Analysis of the Healthy Family Index: The Impact of Implementing the Healthy Indonesia Program with Family Approach

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ABSTRACT

The Healthy Indonesia Program with Family Approach (PIS-PK) is a primary initiative enforced by the current government to enhance the quality of family life and public health. In this context, the assessment of the Healthy Family Index (IKS) is essential for implementing appropriate interventions and efforts to prevent chronic diseases at the family level. Measurement indicators of IKS include healthy, pre-healthy, and unhealthy family categories. Therefore, this study aimed to analyze IKS based on PIS-PK in Jeneponto Regency, South Sulawesi in Indonesia. A quantitative design with an analytical survey was used to measure IKS across the entire family population in the Jeneponto Regency Health Center working area, totaling 1,321 households. The total sampling method was applied, and data from 12 healthy family indicators were evaluated following the IKS formula. The results showed that the average IKS value ranged from 0.59 to 0.77, representing unhealthy, pre-healthy, and healthy family, which constituted 12%, 54.35%, and 33.5% of the examined population, respectively. High numbers of family fell in the pre-healthy and unhealthy categories due to limited participation in family planning program (55.11%), non-utilization of official facilities for childbirth (11.65%), lack of exclusive breastfeeding practices over 7–23 months (10.14%), and absence of weight monitoring at Posyandu (5.59%). Consequently, integrated efforts and cross-sectoral engagement are crucial for improving IKS status.

ABSTRAK

Program Indonesia Sehat dengan pendekatan keluarga (PIS-PK) merupakan program utama pemerintah saat ini serta menjadi kunci utama dalam peningkatan kualitas hidup keluarga serta derajat kesehatan masyarakat. Penilaian Indeks Keluarga Sehat (IKS) sangat penting dilakukan untuk pelaksanaan intervensi yang tepat serta upaya pencegahan penyakit kronis pada tingkat keluarga. Indikator pengukuran program mencakup keluarga sehat, pra-sehat, dan tidak sehat. Penelitian ini bertujuan untuk menganalisis IKS berdasarkan PIS-PK di Kabupaten Jeneponto Sulawesi Selatan. Penelitian menggunakan desain kuantitatif dengan survey analitik yaitu mengukur IKS dengan populasi seluruh KK di wilayah kerja Puskesmas Kabupaten Jeneponto yang berjumlah 1.321 KK pada bulan februari sampai dengan agustus tahun 2022. Teknik pengambilan sampel menggunakan total sampling. Data dari 12 indikator keluarga sehat dihitung menggunakan rumus IKS. Hasil penelitian diperoleh nilai rata - rata IKS berkisar antara 0,59 hingga 0,77. Keluarga tidak sehat (12%), keluarga pra-sehat (54,35%), dan keluarga sehat (33,5%). Masih tingginya jumlah keluarga dengan kategori pra sehat dan tidak sehat karena banyaknya keluarga yang tidak berpartisipasi aktif dalam program KB (55,11%), tidak melakukan persalinan di fasilitas resmi (11,65%), tidak ASI eksklusif (7-23 bulan) 10,14%, serta tidak melakukan penimbangan berat badan di Posyandu (5,59%). Perlu dilakukan upaya terpadu dan pelibatan lintas sektor dalam peningkatan IKS menuju keluarga yang sehat.

GRAPHICAL ABSTRACT

Keyword
family planning services
healthy family index
healthy program
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INTRODUCTION

The Healthy Indonesia Program with Family Approach (PIS-PK) is part of the 5th Indonesian Nawa Cita which aims to improve the quality of life of the citizens. This priority initiative of the Ministry of Health is implemented through Public health center (Puskesmas) in each region (Suryoputro et al., 2021; Roeslie & Bachtiar, 2018). Furthermore, its main focus is to enhance family and individual access to comprehensive health services, including promotive, preventive, curative, and rehabilitative measures (Tri Wulandari, 2021). This program conducts evaluation using indicators reflecting the status of healthy, pre-healthy, and unhealthy family (Rohimah & Sastraprawira, 2019; Haris & Herawati, 2020). To achieve the goals of PIS-PK, health assessment and consideration of social factors associated with family health are necessary (Subramanian et al., 2023).

In PIS-PK context, the healthy family index (IKS) is a key element for improving the degree of public health in developed and developing countries. The assessment of IKS supports family health program and the development of effective health policies, facilitating interventions for enhancing the quality of life and preventing chronic diseases (Evans et al., 2022; Grady et al., 2022; Stierman et al., 2023; Caiata-Zufferey & De Pietro, 2023). Moreover, factors such as the availability of family health records and data management significantly influence the approach to addressing current health problems. National screening program providing family health history data are essential for tailoring intervention program and assessing disease risk (Png et al., 2022; Liebermann et al., 2022).

Family health surveys show disparities between healthy and vulnerable groups, enabling data-driven interventions. Current health problems trigger policymakers to facilitate data collection, which contributes to the evaluation and development of sustainable health systems (Ali et al., 2021; Abdul-Rahman et al., 2023) and supports real-time public health decision-making. Additionally, survey data from various countries serve as the foundation for preventing health problems in the community (Palekar, 2022; Rosal et al., 2023).

One program contributing to the success of health development is PIS-PK because its operation commences from the smallest societal unit, namely the family (Murnita et al., 2021). Furthermore, the family approach facilitates the expansion of health services through direct home visits in the working area (Sugiharti et al., 2019). Regarding this, national family health indicators include participation in family planning program, childbirth in health facilities, infant immunization, exclusive breastfeeding, monitoring of toddler growth, pulmonary TB treatment, hypertension therapy, mental disorder treatment, non-smoking, becoming a member of the National Health Guarantee (JKN), as well as access to clean water and hygienic latrines (Kementerian Kesehatan RI, 2017).

PIS-PK is expected to impact public health through the support of equitable family health data. As part of the national family health survey (NFHS), the program contributes to the largest demographic and health survey globally. Family monitoring and surveillance systems are crucial for determining the degree of individual health. Therefore, the surveys conducted must be precise and accurate to appropriately reflect community conditions. The collection of health data provides insights into community status and behavior, specifically in the family setting, due to the lack of enough knowledge about healthy lifestyles alongside the need for targeted interventions (Petrović-van der Deen et al., 2023; Chaudhary & Sharma, 2023; Dijkstra et al., 2023; Rowen et al., 2019; Gustafson et al., 2022; Van der Heijden et al., 2023; Cai et al., 2022). Platforms facilitating data collection to

Table 1
Number of Family Heads and ART Members per Family Engaged in PIS–PK

Charasteristics	Frequency	Percentage
Family Heads		
Hamlet A	429	32
Hamlet B	206	15
Hamlet C	156	11
Hamlet D	177	13
Hamlet E	162	12
Hamlet F	102	9
Hamlet G	89	8
Number of ART per Family		
1	92	7
2	250	19
3	338	25.5
4	356	27
5	215	16
6	49	4
7	13	1
8	5	0.3
9	2	0.1
13	1	0.1

identify health risks are important considering that family is the main key to public welfare and health (Wu et al., 2020).

In Indonesia, family visits have reached 72.7%, resulting in a national IKS value of 0.172, which reflects 17.2% healthy family based on the indicators. In addition, the survey found that 54.9% are pre-healthy and 1.75% are unhealthy, with smoking being the main contributing factor to pre-health. (Farisni & Reynaldi, 2019). Other studies identified top priorities in pre-healthy family, namely participation in birth control program, exclusive breastfeeding, and smoking. PIS-PK data showed lifestyle differences between healthy and unhealthy family (Maciel & Duarte, 2023), with increased consumption of unhygienic foods posing a significant disease risk (Markey et al., 2023).

Various studies regarding PIS-PK implementation reported numerous challenges, including limited human resources, budget constraints, suboptimal cross-sector support, and financial hurdles (Novianti et al., 2020), as well as poor internet networks in remote areas (Kurniawan et al., 2021; Laelasari et al., 2018; Widiarini, 2020), lack of local government support, and inadequate infrastructure. Addressing these challenges necessitates comprehensive planning, requiring continual family visits by health workers and an increased focus of local governments on improving health in villages. Additionally, cooperation and joint commitment are needed to achieve the target of a 100% healthy family (Ichsan, 2020; Novianti et al., 2020; Lusrizanuri et al., 2020).

A comprehensive exploration of PIS-PK is essential for determining family health status to facilitate the development of intervention models (Gaythorpe et al., 2023), as well as control and provide access to appropriate management of health problems. In this context, ethical considerations and precision are important in generating relevant information (Marelli et al., 2023; McKay et al., 2023; Tauqeer et al., 2023). The European Health Data Space advocates for increased implementation of a consistent electronic family health record system. Moreover, the validity and reliability of survey data must be maintained to achieve effective intervention (Schmitt et al., 2023; Beresford et al., 2023; Iamtrakul &

Table 2
Average IKS Value Based on PIS–PK Implementation

Hamlets	n	%	Average IKS	IKS of Hamlets
Hamlet A				
< 5	104	24%	0.33	0.59*
5-8	255	59%	0.62	Min = 0.17
> 8	70	16%	0.87	Max = 1
Hamlet B				
< 5	28	14%	0.44	0.75
5-8	93	45%	0.69	Min = 0.2
> 8	85	41%	0.90	Max = 1
Hamlet C				
< 5	54	35%	0.27	0.59*
5-8	91	58%	0.61	Min = 0.14
> 8	11	7%	0.91	Max = 1
Hamlet D				
< 5	5	3%	0.4	0.73
5-8	107	60%	0.63	Min = 0.4
> 8	65	37%	0.91	Max = 1
Hamlet E				
< 5	8	5%	0.4	0.76
5-8	75	46%	0.66	Min = 0.4
> 8	79	49%	0.91	Max = 1
Hamlet F				
< 5	1	1%	0.4	0.77
5-8	59	58%	0.67	Min = 0.4
> 8	42	41%	0.91	Max = 1
Hamlet G				
< 5	2	2%	0.4	0.75
5-8	49	55%	0.66	Min = 0.4
> 8	38	43%	0.88	Max = 1

Note: * = pre-healthy; n = population; % = percentage

Chayphong, 2023). Continuous investigations are needed as a foundation for addressing family health problems, comprising social, economic, physical, and environmental aspects. Therefore, this study aimed to analyze the IKS based on PIS-PK implementation in South Sulawesi.

METHODS

This descriptive study used a quantitative design with an analytical survey to measure IKS at the working area of the Barana health center in Jeneponto Regency. The selected location comprised villages grouped under the pre-healthy category in 2020 according to the determined IKS value. Seven hamlets, including Tombolo, Tanete, Dole, Mattoanging, Balanja, Bonto Parang, and Bonto Camba, were assessed in February – August 2022. Data of the examined population, consisting of 1,321 households selected using total sampling, were collected based on 12 healthy family indicators through home visits by PIS-PK Puskesmas officers. Furthermore, the indicators were evaluated with monitoring instruments in all health centers, following the guidelines recommended by the Kementerian Kesehatan RI (2017). These included participation in Family Planning (KB) program, childbirth in health facilities, complete infant immunization, exclusive breastfeeding, monitoring of toddler growth, pulmonary TB treatment, hypertension therapy, mental disorder treatment, non-smoking, family members becoming a JKN member, access to clean water, and access to hygienic latrines.

Data on 12 healthy family indicators were analyzed with the IKS formula in the excel program. Family classification was determined using Formula 1 (Kementerian Kesehatan RI, 2017), with criteria for healthy, unhealthy, and pre-healthy family being an index value of

Table 3
IKS Value Based on Active Participation

IKS Value	Frequency	Percentage (%)
Family participating actively in family planning program		
Yes	457	44.89
No	561	55.11
Family members who delivered at authorized health facilities (0 – 11 months)		
Yes	129	88.35
No	17	11.65
Infants receiving complete basic immunization (12 – 23 months old)		
Yes	217	95.59
No	10	4.41
Exclusive breastfeeding (7-23 months)		
Yes	266	89.86
No	30	10.14
Regular weight measurement at Posyandu (Age 2 – 59 months 29 days)		
Yes	1031	94.41
No	61	5.59

>0.800, 0.500 – 0.800, and <0.500, respectively.

$$\text{IKS} = \frac{\text{Number of Healthy Family Indicators}}{\text{Total 12 indicators not present in the family}} \quad (1)$$

Additionally, the analyzed data were presented descriptively in tables, graphs, and narratives to elucidate the obtained results. This study passed through an ethical feasibility test from the Faculty of Medicine and Health Sciences UIN Alauddin Makassar.

RESULTS

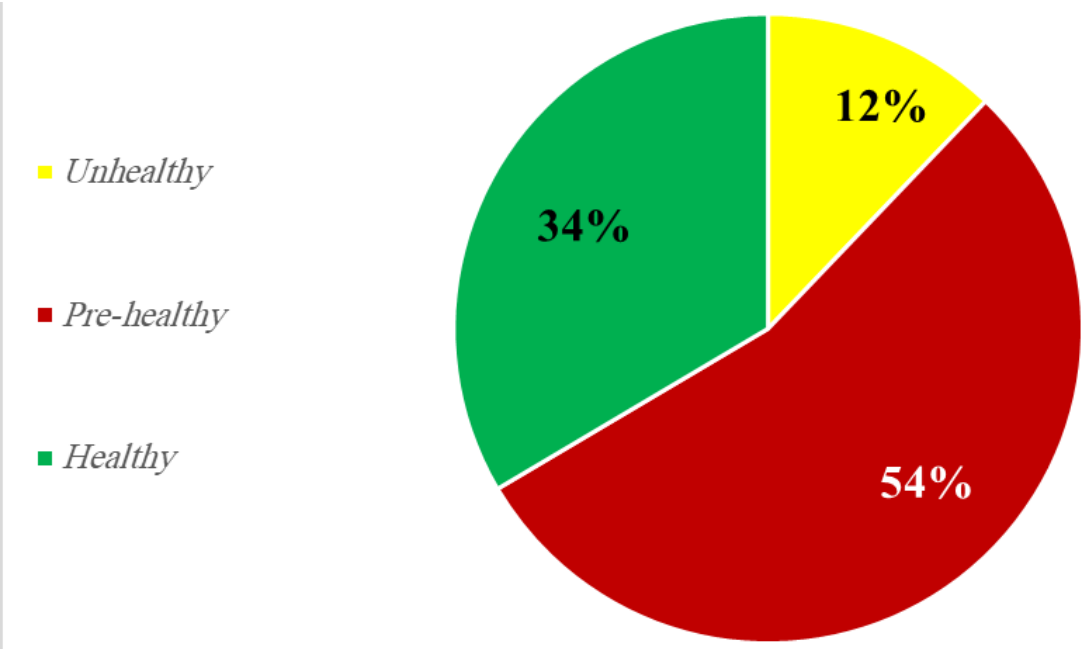
The participation of 1,321 family heads (KK) in PIS–PK at the working area of the Jeneponto Regency Health Center was commendable. According to Table 1, hamlet A contained the highest percentage of KK totaling 429 (32%), while hamlet G had the smallest proportion which was 89 (8%). Based on Table 1, the majority had 3 ART members per family (25.5%), while the minority comprised 9 and 13 ART members (0.1%). The IKS assessment results showed that unhealthy, pre-healthy, and healthy family constituted 12%, 54.35%, and 33.5% of the examined population, respectively (Figure 1). In Table 2, the IKS value of hamlets A to G were 0.59, 0.75, 0.59, 0.75, 0.76, 0.77, and 0.75. This represented unhealthy, pre-healthy, and healthy family categories at proportions of 24%, 59%, and 16%, 14%, 45%, and 41%, 35%, 58%, and 7%, 3%, 60%, and 37%, 5%, 46%, and 49%, 2%, 58%, and 41%, as well as 2%, 55%, and 43%, respectively.

According to Table 3, the percentage of those actively participating in family planning program was 44.89%, while the counterparts were 55.11%. In terms of childbirth, 88.35% used official health facilities (aged 0 – 11 months), while 11.65% opted for other places. For complete basic immunization of 12 – 23 months old infants, 95.59% were given, while 4.41% did not receive. Exclusive breastfeeding (7-23 months) was observed in 89.86% of the examined population, while 10.14% failed to provide exclusive breastfeeding. The assessment conducted at Posyandu (aged 2–59 months 29 days) showed that 94.41% adhered to regular weight monitoring, but 5.59% did not.

DISCUSSION

IKS is a measurement method designed for the evaluation and continual monitoring of family health. This consists of 12 interrelated indicators and provides a comprehensive picture of family conditions, covering physical,

Figure 1
Family Status Categories Based on Average IKS Value



mental, social, and environmental aspects (Kementerian Kesehatan RI, 2017). The results showed significantly different IKS value for hamlets found in the working area of the Jeneponto Regency Health Center. Specifically, E and F had higher IKS value, reflecting a better level of family health compared to other hamlets. However, A and C had lower IKS value, suggesting health challenges that might need further attention. These results showed variations in the accessibility and utilization of health services among the hamlets.

The greatest proportion of hamlets in the study area described most family, ranging from 45% to 60%, with pre-healthy conditions. These observations showed that high numbers of the local community have achieved a basic level of health, but still need efforts to improve the overall health status. Healthy and unhealthy categories showed greater variation between hamlets, where both A and C had a higher percentage of unhealthy family, denoting the presence of several health challenges. This study was in line with IKS analysis conducted by Widiastuty & Ekasari (2022) in Limappocoe Village which showed an index of 0.202, reflecting unhealthy family conditions. The result of Widiastuty was supported by the review of Romdhonah et al. (2021) that majorly showed pre-healthy status reaching 80%, 52%, and 56.49% in Suguling Village, remote areas of Sikka Regency, and Nulle Village, respectively. In contrast, Gayatri et al. (2022) reported only 13.3% of households under the unhealthy category in Asrikaton Village. The varying IKS value across different areas could reflect differences in family health and quality of life in each hamlet.

Hamlets E and F had higher IKS value, signifying the potential positive impact of PIS-PK implementation on family health in both areas. This study contrasted the results of Gayatri et al. (2022) that only 10% of households in Asrikaton Village achieved an IKS value categorized as healthy. Factors such as access to health services, health education, and optimal environmental conditions contributed to the increase in IKS value. Conversely, hamlets A and C had lower IKS value, suggesting the tendency of challenges in PIS-PK implementation, which

could be in terms of access to health services, family participation, or other influencing factors. Knowledge, education, trust, and family income were found to significantly affect the results of IKS (Rakhmawati et al., 2014). Hamlets with pre-healthy conditions showed the potential for family health improvement towards the healthy category through concerted efforts.

The difference in the percentage of healthy and unhealthy family categories among hamlets reflected the complexity of health challenges faced by each community. Hamlets with a higher percentage of unhealthy family, such as A and C, require a more intensive approach to understand and address specific health issues. The challenges in these Hamlets could be limited access to health services, a lack of understanding of good health practices, or environmental factors affecting family health. The government and related parties need to adjust PIS-PK strategy in hamlets with lower IKS value to improve family health through efforts including intensified health education, enhanced access to health services, and environmental improvements. This was consistent with the observations of Suryoputro et al. (2021) that suboptimal implementation of health counseling contributed to the inability to meet health targets.

Hamlets A and C with substantial unhealthy family need comprehensive response efforts, such as counseling, training, and health awareness campaigns. Continual monitoring and evaluation of PIS-PK implementation in each hamlet are essential for measuring progress and identifying areas requiring consistent improvement. Collaborative efforts across health, education, environment, and social sectors are essential to address comprehensive family health problems in each hamlet. Certain previous studies showed that the National IKS target has not been achieved, with most family still categorized as unhealthy (IKS<0.500). Factors contributing to this situation include the correlation between government support and PIS-PK program success, emphasizing the importance of optimal cooperation among health workers, health cadres, and family in achieving maximum IKS. Other studies reported the readiness of trained human resources as the main influencer of optimal PIS-PK implementation (Pratidina & Rokayah, 2023; Darmansyah, 2022; Sumiatin & Ningsih, 2020; Fajriah et al., 2023).

CONCLUSIONS

In conclusion, this study showed that IKS value and family categories in the working area of the Jeneponto Regency Health Center reflected the multifaceted nature of the respective community health. The conducted analysis provided valuable insights into the impact of PIS-PK implementation and the challenges requiring appropriate attention in the pursuit of enhanced family health across all hamlets. The results emphasized the need for continual efforts to facilitate health improvement, particularly in hamlets with a prevalence of unhealthy family. By comparing IKS value before and after PIS-PK implementation, it was anticipated that the government could identify successes, shortcomings, and opportunities to enhance family health services for the Indonesian population. Additionally, PIS-PK was expected to address the health needs of all unhealthy family. Subsequent studies should conduct a comparative analysis across various areas to assess potential significant differences in the implementation and impact of PIS-PK on IKS. The application of quantitative and qualitative methods in this context was suggested to facilitate coherent results.

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AUTHORS' CONTRIBUTIONS

Sitti Saleha formulated the concept, reviewed the manuscript, acquired and analyzed the data. Dismo Katiandagho, Roro Kushartanti, Haura Karlina and Irmawati formulated the concept and performed the field work. Syamsul Alam designed the study, wrote the manuscript and reviewed the manuscript, enrolled participants, collected and analyzed the data. All authors read and approved the final manuscript.

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COMPETING INTERESTS

The authors confirm that all of the text, figures, and tables in the submitted manuscript work are original work created by the authors and that there are no competing professional, financial, or personal interests from other parties.

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