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## **The Effectiveness of Comparison of the Use of the Kuesioner Pra Skrining Perkembangan (KPSP) with Denver II on Development Children aged 0 – 72 months in the Dadok Primary Health Center Work Padang**

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### **Abstrak**

**Background:** The issues of toddler boom and improvement that want for use as a reference withinside the detection encompass 10% of youngsters reaching early age abilities, 50% of youngsters will attain their abilities, 75% of youngsters will gain extra abilities, 90% of youngsters could have on the way to attain the age restriction on the present-day still. However, some time ago, they encountered several growth and development problems which were quite worrying for preschool children.

**Objectives:** This study was to determine the accuracy of developmental outcomes for children aged 0 – 72 months between the Guide to the Kuesioner Pra Skrining Perkembangan (KPSP) and the Denver Developmental Screening Test II (Denver II). Questioner Pra Skrining Perkembangan (KPSP) and the Denver Developmental Screening Test II (Denver II) have a good result, valid and reliable to view developmental outcomes for children aged 0 – 72 months in Dadok Primary Health Center.

**Methods:** The research method used is analytic with the design used being cross-sectional, then the Cohen's Kappa coefficient statistical test is carried out. The research sampling technique used purposive sampling as many as 56 children aged 0-72 months with exclusion criteria, namely children who were sick, had physical disabilities, and experienced other developmental disorders that could not be measured with the KPSP and Denver II instruments. The research into finished from December 2020 to December 2021.

**Results:** The effects of this examination discovered that the improvement of youngsters elderly 0-72 months turned into nevertheless in the precise or everyday category. This may be visible from the effects of developmental tests on the usage of the KPSP and Denver II instruments, each of that has equal effectiveness for use in assessing improvement in youngsters. This is evidenced by the results of the Cohen's Kappa coefficient statistical test with a Kappa value of 0.638 which means it is good (0.61-0.80).

**Conclusion:** It is expected for parents to implement an early detection program for child development by the child's ability at home. Parents are expected to attend seminars or training on growth and development according to the child's age level. invite the child to be more diligent in moving, provide stimulation to the leg muscles, or take the child to therapy so that it can be handled properly.

**Keywords:** child development; KPSP ; denver II

## Introduction

Children are a precious asset of a country and the following generation, so great youngsters are had to obtain an amazing destiny for the country. Good great of youngsters may be finished via way of means of making sure that the system of infant improvement is likewise good. The parent wants their child to grow and develop normally. However, some time ago, they encountered several growth and development problems which were quite worrying for preschool children. Some types of growth and development disorders that can afflict children include babies who are 8 months old and over should have started learning to walk. However, if he hasn't shown any of these signs, it could be that he's experiencing a delay in walking. If it continues until 18 months old still doesn't want to learn to walk, it's should be wary.<sup>1</sup> Based on the recommendations of the Indonesian Ministry of Health, two instruments can be used in early developmental examinations, namely Denver II and KPSP. The Denver Developmental Screening Test II (Denver II) is an assessment method used to assess the development of ages 0-6 years.<sup>2</sup> 6 Apart from Denver II, there is also a Kuesioner Pra Skrining Perkembangan (KPSP) assessment method. KPSP is a list of questions with short answers addressed to parents or caregivers to find out the development of children aged 3 to 72 months. Based on a preliminary study conducted in October 2020 at the Dadok Health Center, Padang City, it was found that the implementation of SDIDTK was still the lowest (32%). From the results of the initial survey to 10 children aged 0 – 72 months, measurements were made using the KPSP developmental instrument, showing that 7 children were identified as normal and 3 children identified as doubtful. While the results of measurements using the Denver II developmental instrument showed as many as 6 children were identified as normal and 4 children identified as a suspect. The measurement results show that there is a difference between using the Denver II instrument and the KPSP. Assessment of child development has many models and kinds.<sup>3</sup> However, there needs to be certain parameters or benchmarks so that comparisons can be made consistently.<sup>4</sup> There are many parameters or tests for child development, such as IQ tests, psychomotor tests, achievement tests, and others.<sup>5</sup> Each test is adjusted to the function and age of the child. These developmental aspects are modifications of the developmental test/screening proposed by Frankenburg, known as the Denver Developmental Screening Test (DDST), which is a test or screening method that is often used to assess child development from the age of 1 month to 6 years. The developments assessed include personal social development, fine motor skills, language, and gross motor skills in children. In addition to the DDST guidelines, another guideline used is the Kuesioner Pra Skrining Perkembangan (KPSP) which is conducted on children aged 3 months to 6 years.<sup>6</sup> This study was to determine the accuracy of developmental outcomes for children aged 0 – 72 months between the Guide to the Kuesioner Pra Skrining Perkembangan (KPSP) and the Denver Developmental Screening Test II (Denver II).

## Methods

This study uses analytical research with a cross-sectional approach, which is to find out the accuracy of the results between the two KPSP and Denver II instruments on the development of children aged 0-72 months. The research sampling technique used purposive sampling as many as 56 children aged 0 -72 months. The Instruments used KPSP and Denver II instruments. The research will be planned to start in December 2020 until December 2021 in the working area of the Dadok Primary Health Center, Padang City, The characteristics of the study taken in this study include age, gender, maternal education, and maternal employment status, in addition kappa tests are used to see the effectiveness between KPSP instruments and Denver II instruments.

## Results

A total of 56 children aged 0 -72 months responded to the survey. That Table 1, The majority

were girls (53,57%) in 49-60 months (21,43%) and were mom's graduates in senior high school (39,29%) and housewives (62,50%). Based on Table 1, it can be seen that from 56 respondents, 53.57% of the children were female,

**Table 1.** Characteristics of Respondents

Characteristics of Respondents	F	%
Gender		
Boys	26	46,43
Girls	30	53,57
Ages (months)		
0 - 12	10	17,86
13 - 24	8	14,29
25 - 36	10	17,86
37 - 48	9	16,07
49 - 60	12	21,43
61 – 72	7	12,50
Mom's Collage		
Junior high school	15	26,79
Senior high school	22	39,29
University	19	33,93
Mom's Work		
Working (PNS, Wiraswasta)	21	37,50
housewife (IRT)	35	62,50

21.43% of the children's age ranged from 49 to 60 months, 39.29% of the mother's education was in the medium category, namely Senior high school/equivalent, as many as 37.50% of mothers who do not work that is on average as housewives.

**Table 2.** Frequency Distribution Based on Results of Developmental Assessment with the KPSP Instrument for Children aged 0 – 72 Months

Results of Developmental Assessment with the KPSP	F	(%)
Instrument		
Accordance	52	92,9
Confused	4	7,1
Total	56	100,00

Based on Table 2, it can be seen that from 56 respondents as much as 92.9% of child development with the assessment of the KPSP instrument is appropriate and as many as 7.1% of the child's development with the assessment of the KPSP instrument is doubtful. Based on the results of the analysis, children who experienced dubious development were dominated by 5.4% male children with ages ranging from 3 to 36 months. In line with the research of Apriani & Febrianti (2020), the results of child development results assessed by the KPSP of 93.6% showed appropriate results. This is by growth which is a measurable increase from the physical which can be assessed through weight, height, and head circumference. While development is an increase in body structure and function that is more complicated in terms of gross mobility, fine mobility, language, and coordination, and independence. By the results of the respondent's development, it looks good which can be seen from rough movements such as the child's ability to lie on his stomach, sit, stand, and walk, while fine movements such as the child's ability to reach objects around using his fingers, gripping, holding, writing and drawing look good and appropriate.<sup>7</sup> Stimulation that is less than

optimal can cause growth and development deviations and can even cause permanent disturbances, so if it is suspected that it leads to developmental delays or questionable results, you can immediately refer to health workers or the nearest health center.<sup>8</sup>

**Table 3.** Frequency Distribution Based on Results of Developmental Assessment with Denver II Instrument for Children aged 0 – 72 Months

Results of Developmental Assessment with Denver II Instrument	F	(%)
Normal	51	91,1
Suspect	5	8,9
Total	56	100,00

Based on Table 3, it can be seen that from 56 respondents, 91.1% of child development with the Denver II assessment instrument was normal and 8.9% of child development with the Denver II assessment instrument was suspect. Based on the results of the analysis on children who experienced the development of the suspect category, it was dominated by 5.4% male children with an age range of 3 to 36 months. In line with the research by Padila et al (2019), 70% of the respondents experienced normal development. The role of parents is an important element for early detection of children's growth and development both fine motor, gross motor, language, and social.<sup>9</sup> Denver II has become a reference because it prioritizes screening tools for 4 development sectors. If there is a suspicion of delay in a sector, the examination can be continued with other measuring instruments. Denver II is also one way to avoid the occurrence of risks or abnormal growth and development is to detect child growth and development as early as possible, because early detection of developmental deviations in children is a major issue and study in modern child health services.<sup>10</sup>

**Table 4.** The Effectiveness of Developmental Assessment Results with KPSP and Denver II Instruments in Children aged 0 – 72 Months

Instrumen		KPSP			Kappa
		Accordance	Confused	Total	
Denver II	Normal	50	1	51	0,638
	Suspect	2	3	5	
	Total	52	4	56	

Based on Table 4, it can be seen that from 56 respondents who were examined for developmental assessments with the KPSP and Denver II instruments as many as 50 child respondents with appropriate or normal development and as many as 3 child respondents with doubtful or suspect development. This is evidenced by the results of the Cohen's Kappa coefficient statistical test with a Kappa value of 0.638 which means it is good (0.61-0.80).

### Discussion

The results of the Cohen's Kappa coefficient statistical test with a Kappa value of 0.638 which means it is good, valid, and reliable to developmental assessments. Development is a growth withinside the shape and characteristic of the frame this is extra complicated withinside the cap potential of gross motion, first-class motion, speech, and language in addition to socialization and

independence. Development is by no means a finishing process.<sup>11</sup> Everything of personal improvement, whether or not physical, emotional, intellectual, impacts every other. Every ordinary person will revel in stages/levels of improvement. Which way that during residing an ordinary and lengthy life, people will revel in developmental levels from infancy, childhood, adolescence, adulthood, and vintage age. The improvement follows a sure sample or direction, in which the outcomes of improvement from the preceding level are a circumstance for in addition improvement.<sup>12</sup> Assessment of baby improvement has many fashions and kinds. However, there wishes to be positive parameters or benchmarks so that comparisons may be made consistently. There are many parameters or assessments for baby improvement, together with IQ assessments, psychomotor assessments, success assessments, and others.<sup>13</sup> Each check is adjusted to the feature and age of the baby. These developmental components are adjustments of the developmental check/screening proposed through Frankenburg, referred to as the Denver Developmental Screening Test (DDST), that's a check or screening technique this is frequently used to evaluate baby improvement from the age of 1 month to 6 years. The trends assessed consist of non-public social improvement, nice motor capabilities, language, and gross motor capabilities in children.<sup>14</sup> KPSP as a pre-screening device for the improvement of youngsters elderly 0-6 years, is finished every 3 months for youngsters earlier than the age of 2 years, and every 6 months for youngsters after the age of 2 years till the age of 6 years. The aim is to decide the improvement of regular youngsters or people with deviations.<sup>15</sup> Based on the results of the analysis of this study, it was found that the developmental assessments were still in the appropriate or normal category. The outcomes of the improvement of 56 respondents as a lot as 91.1% of infant improvement with the Denver II evaluation device became regular and 8.9% of infant improvement with the Denver II evaluation device became suspect. In line with the studies through Padila et all (2019), 70% of the respondents skilled regular improvement. The position of mother and father is a vital detail for early detection of kid's increase and improvement each best motor, gross motor, language and social. Denver II has grown to be a reference as it prioritizes screening gear for 4 improvement sectors. If there's a suspicion of postpone in a sector, the exam may be persisted with different measuring instruments.<sup>16</sup> Denver II is likewise one manner to keep away from the incidence of dangers or unusual increase and improvement is to locate infant increase and improvement as early as possible, due to the fact early detection of developmental deviations in kids is the main problem and have a look at in contemporary-day infant fitness services. This can be seen from the results of developmental assessments using the KPSP and Denver II instruments, both of which have the same effectiveness to be used in assessing development in children. This is in line with the research of Artha, et al. The results of the research agreement on the screening results between Denver II and KPSP showed quite high results (Artha et al., 2016).<sup>5</sup> Meanwhile, according to Apriani's research, there was a fairly even agreement between the examination with Denver II and KPSP with a Cohen's Kappa coefficient value of 0.289, which means that both instruments have the same meaning in assessing developments.<sup>17</sup>

This examination makes use of number one records, particularly amassing records the use of a developmental pre-screening questionnaire (KPSP) and Denver Developmental Screening Test II (Denver II). Researchers carried out direct observations via way of means of filling out the to be had layout primarily based totally on the age of the kid. Interpretation of the consequences at the DDST tool with an assessment: If passed (Passed= P), failed (Fail= F), refused (Refused = R), or did the kid now no longer get the possibility to do the task (No Opportunity= NO). This study focused only on developmental assessments of 56 children aged 0 -72 months. Assessment of the research used toys properties, to view knowledge, competencies of a child in assessments and concentrates on the self-report research the accuracy of the Use of the Kuesioner Pra Skrining Perkembangan (KPSP) with Denver II on Development Children aged 0–72 months. Caution is

warranted when using and applying the findings of the research.

### Conclusion

Parents are expected to attend seminars or training on growth and development according to the child's age level. invite the child to be more diligent in moving, provide stimulation to the leg muscles, or take the child to therapy so that it can be handled properly.

### Conflict of Interest Declaration

There is no conflict of interest in the preparation of this research.

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