Malaysian Journal of Social Sciences and Humanities (MJSSH) (e-ISSN : 2504-8562)
2022, Volume 7, Issue 4, e001459
DOI: https://doi.org/10.47405/mjssh.v7i4.1459

Adaptive Behaviour Empowerment of Children with Disabilities in *Pertubuhan Pemulihan Dalam Komuniti* (PPDK)

Zakiyah Jamaluddin[1*], Norzalinda Mohd Ali Hanafiah[2], Rusimah Sayuti[3]

[1]Institute for Psychotherapy, Correctional & Rehabilitation, Universiti Utara Malaysia (UUM), Sintok, 06000 Kedah, Malaysia;
School of Applied Psychology, Social Work and Policy, Universiti Utara Malaysia (UUM), Sintok, 06000 Kedah, Malaysia.
Email: zakiyah@uum.edu.my
[2]School of Applied Psychology, Social Work and Policy, Universiti Utara Malaysia (UUM), Sintok, 06000 Kedah, Malaysia.
Email: norzalinda@uum.edu.my
[3]School of Applied Psychology, Social Work and Policy, Universiti Utara Malaysia (UUM), Sintok, 06000 Kedah, Malaysia.
Email: rusimah@uum.edu.my

CORRESPONDING AUTHOR (*):
Zakiyah Jamaluddin (zakiyah@uum.edu.my)

KEYWORDS:
Adaptive behaviour
Skills
Empowerment
Children with disabilities,
Community Rehabilitation Organisation

CITATION:
Zakiyah Jamaluddin, Norzalinda Mohd Ali Hanafiah & Rusimah Sayuti. (2022). Adaptive Behaviour Empowerment of Children with Disabilities in *Pertubuhan Pemulihan Dalam Komuniti* (PPDK). *Malaysian Journal of Social Sciences and Humanities (MJSSH), 7*(4), e001459. https://doi.org/10.47405/mjssh.v7i4.1459

ABSTRACT

Adaptive behaviour is a conceptual, practical, and social skill that each individual uses in daily life. This study focuses on the empowerment of adaptive behaviour among children with disabilities in the *Pertubuhan Pemulihan Dalam Komuniti* (PPDK) or Community Rehabilitation Organisation in the district of Kubang Pasu, Kedah, Malaysia. The objective of the study is to examine the differences in the adaptive skills of children with disabilities based on the category of People with Disabilities (PWDs). This is a quantitative study using a survey method that involves parents or guardians of children at PPDK. A total of 95 respondents were involved in this study from the total population of 137 disabled trainees. The questionnaire was based on and modified from the Inventory for Client and Agency Planning (ICAP) which covered adaptive behaviours based on motor skills, social and communication skills, personal life skills, and community life skills. The analysis found that motor skills, communication and social skills, and personal life skills are different for all categories of PWDs. Only community life skills are similar for all categories of PWDs. Overall, this study found that PPDK can enable the adaptive behaviour of children with disabilities for participating in formal education.

Contribution/Originality: This study further enhances the understanding of adaptive behavior among children with disabilities especially in *Pertubuhan Pemulihan Dalam Komuniti* (Community Rehabilitation Organisations). More specifically, it examines the differences in the adaptive skills of children with disabilities based on the category of People with Disabilities (PWD's). The results of this study will be able to help the Community Rehabilitation Organisation, the Department of Social Welfare and parents and guardians in empowering children with disabilities in adaptive behavior.

© 2022 by the authors. Published by Secholian Publication. This article is licensed under a Creative Commons Attribution 4.0 International License (CC BY).

1. Introduction

Pertubuhan Pemulihan Dalam Komuniti (PPDK) or the Community Rehabilitation Organisation is an option for parents having children with disabilities who are unable to participate in formal education at school due to more serious disabilities than children with disabilities who attend special education schools. Khoo et al. (2009) found that 31.5% of physically disabled children did not receive any formal education. The issue of self-reliance was highlighted in their study because the more serious a child's disability, the higher the dependence on parents and teachers.

Empowerment is a condition that allows an individual to have the ability, confidence, and commitment to take responsibility and ownership to improve a process and the expansion of work, especially in terms of interaction with and dependency on other parties in the organisation (Besterfield, et al., 2002). Steel (2005) states that empowerment means giving individuals the opportunity to make their own choices or take effective actions. It is also meant to provide benefits to the individuals involved especially in opportunities to improve talent skills and abilities (Mitchell-Stewart, 1994; Wilson, 1996). This will lead to continuous improvement in all aspects of life. In the context of this study, empowerment is seen from the perspective of adaptive behaviour of children with disabilities in PPDK.

2. Literature Review

Adaptive behaviour is a conceptual, social, and practical skill that an individual uses in daily life (Schalock et al., 2010; Onnivello et al., 2022). According to Paskiewicz (2009), adaptive behaviour is used so that individuals with disabilities can learn to function in their daily lives. In addition, measuring their behaviour is a way to summarise effectiveness for themselves, besides reaching the desired level, and also fulfilling responsibilities in the social system. These skills are also a process that will increase conflict when individuals with disabilities experience periods of growing up. Adaptive behaviour is seen as the execution of daily activities, rather than the ability to perform activities.

The study of Duijn, et al. (2010) found that children with Down syndrome possess adaptive behaviour at a slower rate. Their highest score was only achieved at the age of 12, which was lower than that of growing children. While Park et al. (2012) studied the relationship between language structure skills with communication skills, adaptive behaviour, behavioural and emotional problems of autistic children in preschool. The results of their study showed that there was a relationship between communication skills with social and daily life skills as well as behavioural problems, for autistic children.

Khoo et al. (2009) showed that more than 1/3 of the 13,147 children with physical disabilities respondents were dependent on their caregivers in various aspects of self-care (37.4%) and mobility (34.9%). The researchers also found that the more serious the physical disability, the lower independent functioning and their participation in the community. This study concludes that physical disabilities can have a significant impact on a child's functionality. They also identified that there is a need for the involvement and commitment of government, non-governmental organisations, and the private sector in this issue.

© 2022 by the authors. Published by Secholian Publication. This article is licensed under a Creative Commons Attribution 4.0 International License (CC BY).

Results of the study of Onnivello et al. (2022) on 100 parents/guardians to children with Down syndrome aged between 3 to 16 years, showed that children with Down syndrome aged between 3 to 6 years received low scores on communication skills (85%), personal life (70%), and motor (87.5%). These findings are in line with previous studies and consistent with children with Down syndrome who show low scores in communication, social, and personal life (Grieco et al., 2015; Will et al., 2018; Spiridigliozzi et al., 2019).

Children with cerebral palsy (CP) are rarely given attention by society. Malek et al. (2022) attempted to explore factors associated with adaptive behaviour among 59 children with cerebral palsy. They found that 34% of the children had an adaptive skills disability. Similarly, children diagnosed with autism and who have low communication were also closely associated with poor adaptive skills ($p < 0.001$).

Based on previous studies, it has been found that children with disabilities experience problems in terms of their ability to be independent and are highly dependent on their caregivers. They also face problems in terms of communication and behaviour. Therefore, this study is important to study the adaptive behaviour of children with disabilities in PPDK and further improve their social functioning in line with other individuals in obtaining their rights which include aspects of education, health, employment, and social support. The objective of this study is to examine the differences in adaptive behavioural empowerment of children with disabilities based on the people with disability category.

3. Methodology

This study uses a quantitative research method design by using a questionnaire for data collection. The population in this study is all parents or guardians who send children with disabilities to the PPDKs in the district of Kubang Pasu, Kedah, Malaysia, namely PPDK Kota Siputeh Kodiang, Jitra, Ayer Hitam, and Changlun. Table 1 shows the population and sample that includes the number of trainees in the four PPDKs. However, since the trainees could not be interviewed due to their disability, then their caretakers including mothers, fathers, and guardians were the respondents in this study.

Table 1: Population and Sampling

PPDK (Kubang Pasu District)	Population	Sample (Parents/Guardians)
PPDK Kota Siputeh (Kodiang)	20	18
PPDK Changlun	37	27
PPDK Ayer Hitam	28	17
PPDK Jitra	52	33
Total	137	95

For the sampling of the study, all parents were selected based on purposive sampling (purposeful) where only those willing to be respondents were selected. There are various types of disabilities of children in PPDK such as physical, mental, Down syndrome, autism, and hyperactivity. The selection of the study sample is not limited to one type of disability and all the types of disabilities mentioned above were included in the study.

The questionnaire form used was based on and modified from the Inventory for Client and Agency Planning (ICAP) which included motor skills, social and communication skills, personal life skills, and community life skills (Bruininks, Hill, Weatherman & Woodcock, 1986).

© 2022 by the authors. Published by Secholian Publication. This article is licensed under a Creative Commons Attribution 4.0 International License (CC BY).

The questionnaire consists of three sections: Section A (Respondent Demographic Information), Section B (Information of Children/Trainees with Disabilities), and Section C (Adaptive Behaviour). Section C has four components, i.e. 1. Motor Skills, 2. Communication and Social Skills, 3. Personal Life Skills and 4. Community Life Skills. For Section C, a four-point Likert scale was used, from Scale 0: Unable to Perform (even if instructed), Scale 1: Limited Ability (if instructed), 2: Moderate Ability (if instructed) and Scale 3: Perform well (without being told). Component 1 for Motor Skills contains 17 items, Component 2 for Communication and Social Skills contains 18 items, Component 3 for Personal Life Skills contains 22 items and Part 4 for Community Life Skills contains 15 items.

Permission from the Director of the Malaysian Social Welfare Department was obtained to conduct the study before the fieldwork. Later, the researchers obtained permission from the four PPDK supervisors. Appointments then were set to distribute questionnaires to the parents and guardians during operating hours of PPDKs. This is done to ensure researchers can meet the parents, especially within the stipulated time. The study was conducted during PPDKs' operating hours and did not interfere with the activities of trainees because it was conducted in specific places reserved by the PPDKs for the data collection process.

4. Result

4.1. Background of Parents/Guardians and Children with Disabilities

All parents or guardians of the trainees involved were Malays except two Indians and one Chinese. Thus, the majority of the trainees' parents/guardians were Muslims, two were Hindus and one was Teochew. Of the total parents/guardians of the trainees, six were single, three were widows/widowers, and the rest were married. As for the level of education, the highest percentage was recorded for those with secondary school education at 61.29%, followed by the level of primary school education and below. Among the parents/guardians of children with disabilities involved in the study, 62.37% were mothers, 32.26% were fathers and the rest were sisters (2.15%), grandfathers (1.08%), grandmothers (1.08%), and adoptive grandfathers (1.08 %).

Based on the gender of the children, they consisted of 47 males (49.5%) and 48 females (50.5%). According to the age distribution, they consisted of children with disabilities aged 3 to 39 years. Their mean age was 13.53 years with a standard deviation of 7.078. In terms of race, almost all respondents consist of Malay children at 96.8%. Two of them were Indian while one was Chinese.

Children with disabilities involved can be categorized into six: autism learning problems, Down syndrome learning problems, hyperactive learning problems, slow learner learning problems, physical disabilities, and multiple disabilities. Majority of them comprised of multiple disability categories at 33.7%, followed by those with learning disabilities at 22.1%, Down syndrome learning disabilities at 17.9%, autism learning disabilities at 10.5%, physical disabilities at 11.6%, and hyperactive learning disabilities at 3.2% (Table 2).

© 2022 by the authors. Published by Secholian Publication. This article is licensed under a Creative Commons Attribution 4.0 International License (CC BY).

Table 2: Categories of Children with Disabilities at PPDK

		PPDK				Total
		Kodiang	Jitra	Ayer Hitam	Changlun	
Disability categories	Learning Disabilities - Autism	1	2	0	6	10
	Learning Disabilities - Down Syndrome	1	8	6	2	17
	Learning problems - hyperactive	1	0	0	2	3
	Learning problems - Slow learner	2	5	8	6	21
	Physical	2	4	1	4	11
	Multiple	11	11	2	8	32
	Unknown	0	1	0	0	1
Total		18	32	17	28	95

4.2. Adaptive Behaviour and Disabled Category Factors

Differences between categories of PWDs based on the empowerment of children with disabilities were conducted based on adaptive behaviours from four different skills namely motor skills, communication and social skills, personal life skills, and community life skills. The Kruskal-Wallis Test of Unrelated Samples was conducted.

It was found that motor skills, communication and social skills, and personal life skills/self-skills were different for all categories of PWDs. Only community life skills were the same for all categories of PWDs (Table 3).

Table 3: Results of Kruskal-Wallis's test between PWD Category and level of empowerment by skill

Adaptive behaviour	Significant
Motor skills	0.003
Communication and Social Skills	0.013
Personal Skills/Self Skills	0.010
Community Life Skills	0.073

To study in-depth, the Dunnet C test was conducted to identify paired category with different levels of empowerment for motor skills, social and communication skills, and personal life skills. Dunnet C test was conducted on each pair category based on the three skills. Tables 4, 5 and 6 showed the results for all paired category involved based on motor skills, social and communication skills and personal life skills.

Based on Tables 4, 5 and 6, it can be concluded that the level of empowerment of children with disabilities with learning disabilities (Slow learner) and children with various disabilities are different based on the three skills namely motor skills, social and communication skills, and personal life skills. Moreover, based on motor skills, the level of empowerment of children with disabilities with Down Syndrome problems and children of various disabilities is different.

© 2022 by the authors. Published by Secholian Publication. This article is licensed under a Creative Commons Attribution 4.0 International License (CC BY).

Table 4: Results of Dunnet C test between disability category and motor skills

	I (Disability category)	J (Disability category)	Mean differentiation (I-J)
Motor Skills	Learning disability – Autism	Learning disability – Down Syndrome	-1.69318
	Learning disability – Autism	Learning disability – Hyperactive	.18182
	Learning disability – Autism	Learning disability – *Slow learner*	-2.91342
	Learning disability – Autism	Physical	15.45455
	Learning disability – Autism	Multiple disabilities	9.15057
	Learning disability - Down Syndrome	Learning disability – Hyperactive	1.87500
	Learning disability - Down Syndrome	Learning disability – *Slow learner*	-1.22024
	Learning disability - Down Syndrome	Physical	17.14773
	Learning disability - Down Syndrome	Multiple disabilities	10.84375*
	Learning disability – Hyperactive	Learning disability – *Slow learner*	-3.09524
	Learning disability – Hyperactive	Physical	15.27273
	Learning disability – Hyperactive	Multiple disabilities	8.96875
	Learning disability - *Slow learner*	Physical	18.36797
	Learning disability - *Slow learner*	Multiple disabilities	12.06399*
	Physical	Multiple disabilities	-6.30398

Table 5: Results of Dunnet C test between disability category and social and communication skills

	I (Disability category)	J (Disability category)	Mean Differentiation (I-J)
Social and Communication Skills	Learning disability – Autism	Learning disability - Down Syndrome	-12.18182
	Learning disability – Autism	Learning disability – Hyperactive	-2.51515
	Learning disability – Autism	Learning disability – *Slow learner*	-13.18182
	Learning disability – Autism	Physical	-3.18182
	Learning disability – Autism	Multiple disabilities	-1.80682
	Learning disability - Down Syndrome	Learning disability – Hyperactive	9.66667

© 2022 by the authors. Published by Secholian Publication. This article is licensed under a Creative Commons Attribution 4.0 International License (CC BY).

	Learning disability - Down Syndrome	Learning disability – *Slow learner*	-1.00000
	Learning disability - Down Syndrome	Physical	9.00000
	Learning disability - Down Syndrome	Multiple disabilities	10.37500
	Learning disability – Hyperactive	Learning disability – *Slow learner*	-10.66667
	Learning disability – Hyperactive	Physical	-.66667
	Learning disability – Hyperactive	Multiple disabilities	.70833
	Learning disability - *Slow learner*	Physical	10.00000
	Learning disability - *Slow learner*	Multiple disabilities	11.37500*
	Physical	Multiple disabilities	1.37500

Table 6: Results of Dunnet C test between disability category and personal skills

	I (Disability category)	**J (Disability category)**	**Mean differentiation (I-J)**
Personal Life Skills	Learning disability – Autism	Learning disability - Down Syndrome	-9.98295
	Learning disability – Autism	Learning disability – Hyperactive	-5.54545
	Learning disability – Autism	Learning disability – *Slow learner*	-13.25974
	Learning disability – Autism	Physical	5.81818
	Learning disability – Autism	Multiple disabilities	3.64205
	Learning disability - Down Syndrome	Learning disability – Hyperactive	4.43750
	Learning disability - Down Syndrome	Learning disability – *Slow learner*	-3.27679
	Learning disability - Down Syndrome	Physical	15.80114
	Learning disability - Down Syndrome	Multiple disabilities	13.62500
	Learning disability – Hyperactive	Learning disability – *Slow learner*	-7.71429
	Learning disability – Hyperactive	Physical	11.36364
	Learning disability – Hyperactive	Multiple disabilities	9.18750
	Learning disability - *Slow learner*	Physical	19.07792
	Learning disability - *Slow learner*	Multiple disabilities	16.90179*
	Physical	Multiple disabilities	-2.17614

© 2022 by the authors. Published by Secholian Publication. This article is licensed under a Creative Commons Attribution 4.0 International License (CC BY).

5. Discussion

The results of this study show that motor skills, communication and social skills, and personal life skills/self-skills are different for all categories of PWDs. Only community life skills are the same for all categories of PWDs. These findings support previous studies (Grieco et al., 2015; Will et al., 2018; Spiridigliozzi et al., 2019; Malek et al., 2022; Onnivello et al., 2022).

Meanwhile, the level of adaptive behaviour for three different skills, namely motor skills, communication and social skills, and personal life skills/self-skills are better among children with learning disabilities of slow learners compared to those in the category of multiple learning disabilities. No statistically significant differences exist between other categories besides the category of children with multiple disabilities. This supports the results of a study by Koster, Pijl, Nakken and Van Houten (2010). Their study concluded that no statistically significant differences existed between the different disability categories (behavioural disorders, autistic spectrum disorders, motor disabilities, intellectual disabilities, and speech/language disabilities) based on four themes of social participation namely social self-perception, acceptance by classmates, friendship/relationship and the initiation of touch/interaction.

However, the results of the current study contradict the results of the study by Paskiewicz (2009). The results of that study showed that for the domains of socialization and daily life skills, children with these learning disabilities had statistically higher performance than children with mental retardation or autism.

6. Conclusion

Overall, the PPDK was established to help people with disabilities (PWDs) participate in formal education. The study found that PPDK has provided effective services to the empowerment of adaptive behaviours, namely motor skills, social skills, and community skills that play an important role in the cognitive development and socialisation of children with disabilities.

Acknowledgement

This article was part of University Research Grant Scheme title "*Pengupayaan Anak-anak Kurang Upaya Dalam Program Rehabilitatif Pusat Pemulihan dalam Komuniti*". This research was supported by the Research and Innovation Management Centre (RIMC), Universiti Utara Malaysia through University Research Grant Scheme, Code S/O 13360, and the authors wish to thank to RIMC, UUM, for the management and administration of this research.

Funding

This research was funding by the Research and Innovation Management Centre (RIMC), Universiti Utara Malaysia through University Research Grant Scheme, Code S/O 13360.

Conflict of Interests

The authors declare no conflict of interest in this study.

© 2022 by the authors. Published by Secholian Publication. This article is licensed under a Creative Commons Attribution 4.0 International License (CC BY).

References

Besterfield, D. H., Besterfield-Michna, C., Besterfield, G., & Besterfield-Sacre, M. (2002). *Total Quality Management* (3rd Editio). Prentice Hall.

Bruininks, R. H., Hill, B. K., Weatherman, R. F., & Woodcock R. W. (1986). *Inventory for Client and Agency Planning*. Itasca, IL: Riverside Publishing Company.

Duijn, G. Van, Dijkxhoorn, Y., Scholte, E. M., & Berckelaer-Onnes, I. A. Van. (2010). The Development of Adaptive Skills in Young People with Down Syndrome. *Journal of Intellectual Disability Research*, *54*, 943–954.

Grieco, J., Pulsifer, M., Selighson, K., Skotko, B., & Schwartz, A. (2015). Down syndrome: cognitive and behavioural functioning across the lifespan. *American Journal of Medical Genetics Part C: Seminars in Medical Genetics, 169*(2), 135-149. doi: 10.1002/ajmg.c.31439.

Khoo, T., Kassim, A. B., Omar, M. A., Hasnan, N., Amin, R. M., Omar, Z., & Yusoff, A. F. H. J. (2009). Prevalence and Impact of Physical Disability on Malaysian School-Aged Children: A Population-Based Survey. *Disability and Rehabilitation*, *31*(21), 1753–1761.

Koster, M., Pijl, S. J., Nakken, H., & Van Houten, E. (2010). Social Participation of Students with Special Needs in Regular Primary Education in the Netherlands. *International Journal of Disability, Development and Education*, *57*(1), 59–75.

Malek, S.A., Mesterman, R., Switzer, L., DiRezze, B., deVeber, G., Fehlings, D., Lunsky, Y., Phoenix, M., & Gorter, J.W. (2022). *European Journal of Paediatric Neurology, 36,* 19-25..

Mitchell-Stewart, A. (1994). *Empowering People (Institute of Management Series.)*. Financial Times/ Prentice Hall.

Onnivello, S., Colaianni, S., Pulina, F., Locatelli, C., Marcolin, C., Ramacieri, G., Antonaros, F., Vione, B., Piovesan, A., & Lanfranchi, S. (2022). Executive functions and adaptive behaviour in individuals with down syndrome. *Journal of Intellectual Disability Research, 66*(1-2), 32-49. doi:10.1111/jit.12897.

Park, C. J., Yelland, G. W., Taffe, J. R., & Gray, K. M. (2012). Brief Report : The Relationship Between Language Skills, Adaptive Behavior, and Emotional and Behavior Problems in Pre-schoolers with Autism. *Journal of Autism Developmental Disorders*, *42*, 2761–2766.

Paskiewicz, T. L. (2009). *A Comparison of Adaptive Behavior Skills and IQ in Three Populations: Children with Learning Disabilities, Mental Retardation, and Autism*. Temple University.

Schalock, R. L.; Borthwick-Duffy, S. A.; Bradley, V. J.; Buntinx, W. H. E.; Coulter, D. L.; Craig, E. M.; Gomez, S. C.; Lachapelle, Y; Luckasson, R.; Reeve, A.; Shogren, K. A.; Snell, M. E.; Spreat, Scott; T., Marc, J.; Thompson, J. R.; Verdugo-Alonso, M.A.; Wehmeyer, M. L.; Yeager, M. H. (2010). *Intellectual disability: Definition, classification, and systems of supports*. Eleventh Edition. American Association on Intellectual and Developmental Disabilities. USA: Washington DC.

Spiridigliozzi, G.A., Goeldner, C., Edgin, J., Hart, S.J., Noeldeke, J., Squassante, L., Visootsak, J., Heller, J.H., Khwaja, O., Kishnani, P.S., & d'Ardhuy, X.L. (2019). Adaptive behaviour in adolescents and adults with Down syndrome: results from a 6-month longitudinal study. *American Journal of Medical Genetics Part A, 179*(1), 85-93. doi: 10.1002/ajmg.a.60685.

Steel, R. (2005). Actively involving marginalized and vulnerable people in research. In L. Lowes & I. Hulatt (Eds.), *Involving Service Users in Health and Social Care Research*. Routledge.

Will, E.A., Caravella, K.E., Hahn, L.J., Fidler, D.J., & Roberts, J.E. (2018). Adaptive behaviour

© 2022 by the authors. Published by Secholian Publication. This article is licensed under a Creative Commons Attribution 4.0 International License (CC BY).

in infants and toddlers with Down syndrome and fragile X syndrome. *American Journal of Medical Genetics Part B: Neuropsychiatric Genetics, 177*, 358-368. doi.org/10.1002/ajmg.b.32619.

Wilson, P. A. (1996). Empowerment: Community Economic Development from the Inside Out. *Urban Studies*, *33*, 617–630.

© 2022 by the authors. Published by Secholian Publication. This article is licensed under a Creative Commons Attribution 4.0 International License (CC BY).