual disability (ID) has severe impairments in intellectual and adaptive ability, particularly in the areas of conceptual ability, social ability, and practical ability (AAID, 2013; Jacob et al., 2021a; Jacob et al., 2021b). Social and adaptive skills are also significantly impacted.

Typically, intellectual disabilities occur before age eighteen and affect cognitive processing and adaptive behavioural patterns (Schalock et al., 2010; Jacob et al., 2022). The problem with poor self-help skills is that it significantly impacts a child's development opportunities and adaptive socialisation abilities. Many studies have documented the various effects of social dysfunction on children with intellectual and developmental disabilities. The disorder has various fundamental diagnostic characteristics, including deficits in self-help skills. Moreover, pupils with ID will likely suffer profound social

and language difficulties, requiring specialized, individualized instruction (Taylor, 2001). A child's social behaviours considered appropriate at a particular age change as they age, increasing self-help deficits.

The child's changing social needs and environment can complicate the design of effective social skills interventions. Children with self-help skills can operate independently within their environment (Volkmar & Wiesner, 2009). A child's care depends entirely on the adults around them at birth. Feeding, cleaning, and dressing the child is the responsibility of these adults. Childcare gradually becomes his responsibility as he develops. The ability to self-help also contributes to social acceptance and healthy living (Anderson et al., 2007; Scheuermann & Webber, 2002). It is crucial to develop these skills during the first ten years of life (Anderson et al., 2007). Children with disabilities may be able to live in the least restrictive environment if they acquire adaptive behaviours. The importance of specific skills and the critical areas of self-help may vary depending on the individual's age and setting.

Despite the importance of feeding, eating, dressing, and toileting for young children, children in elementary school may be concentrating on lunchtime routines in a variety of settings (such as at home or at the school cafeteria) and using a school backpack independently (Pretzel, Hester & Porr, 2013). As a teenager, deodorant, shaving, and managing a monthly menstrual cycle are all issues associated with puberty and the teen years (Sicile-Kira, 2006). There may be multiple professionals (e.g., educators, psychologists, occupational therapists) identifying and developing these skills as the demands fluctuate (Anderson et al., 2007).

Albert Bandura formulated the Social Cognitive Theory (SCT) in the 1960s as the Social Learning Theory (SLT) (Bandura, 1986). The SCT was developed in 1986 and based its premise on the idea that learning occurs through active and collaborative interactions between people, their environment, and their behaviour. In recent years, social learning theory has become increasingly recognised as one of the most critical factors in promoting the sustainability of

natural resource management and fostering behavioural change (Muro & Jeffrey, 2008). In SCT, social influences and external and internal social reinforcement are emphasised. Furthermore, to consider the individual's way of acquiring and maintaining behaviour, SCT also evaluates the social environment in which it occurs.

In behavioural theory, past experiences influence whether a person will engage in a behaviour (Bandura, 1986). Human behaviour results from the simultaneous, multi-dimensional, and mutual interplay of an individual's characteristics, behavioural patterns, and environment (Bandura, 2009). A person can learn more about how to do things if he/she observes others doing them. Environment and personal factors such as cognitive, affective, and biological aspects significantly influence this learning behaviour. Similarly, learning activities and situations can influence personal factors. The same holds if the two other factors simultaneously impact environmental factors (Nabavi, 2012).

People engage in specific behaviours for a variety of reasons, all of which are influenced by their past experiences (Bandura, 1977). Reinforcements, expectations, and expectancies are all shaped by these experiences. Learning and development theories such as SLT have become increasingly influential. In many ways, it is based on traditional learning theories. It encompasses attention, memory, and motivation, making it a bridge between behavioural and cognitive theories of learning (Muro & Jeffrey, 2008). A person can learn several things, such as how to walk, memorize a poem, or comprehend a mathematical formula. According to Saljö (1979), learning involves: (1) knowledge acquisition; (2) memorizing; (3) acquiring facts, skills, and methods; (4) conceptualizing; and (5) reinterpreting knowledge in a new way to interpret and understand reality.

Play allows children to learn the importance of shared responsibility, appropriate behaviour, and teamwork (Daubert et al., 2018). In essence, play-

based learning contributes to social development among children. The skills children develop through play can assist them in managing themselves, being cooperative, courteous, friendly, and more capable in social situations. They also demonstrate excellent self-help skills, positive social behaviour, adaptability, and peer interaction. During play, children develop cognitively, physically, socially and emotionally (Rosli & Lin, 2018; Ali & Mahamod, 2015). The lack of time and the pressure to focus on academics contribute to inadequate playtime for children (Daubert et al., 2018; Irvin, 2017). Children who cannot express themselves adequately through words benefit from playing as a therapy. Recently, children have used it as a form of expression (Irvin, 2017).

It is also important to note that children can control their (impulsive) behaviour and prepare and take more appropriate actions (Daubert et al., 2018). There are many forms of play, namely - playing with objects exploits their properties to engage in playful activities (Pellegrini & Smith, 2005). Children engage in pretend play or pretence when they engage with a visual representation of reality in a playful setting - they 'just pretend' (Lillard, 1993). Playing rough and tumble can seem aggressive, but it is just an act of pretend aggression (Pellegrini, 1989). Children learn skills necessary for social interaction, school, and life through these different forms of play. Developing a child's full potential requires play (Ginsburg, 2007).

The right of children to play is also protected (Jantan, 2013). The National Association for the Education of Young Children (2009) emphasizes the importance of play in promoting the holistic development of children. It has been proposed that social development in children can be elicited through social interactions with their peers or adults (Dzainudin et al., 2018). By playing together, parents will have many opportunities to be involved in the activities of their children (Jantan, 2013). Play-based learning effectively engages students and enables them to learn in a relaxed environment (Loy, 2017).

People with intellectual disabilities may systematically overcome specific skill deficits by employing appropriate interventions (Begin, 1996; Sugai & Lewis, 1996). It has been found that social stories and pivotal response teaching are among the most effective ways to teach self-help skills to pupils with ID (Baker, 2004; Olçay-Gül, 2012). Based on research, Social Stories are designed to allow children with ID to read and understand social cues and situations and to form appropriate responses to such situations (Attwood, 2000; Mundy & Stella, 2001). Children with ID can benefit from social stories as an effective technique to address behavioural deficiencies and excesses (Scattone et al., 2002). As the name implies, a Social Story targets a specific problematic social situation which becomes the focus of the story. Studies involving Social Stories have primarily focused on reducing isolated inappropriate behaviours, while others have investigated skill acquisition and social interaction enhancement (Scattone et al., 2002).

The concept of a social story is the creation of a short story that describes a situation, person, skill, event, or concept in the context of socially acceptable responses in a child-specific manner (Gray, 1998). Children with special needs receive stimulus control directly from their teachers and peers through social stories. Social stories are similar to priming strategies, which prime responses to situations just before they occur (Zanolli et al., 1996). Some studies have shown that social stories can help children prevent tantrums, cheating, and inappropriate behaviour during gameplay (Kuttler et al., 1998; Lorimer et al., 2002). Such behavioural change may be sustained over time (Kuoch & Mirenda, 2003). Scholars have adopted the social story format in unique ways. Brownell (2002) used guitar accompaniment to adapt social story texts to an original tune and sing them to four participants to elicit improvement in problem behaviours (such as loud vocalizations, writing, and following instructions). Brownell's study showed that singing social stories to participants was as effective as reading them.

Children with ID benefit from social stories intervention by being shown and guided in an unfamiliar social situation, leading to maladaptive behaviour (Gray, 2010). The purpose is to help children with ID better understand their behaviour by explaining how, when, and why certain events occur in a story. Previous studies have demonstrated that social story intervention efficiently improved social behaviours (Crozier & Tincani, 2006; Wright & McCathern, 2012). Gray (1995) asserts that social stories provide accurate information about social situations by describing how other people might react and respond, enabling children to understand their social situations better. Children with ID may better understand social information from social stories by using exact methods, which may improve their social behaviours and skills. Children with ID must understand and predict how others feel and think to comprehend social stories' role in understanding/perspective-taking. However, this understanding must be acquired (Hanley-Hochdorfer et al., 2010).

In this study, two null hypotheses were tested at a significance level of 0.05. The first hypothesis posits that there is no significant main effect of treatment, specifically comparing the playway method to the social story approach, on the self-help skills of pupils with intellectual disabilities. The second hypothesis suggests that there is also no significant main effect of socioeconomic status on the self-help skills of these pupils. Thus, the focus of the analysis was to determine whether either of these variables has a meaningful impact on the development of self-help skills in this particular group of students.

METHOD

A quasi-experimental design comprising pretests, posttests and a control group was adopted in this study. This type of research design aims to assess the cause and effect of the intervention (playway and social story) on the self-help skills of participants. The pretest was administered to the three-

treatment group, after which the treatment (play way and social stories) was administered to groups 1 and 2, respectively. Placebo treatment was administered to the control group. There were three sessions a week for eight weeks during the treatment. The posttest was administered to the three groups at week 10.

The study participants included seventeen pupils with intellectual disabilities. We selected three special schools in the Ibadan metropolis, Oyo State, that are geographically representative of the city. A psychologist assessed pupils to ascertain the presence of intellectual disabilities using an assessment scale. Participants were selected using a purposive sampling technique. Each school was randomly assigned to one of three treatment groups. Ten students with intellectual disabilities were selected during the first round of selection in school S ($N = 10$, male = 6; female = 4; mean age = 11-15 years), while eight students with mild intellectual disabilities were selected in school C ($N = 8$, male = 4, female = 4, mean age = 11-15 years). Play way therapy was used in school P, Social Stories was used in school S, and a placebo was used in school C as a control group. Keeping the three treatments separate was the key to preventing contamination.

This study used the Sloson intelligence test, which measures verbal intelligence for children and adolescents ages four to eighteen. It was initially designed by Richard Lawrence Slosson Jr. (1910-1970). Although this is a foreign test, Oduolowo (1998) and Oyundoyin (2004) have adapted it to suit African students. Adediran (2011) reported that test-retest results indicate a high content validity of 0.86. Thus, SIT appears valid and valuable, while the reliability coefficient (KR-20) by age level varies from 0.88 to 0.97 (Jacob & Pillay, 2021). In addition to determining participant ID, this test also calculated their intelligence quotient (IQ).

Based on various self-help skills intended to be taught, the researcher developed a play way treatment package. A step-by-step guide is provided for

the experimental group (play way). During the eight-week treatment period, the play way group received treatment thrice weekly.

The researcher developed an instructional package for teaching self-help skills using the social story method instructional strategy. This guide outlines how to implement the treatment package for the experimental group (social story method). Social story group participants received treatment three times weekly for eight weeks.

This scale uses the Performance Assessment of Self-care Skills (PASS) to measure occupational performance on daily tasks. In addition to being client-centered, outcome-oriented, criterion-referenced, and standardised, occupational therapy practitioners use the PASS to assess adolescent, adult, and older adult occupational skills and plan interventions based on those skills under various circumstances. The PASS is divided into four domains and consists of 26 core tasks. PASS consists of five functional mobility tasks, three activities of daily living (ADLs) with a physical accent, and fourteen cognition-focused activities of daily living (IADLs).

This scale classifies participants' parents in the study into high, middle, and low SES. Salami (2000) designed the scale to determine parents' socio-economic status through their occupation, education, residence, and available appliances in the home. SES is typically measured using composite scales, which incorporate multiple variables, such as economic and social factors. A total of 12 items are included in this scale. Pupil's biodata are in items 1 - 4. Items 5 - 12 relate to parents' occupations, educational qualifications, residence, and types of electrical appliances at home.

Researchers informed participants' parents about the purpose of the study during a meeting. Parents' consent forms must contain information in a language they can understand to ensure adequate interaction. Once adequate understanding has been achieved, each parent signs the consent form. No information about the participants' profiles or responses was disclosed. One of the significant limitations of this study was the inability to record during the

sessions, as this would infringe on the participants' rights to privacy. Data collected from this study was analysed using Analysis of Covariance (ANCOVA) with a level of significance at 0.05 level of significance. Further, marginal means estimates were determined.

RESULTS AND DISCUSSION

The results based on analyses of the data collected are presented for the hypotheses. H_0 : There is no significant main effect of treatment on self-help skills of children with intellectual disability.

Table 1. Analysis of covariance of post-self-help skills of children with intellectual disability by treatment

Tests of Between-Subjects Effects						
Dependent Variable: post						Partial Eta Square
Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	d
Corrected Model	345.271 ^a	5	38.363	49.838	.000	.957
Intercept	2073.326	1	2073.326	2693.464	.000	.993
Treatment	175.349	2	87.674	113.898	.000	.919
Parents socioeconomics status	.203	1	44.203	55.264	.000	.642
Error	15.395	11	1.196			
Total	3774.000	30				
Corrected Total	360.667	29				

a. R Squared = .957 (Adjusted R Squared = .938)

The results in Table 1 show that treatment significantly enhances the self-help skills of pupils with ID [$F (2,11) = 113.898$; $p < 0.05$; partial $\eta^2 = 0.919$]. There is a 91.9% effect size. Based on this, treatment accounted for 91.9% of the variance in self-help skills of pupils with ID after the training. Due to the significant improvement in self-help skills of both experimental groups, the null hypothesis was not accepted.

Table 2. Marginal Mean Comparisons of Treatment and Control Groups on Self-help Skills

Treatment	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Playway	13.333 ^a	.316	12.674	13.992
Social story	12.679 ^a	.389	11.867	13.490
Control	5.878 ^a	.297	5.258	6.498

Table 2 shows that the pupils with ID in the play way treatment group had the highest post-self-help skills score (13.333), followed by social stories (12.679), while the pupils in the control group had the lowest mean score (23.278). This reveals that play way treatment's significant main effect on study participants' self-help skills was better than the other two (social stories and control) groups. Social skills as treatment enhance the self-help skills of participants better than the control group. The implication is that play way and social stories enhanced the self-help skills of participants. Ho2: There is no significant main effect of parents' socioeconomic status on the self-help skills of children with intellectual disability.

Ho2: There is no significant main effect of socioeconomic status on the self-help skills of pupils with intellectual disability. Based on Table 1, parents' socio-economic status significantly impacted pupils with ID's self-help skills [$F (1,10) = 55.264$; $p < 0.05$; partial $\eta^2 = 0.642$]. Hence, parents' socio-economic status contributed 64.2% to the difference in self-help skills of pupils with ID. It was found that pupils with ID had enhanced self-help skills based on their parents' socio-economic status, so the null hypothesis was not accepted. Based on the adjusted marginal means of the parents' socio-economic status, Table 3 displays the level of significant main effects.

Table 3. Marginal Mean Showing the Relationship Between Parents' Socio-economic Status and Self-Help Skills

Mean	Std. Error	95% Confidence Interval

Socioeconomic status		Lower Bound	Upper Bound
Low	10.725	.224	10.258
High	11.000 ^a	.380	10.208

Table 2 shows that the learners with intellectual disability from high parental socioeconomic status had the higher post-self-help skills score (11.000) when compared to the low parental socioeconomic status which was 10.725. The Std. Error for high parents' socioeconomic status was 0.380 which was higher than low parents' socioeconomic status. This order could be represented as high parents' socioeconomic status > low parents' socioeconomic status.

This paper evaluated how play way and social stories affect self-help skills among pupils with ID. The results of previous studies have also shown that role-playing affects early socio-emotional skills development for young children (Holli, 2017). It has been demonstrated that play way and social stories are valuable instructional tools teachers can use to increase the self-help skills of children with intellectual disabilities in a small group setting. With the playway, students could view the prompt from their perspective (instead of watching their teacher perform the task). On the other hand, social stories have to do auditory learning when the pupils pay attention to the morals in particular stories and applications. Rather than focusing on peer performance, the play way shows an onlooker's perspective. Students with cognitive disabilities may benefit from the play way since the teacher does not have to give them individual prompts. As students with intellectual disabilities become independent, they can tell social stories independently, freeing the teacher to focus on other classroom duties.

The goal of using play way for independent instruction is valid, given the effectiveness in teaching community skills to pupils with intellectual disability.

Holis (2017) found that it can engage children in actual and factual aspects of life. The children can also use it as a reference to make informed decisions in difficult situations (Holis, 2017; Irvin, 2017). The foundation of early childhood learning lies in flexible learning environments that allow for exploration. The imagination and fantasy children generate in these situations have a significant impact. Role-playing is not a meaningless simulation, as this example illustrates. According to Puteh and Ali (2012), implementing play-based learning into educational activities is only possible with the necessary knowledge and skills. As a result of the study, it was found that many teachers need more skills to implement a play-based instruction approach. This requires educators to integrate various play as an instructional strategy into children's learning experiences creatively. Using play, teachers can see children improving holistically: physically, socially, emotionally, and cognitively.

Social Stories have limited empirical support in terms of their effectiveness. Although previous studies indicate that social stories can address the behavioural deficits and excesses of children with intellectual disabilities (Scattone et al., 2002), caution should ensue when considering the results of previous studies. Regarding the self-help skills of study participants, the effectiveness of an intervention program cannot be separated from its supporting factors. Sufficient time was required to meet the participant's needs during the preparation for the intervention program's completion. The intervention program required cooperative attitudes and active participation from participants.

Furthermore, the result based on hypothesis two indicated that parents' socioeconomic status significantly affected the self-help skills of pupils with intellectual disability. The result is consistent with the submission of Jacob and Pillay (2021), whose findings suggest that low income reduces children's ability to develop appropriate cognitive linguistic abilities, impairment self-help skills challenges understanding phonological patterns, and causes lower

academic performances than their peers from high- and middle-income households. Parents with higher socioeconomic status may be more interested in their children's overall development than parents with lower socioeconomic status because they have other priorities and cannot devote as much attention to their children's self-help skills in education (Ewijk & Sleegers, 2011; Turney & Kao, 2009). A significant difference in self-help skills was observed between children with intellectual disabilities from high socioeconomic-status households and those from low socioeconomic-status households.

CONCLUSION

The study found that treatment (playway and social stories) significantly improved the self-help skills of children with intellectual disability compared to participants in the control group. However, the play way was found to be more effective than the control group when compared to the two groups, which is likely due to learners' active participation during the learning process. Students' interest in the play way group was sustained better than that of the learners in the social story and control group. Learning through play allowed the learners to interact with one another. The result also revealed that using social stories was more efficient than placebo treatment in enhancing the self-help skills of children with intellectual disability.

In addition, the socioeconomic status of parents was also significantly associated with children's self-help skills. In light of the study's findings, teachers should encourage pupils with intellectual disabilities to use this teaching strategy to develop self-help skills by integrating play way and social stories. In that way, learning is made concrete, auditory, and visual. It is imperative that stakeholders, such as teachers, caregivers, and staff of schools with students with intellectual disabilities, are trained to adapt play ways and social stories to teach children self-help skills.

LIMITATIONS

One of the study's limitations was the small sample size. The number of participants should be increased in future research. There were also unpredictability issues with the study. Several factors contribute to this behaviour, including pupil behaviour such as hyperactivity and impulsivity, and participant absences from school due to participants going for scheduled medical attention. The study also has a limitation in that one person assessed the participants' self-help skills in each group. The degree to which observed behaviour was agreed or disagreed could not be compared in this way.

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