SKJP 2024
Jurnal SMART Keperawatan, 2024, 11 (2), 93-99 pISSN 2301-6221; eISSN 2502-5236
https://ojs.unkaha.com/ojsn/index.php/jskp
Received 21 August 2024; Revised 30 September 2024; Accepted 7 October 2024

OVERVIEW OF THE DEVELOPMENT OF STUNTING CHILDREN AGED 2-5 YEARS IN GEDOG VILLAGE

[1]Faradillah Nur Aulya Rahmah, [*]Dewi Rachmawati, Tri Cahyo Sepdianto

[1]Department of Nursing, Poltekkes Kemenkes Malang
[*]Corresponding Author: dewi_rachmawati@poltekkes-malang.ac.id

ABSTRACT

Stunting is a growth and development problem that has an impact on intellectual abilities, decreased economic productivity and the risk of metabolic diseases which will affect the development of children in the future. The purpose of this study was to determine the development of stunted children aged 2-5 years in Gedog Village. This research design uses descriptive quantitative with a sample size of 42 stunted children aged 2-5 years who meet the inclusion criteria and are selected using purposive sampling method. Data collection was carried out on February 7-29, 2024 at each integrated healthcare center in Gedog Village. Instruments in the study using the Denver Development Screening Test I and results of the DDST assessment are normal, abnormal, suspect, and unstable. The data obtained is presented in the form of diagrams and narrated. The results of this study were gross motor development 75% scored normal and 25% scored advanced, fine motor development 69% of children were normal, 22% delay and 8% caution, language development 53% normal, 39% caution and 8% delay, personal social development 47% normal, 47% delay and 6% caution and overall normal results 53%, Abnormal 19% and suspect 28%. From these results, it is found that stunting is not the main cause of developmental abnormalities in children. Parenting and the environment are also one of the factors that make children reach their developmental stage.

Keywords: Fine Motor, Gross Motor Development, Language, Social, Stunting

INTRODUCTION

Stunting is a problem of child growth and development caused by chronic malnutrition, stunting causes the child's posture to be shorter and thinner than other children his age (Priyono 2020). According to WHO, if a child's growth is inhibited, the process of fine motor skills, gross motor skills, language and personal social skills is also inhibited (Wulansari, Mastuti, and Indahwati 2021). According to data from the Basic Health Research of the Indonesian Ministry of Health in 2018, there were 8.7 million babies, or 30.7% of toddlers in Indonesia affected by stunting (Kemenkes RI 2018), this figure is still above the 20% target set by the World Health Organization. Meanwhile, based on the Indonesian Nutrition Status Survey (SSGI) in 2022, the prevalence of stunting in East Java Province was 19.2 percent and the stunting rate in Blitar City from 2021 to 2022 reached 12.8% (Kemenkes 2022).

Stunting can have an impact on children's developmental abilities, such as suboptimal cognitive, motor, and verbal development, increased risk of disease and death due to body size reduction, lack of intellectual ability, decreased economic productivity, and increased risk of metabolic diseases (Auliana, Susilowati, and Susiloningtyas 2020).

Children's motor development is divided into two, namely gross motor development and fine motor development. Fine motor is an aspect related to the child's ability to perform movements carried out by small muscles that coordinate harmoniously (Puspita and Umar 2020) such as squeezing paper, folding paper, cutting paper without patterns while gross motor is a physical skill that involves large muscles to move all parts of the body such as

walking, running, catching, throwing. Language development is an aspect related to the child's ability to respond to sounds, follow commands and speak spontaneously. While personal social development is an aspect related to self-will, socializing and interacting with the environment. such as eating, putting on and taking off clothes, and interacting with friends and the surrounding environment. Children with stunting usually tend to be apathetic and do not want to play with people around them (Hanani and Syauqy 2016).

Stunting children experience obstacles in their development as evidenced in research conducted (Primasari, Syofiah, and Muthia 2021) of 130 toddlers who were screened for KPSP development, 30 toddlers experienced deviations in their gross motor development, 18 of which were stunting toddlers. In line with research conducted (Maharani 2023) on 21 stunting toddlers who were tested with SDIDTK where toddlers were unable to meet developmental milestones according to their age, children aged 4 months could not turn from face down to supine, there were 5 children aged 24-36 months unable to walk up stairs and 3 children aged 36-48 months unable to stand on 1 leg for 2 seconds, jump with both feet raised and pedal a bicycle. According to research conducted by (Hanani and Syauqy 2016) it was found that most stunted children had suspicious results in the language and personal social sectors.

In accordance with the preliminary study that has been carried out, data obtained from 246 children, including 168 children aged 2-5 years experiencing stunting. From the results of the preliminary study, it is said that individual developmental tests have never been carried out on stunting children. Therefore, researchers want to examine the development of stunting children aged 2-5 years in Gedog Village.

METHOD

The research design used in this study was descriptive. The population in this study were subjects who met the established criteria, namely stunted children aged 2-5 years, totaling 42 children in Gedog Village. The sample in this study were stunted children aged 2-5 years at the integrated healthcare center in the Gedog Village area. With a large sample according to the inclusion criteria, namely stunted children aged 2-5 years totaling 42 children, children who according to anthropometric measurements of TB / U integrated healthcare center are less than -2 SD, children with no congenital abnormalities and willing to become respondents. While the exclusion criteria are stunted children aged 2-5 years who refuse or are uncooperative when developmental tests are carried out. From this sample, 36 respondents were included in the inclusion criteria and 3 respondents were included in the exclusion criteria because they were not cooperative and had congenital abnormalities. The sampling technique in this study used purposive sampling. The research was conducted at integrated healthcare center spread across the Gedog Village area Data collection was carried out on February 7-29, 2024.

The variable of this study is the development of children with stunting which includes 4 sectors, namely gross motor, fine motor, language, and personal social. In this study, the data collection technique used was to conduct developmental tests with the DDST (Denver Development Screening Test) form to assess the level of child development according to their age where this DDST sheet contains a number of developmental items that will be tested on respondents according to their age. There are 4 categories in the DDST interpretation: Normal (When there is no delay or at most only one caution), Abnormal (When there are 2 or more delays), Suspect (When there are ≥ 2 cautions and/or ≥ 1 delay), Unstable/untestable (When there is a refusal score in ≥ 1 trial located to the left of the age line or

refusal in ≥ 1 trial that crosses the age line in the 75-90% area). The data obtained is presented in the form of diagrams and narrated

RESULTS

Table 1. Characteristics of stunted children based on gender, age, birth weight, birth history, pregnancy history, height by age and weight by age at the integrated healthcare center Gedog in the Sananwetan Health Center.

Respondent's Characteristics		n	%
Gender	Male	21	58%
	Female	15	42%
Age (month)	24-36 Month	7	19%
	36-48 Month	11	31%
	48-60 Month	11	31%
	60-72 Month	7	19%
Birth weight	Underweight	5	14%
	Normal	31	86%
Birth History	Normal	32	89%
	Caesar	4	11%
Pregnanc y history	Not present	33	92%
	Preeklamsia	3	8%
Height by age	Short	22	61%
	Very short	14	39%
Weight by age	Normal weight	9	25%
	underweight	21	58%
	Very underweight	6	17%

Base on the table above, it can be interpreted that the majority of respondents are male as many as 58% of toddlers (21 children), age shows the majority aged 36-60 months 62% of children (22 children), birth weight shows the majority of children with normal weight as many as 86% of children (31 children), mothers gave birth normally as many as 89% (32 people), pregnancy history with no history of preeclampsia as many as 92% (33 people), the results of height by age data stunting children as many as 61% (22 children) with short height by age and the results of weight by age data obtained 58% (21 children) with underweight.

Table 2 Interpretation of the results of the assessment of gross motor development of stunted children aged 2-5 years at the Gedog integrated healthcare center in the Sananwetan Health Center.

Gross motor	n	%
Advanced	9	25%
Normal	27	75%
Caution	0	0%
Delay	0	0%

Based on the table, it shows that the development of children measured using the DDST form in the gross motor aspect, the majority of them get normal results as much as 75% (27 children).

Table 3 Interpretation of the results of the assessment of fine motor development of stunted children aged 2-5 years at the integrated healthcare center Gedog in the Sananwetan Health Center.

Fine motor	n	%
Advanced	0	0%
Normal	25	69%
Caution	3	8%
Delay	8	22%

Based on the table, it shows that the development of children measured using the DDST form in the fine motor aspect, the majority of them get normal results as much as 69% (25 children).

Table 4 Interpretation of the results of the assessment of language development of stunted children aged 2-5 years at the integrated healthcare center Gedog in the Sananwetan Health Center.

Language	n	%
Advanced	0	0%
Normal	19	53%
Caution	14	39%
Delay	3	8%

Based on the table, it shows that the development of children measured by the DDST form in the language aspect, the majority of them get normal results as much as 53% (19 children).

Table 5 Interpretation of the results of the assessment of personal social development of stunted children aged 2-5 years at the integrated healthcare center Gedog in the Sananwetan Health Center.

Personal social	n	%
Advanced	0	0%
Normal	17	47%
Caution	2	6%
Delay	17	47%

Based on the table, it shows that the development of stunted children measured using the DDST form in personal and social aspects is 47% (17 children) each getting normal and delayed results.

Table 6 The results of the overall assessment of the development sector of stunted children aged 2-5 years at the integrated healthcare center Gedog in the Sananwetan Health Center.

Overall development	n	%
Normal	19	53%
Abnormal	7	19%
Suspect	10	28%

Based on the table above, it can be concluded that the development of stunted children as measured using the DDST form is mostly normal 53% (19 children).

DISCUSSION

Gross Motor Development

The results of data analysis per sector show that the development of stunted children measured using DDST forms in the gross motor aspects of stunted children is normal as many as 27 children (75%). In contrast to the theory that says that stunting causes obstacles to children's gross motor abilities due to the inhibition of the muscle maturity process so that muscle mechanical abilities are reduced, supported by research by (Nurmalasari, Yudhasena, and Utami 2019) which says that there is a relationship between the incidence of stunting and gross motor development in toddlers aged 6-59 months with the results of the majority of stunted children in the abnormal category.

According to (Asthiningsih and Muflihatin 2018), factors that affect child development are nutrition, chronic diseases, physical and chemical environments, psychology, parenting, stimulation and drugs. Stimulation can be in the form of activities that can hone motor skills, and playing games that hone gross motor skills such as playing ball, jumping and so on, parents can also set a good example so that children can develop their motor skills by imitating (Miru, Wahyuningrum, and Wicaksono 2021). In addition, providing an environment that supports children to move freely, activities carried out outdoors will stimulate muscle development where children can move freely to run, jump and move their bodies unlimitedly.

In this study, normal and advanced results were influenced by parenting factors. Children's parents give freedom to play so that children are very active when playing with their friends such as running around. In addition, the results obtained advanced results because each developmental task has almost the same level so that children can easily achieve developmental tasks that are at the age line and above the age line. This study is in line with the research of (Wulansari et al. 2021) who found that stunting does not have a significant effect on gross motor development in children, this is due to support within the family and peers.

Based on observations at the time of the test with the DDST form, most children were able to perform developmental tasks truncated at the age line supported by research conducted by (Munir, Yulisyowati, and Virana 2019) which said good nutritional factors, an environment that supports child development and the active role of parents in parenting will make child development more optimal.

Fine Motor Development

The results of data analysis per sector show that the development of stunted children in the fine motor aspect of most children received normal results as many as 25 stunted children (69%), in line with research conducted by (Wulansari et al. 2021) that stunting has no significant effect on the gross motor development of stunted children aged 2-5 years. This is due to favorable environmental factors and parental support. In contrast to the research of (Auliana et al. 2020) which shows that there is a significant relationship between stunting toddlers and fine motor development. This is due to the inhibition of the maturity of nerve cells, motor movements, stimulation in the surrounding environment and lack of intelligence in children so that children's development is hampered.

The success of children in developing fine motor skills is certainly supported by parenting factors where parents as the closest people to children play a role in teaching children's developmental tasks according to their age patterns such as teaching children to draw, write and count

which requires coordination between the nervous system and fine muscle movements that achieve careful coordination. A non-conducive environment will also be a stressor for children that can interfere with their fine motor development (Yanti and Fridalni 2020).

Normal results were obtained because the majority of stunted children aged 2-5 years in Gedog Village attended formal and non-formal education in early children eduation program, kindergarten and integrated healthcare center schools available. Where this education can support children's fine motor development because in this education children are accompanied and stimulated to hone their fine motor development. In addition, the results of delay in child development were obtained for 8 children (22%) and caution child development for 3 children (8%) where most children failed in the developmental tasks of drawing people with 3 body parts and drawing circles.

According to the observations of researchers, the delay in children is due to the lack of stimulation and assistance from parents to invite children to train their fine motor skills. Where the age of 2-5 years is the golden age which is a very fast growth period and will not be repeated, therefore, it is very important to pay careful attention to growth and development.

Language Development

The results of data analysis per sector show that the development of stunted children measured using the DDST form in the language aspect of the majority of children is normal as much as 53% (19 children). Parents are an important component in children's language development, because of their role as language models and correctors of children's mistakes. So, if parents can play an active role in seeing children's language development and providing correct language correction to children, then children will experience positive language development (Wulansari et al. 2021).

During their development, children still learn to imitate what they see from their environment, therefore, parents as the first educators of children must be able to provide educational examples for children in order to develop positive behavior. The environment is very influential in shaping good language development so that children can more easily socialize and communicate in everyday life (Yanti and Fridalni 2020).

In addition, the results showed that 14 children (39%) who experienced caution and 3 children (8%) experienced delays in language development. From the results of the researcher's observations, it was found that most children failed to interpret words, mention the uses of objects, did not understand adjectives, there were children whose speech was not clear and could not combine words. This is because parents do not understand the importance of teaching children to know the uses, properties of an object and sometimes allow children to play alone outside the home so that children can only mention the names of objects and do not understand the meaning, uses and properties. Supported by research conducted by (Wulansari et al. 2021) which states that stunting affects the language development of stunting children. this is because stunting children experience obstacles in the development of brain cells which results in disruption of speech and language skills.

Personal Social Development

The results of data analysis per sector show that the development of stunted children measured using the DDST form on personal social aspects as many as 17 children (47%) get normal results. Based on the theory that explains that children who experience malnutrition tend to be more lethargic and inactive so that they are less able to interact with their environment, characterized by decreased activity, more fussy and not feeling happy, and not showing curiosity (exploration instinct). Of course, these things can hinder children from developing their personal social development (Munir et al. 2019). Supported by research research by (Wulansari et al. 2021) which shows the results that stunting has a significant effect on personal social development.

According to (Miru et al. 2021) Environmental factors and parenting are important in supporting children's personal social development. Parenting from parents will have an influence on each stage of a child's development in

personal social development related to the child's independent ability to carry out activities such as eating and cleaning up toys after playing, parting with the mother, toileting socializing and interacting with the environment. It is hoped that parents can give trust and provide knowledge to children so that children are ready to face, interact and socialize in the outside environment. In addition, children are also ready to carry out activities according to their respective age stages so that children do not always depend on parents. supported by research.

In addition, 17 children (47%) received delay results and as many as 2 children (6%) received caution results from the results of observations and interviews with parents when research was conducted several developmental tasks that many children get failed results, namely on the developmental tasks of wearing clothes, brushing teeth and taking food independently due to parents not giving freedom and trust to children to do it independently so that children become dependent on parents when doing activities that should be done independently at their age.

Overall assessment of the development of stunted children aged 2-5 years in Gedog Village

The results of the overall data analysis showed that the development of stunted children measured using the DDST form obtained the majority of normal results as much as 53% (19 children), Abnormal 19% (7 children) and suspect 28% (10 children). Normal child development is caused by the provision of stimulation carried out by the child's parents. According to (Soetjiningsih 2018) children who get directed and regular stimulation will develop faster than children who do not know or lack stimulation. Supported by research by (Asthiningsih and Muflihatin 2018) who got normal results totaling 93 toddlers (82.3%), abnormal there were 2 toddlers (1.8%), and suspect there were 18 toddlers (15.9%). These results are obtained because parents can pay attention to the development of their toddlers by stimulating the 4 aspects so that the development of toddlers can reach optimal.

In contrast to the theory that stunting will affect child development. There are two impacts of stunting, namely short-term impact and long-term impact. This impact certainly also affects 4 aspects of development, namely gross motor, fine motor, language and personal social.

Suspect results are caused by children failing to perform developmental tasks where the age line lies at or between 75% and 90% and abnormal results are caused by children failing in developmental tasks that are to the left of the age line. Children tend to hesitate and lack confidence in performing their developmental tasks, in addition to the lack of parental trust in children causing children to fail to achieve developmental tasks according to their age.

Children's failure is due to the fact that most children are not given enough stimulation by their parents so that the stimulation provided is less regular. Parenting from parents will influence each stage of child development such as providing stimulation to invite children to learn to hone their developmental abilities while playing, providing a supportive environment to facilitate children to hone their developmental abilities, and giving trust to children to try new things so that child development can be achieved properly according to their age. Therefore, developmental monitoring needs to be done regularly and sensitively so that developmental delays can be assessed for risk factors and immediate intervention (Soetjiningsih 2018).

The appropriate nursing implications from this study include that nurses must provide education to parents regarding proper parenting that supports the child's development, encourage the implementation of early detection of developmental delays so that issues can be intervened as soon as possible before they worsen, develop stimulation training programs for children who show "delay" or "caution" results to intensify the reduction of developmental delay risks, and ensure continuous monitoring and evaluation to track the child's progress. By providing proper education, interventions, and monitoring, nurses can help prevent developmental delays in stunted children and ensure they reach their full developmental potential.

CONCLUSION

The results of the overall development of aspects of stunted children aged 2-5 years are normal as much as 53%, suspect 28% and abnormal 19%. It can be seen that stunting is not the main cause of developmental abnormalities in children. Parenting and the environment are also one of the factors that

make children reach their developmental stage. Therefore, detection of child development is important to identify developmental delays and intervene by supporting child development.

REFERENCE

Asthiningsih, Ni Wayan Wiwin, and Siti Khoiroh Muflihatin. 2018. "Deteksi Dini Perkembangan Balita Dengan Metode Ddst Ii Di Posyandu Wilayah Kerja Puskesmas Juanda Samarinda." *Jurnal Endurance* 3(2):367. Doi: 10.22216/Jen.V3i2.3149.

Auliana, Dina, Endang Susilowati, and Susiloningtyas. 2020. "Hubungan Stunting Dengan Perkembangan Motorik Anak Usia 2-3 Tahun Di Desa Temuroso Wilayah Puskesmas Guntur 1 Kabupaten Demak." *Link* 16(1):49–53. Doi: 10.31983/Link.V16i1.5590.

Hanani, Ruth, and Ahmad Syauqy. 2016. "Perbedaan Perkembangan Motorik Kasar, Motorik Halus, Bahasa, dan Personal Sosial Pada Anak Stunting dan Non Stunting." 5 (Jilid 3):412–18.

Kemenkes. 2022. "Buku Saku Hasil Survei Status Gizi Indonesia (SSGI) 2022." *Badan Kebijakan Pembangunan Kemenkes*, pp. 1–150.

Kemenkes RI. 2018. "Hasil Riset Kesehatan Dasar Tahun 2018." *Kementrian Kesehatan Ri* 53(9):1689–99.

Maharani, Silvia Yuli. 2023. "Hubungan Stunting Terhadap Keterlambatan Motorik Kasar Dan Halus Anak Usia 3 Bulan-5 Tahun Di Wilayah Umbulharjo I Yogyakarta."

Miru, Lisye Angriani, Ari Damayanti Wahyuningrum, and Kurniawan Erman Wicaksono. 2021. "Hubungan Pola Asuh Dengan Tingkat Perkembangan Personal Sosial Anak Usia Prasekolah." *Media Husada Journal Of Nursing Science* 2(1):28–32. Doi: 10.33475/Mhjns.V1i2.31.

Munir, Zainal, Yulisyowati, And Helpy Virana. 2019. "Hubungan Pola Asuh Orang Tua dalam Menstimulasi Perkembangan Motorik Kasar dan Halus Usia Pra Sekolah." *Jurnal Keperawatan Profesional* 7(1). Doi: 10.33650/Jkp.V7i1.505.

Nurmalasari, Yesi, Novaldo Yudhasena, and Deviani Utami. 2019. "Hubungan Stunting dengan Perkembangan Motorik Kasar Pada Balita Usia 6-59 Bulan di Desa Mataram Ilir Kec. Seputih Surabaya Kabupaten Lampung Tengah Tahun 2019." 6:264–73.

Primasari, Eka Putri, Putri Nelly Syofiah, and Gina Muthia. 2021. "Perbedaan Perkembangan Motorik Balita Stunting Dan Normal Di Wilayah Kerja Puskesmas Pegang Baru." *Jurnal Kesehatan Masyarakat* 5(1):1–6. Doi: 10.31004/Prepotif.V5i1.1145.

Priyono, Priyono. 2020. "Strategi Percepatan Penurunan Stunting Perdesaan (Studi Kasus Pendampingan Aksi Cegah Stunting Di Desa Banyumundu, Kabupaten Pandeglang)." *Jurnal Good Governance* 16(2):149–74. Doi: 10.32834/Gg.V16i2.198.

Puspita, Linda, and Mareza Yolanda Umar. 2020. "Perkembangan Motorik Kasar dan Motorik Halus Ditinjau Dari Pengetahuan Ibu Tentang Pertumbuhan Dan Perkembangan Anak Usia 4-5 Tahun." *Wellness And Healthy Magazine* 2(1):121–26. Doi: 10.30604/Well.80212020.

Soetjiningsih. 2018. "Tumbuh Kembang Anak." Jakarta : Penerbit Buku Kedokteran EGC, pp. 1–36.

Wulansari, Meishita, Ni Luh Putu Herli Mastuti, and Lilik Indahwati. 2021. "Pengaruh Stunting Terhadap Perkembangan Motorik Halus, Motorik Kasar, Bahasa Dan Personal Sosial Pada Anak Balita Usia 2-5 Tahun Di Desa Madiredo Kecamatan Pujon Kabupaten Malang." *Journal Of Issues In Midwifery* 5(3):111–20. Doi: 10.21776/Ub.Joim.2021.005.03.2.

Yanti, Etri, and Nova Fridalni. 2020. "Pengaruh Kirigami Terhadap Kemampun Motorik Halus Anak Kelompok B Di Tk Asyiyah Bustanul Athfal Iv Kota Jambi." *Jurnal Kesehatan Medika Saintika* 11(2):226–35.