



Knowledge and Rates of Use of Preschool Consultation by the Mothers in the Area of Health Tshitenge/Democratic Republic of Congo

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Abstract

Introduction: The postponement of the preventive activities of the Provincial Division of Health of East Kasai 2016 revealed that the level of attendance of the preschool consultation is decreasing less and less in the Health Area Tshitenge. Thus, this study set the goal of determining the knowledge and use of maternal pre-school counseling in the Health Area Tshitenge. **Methods:** The survey method was used by means of a questionnaire administered to mothers in this region, but more specifically, we collected data from 422 mothers responsible for randomly selected children aged 0 to 5 in the four health. **Results:** After analysis and analysis of the data with the computer tool, we obtained the following results: the rate of use of the preschool consultation service is 60.7%; the level of education, occupation and the number of children under 5 years of age have a strong influence on the use of preschool counseling; lack of knowledge about the most important activity of preschool counseling has a negative influence on its use. There is a link

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between the use of the preschool consultation and the most important activity of the preschool consultation for the respondent; there is also a link between this and an appointment on the map; and finally, the cost judgment of SPC strongly influences its use. **Conclusion:** In order to raise this activity, the revitalization of preschool consultation activities in the Tshitenge health area, the reinforcement of the parents' awareness on the use of preschool counseling from 0 to 59 months, and the revival of visits to homes for children whose mothers drop out of preschool counseling sufficient are a basis.

Subject Areas

Public Health

Keywords

Vaccination, Weight Curve, Weighing, Low Use, Preschool Consultation

1. Introduction

The growth and development in the physical, intellectual, psychological and social are the main characteristic of childhood [1] and depend largely on the quality of care provided to children in preschool. It therefore serves not only to assess the nutritional status and health of the child, but it is also an excellent measure of inequality of human development that people face [2].

Hence, the appropriate use of health services is important to the health improvement of the population especially in developing countries or economic, physical and social barriers exist. At the World Summit for Children, the international community has set itself the goal of promoting growth and its regular monitoring to be institutionalized in all countries in the late 1990s [3].

For its part, Ngandu [4] states that assessing regular growth is the most direct way to detect disturbances in the health of this fragile; and also an essential preventive measure to decrease morbidity and mortality in childhood.

The observation was made that, after the last vaccination against measles and yellow fever (around the ninth month), very few children come to the SPC, while it should continue up to 5 years. Indeed, it is at this age that the child malnutrition begins to manifest, as that causes the slowdown in growth and mental problems, especially in children 0 to 5 years from hearing school performance [5]. Also it is from this age that on the one hand, breastfeeding goes to his removal, the child walks, talks, develops contact and sociability acquires independence, on the other hand the mother of pregnant again, so it's at that age where malnutrition begins to manifest the most.

The determination of the risk faced children who drop out early SPC is higher in the age group of 24 to 34 months for acute malnutrition and underweight, and in that of 36 to 47 months for chronic malnutrition according to study in the health zone of Kisenso [4]. This malnutrition will have serious

repercussions on health, their future development and that of society. In the absence of any intervention, these malnourished children are vulnerable to infections, deficiency diseases, neurological disabilities, and even death.

According to L'wed, use of SPC is still a public health problem in developing countries, and it is found that many children do not regularly attend the SPC activities. Therefore 1 child out of 22 dies in its first two years. This represents 6.2 million deaths of children under 5 years old in a year [6].

UNICEF also confirms that the use of SPC still poses serious problems in the developing countries and especially in very remote areas, it is that more children under 5 years do not regularly follow the CPS Service and the likely causes in approximately 78.7% are: sufficient knowledge, literacy, multiparity, early pregnancy, negligence, various jobs for women, non-involvement of men in promotional services [7].

The report of the preventive activities of the Provincial Health Division of Kasai Oriental in 2016 has revealed that the level of attendance at the pre consultation is less shrinking Tshitenge in the health area.

Based on the foregoing, we asked the questions of mothers of Tshitenge health zone, do they have sufficient knowledge about the preschool consultation? What is the rate of use of this pre-consultation service?

2. Material and Methods

2.1. Design

Our study is a prospective cross-sectional survey which has the advantage of allowing to collect, at the same time, information on various health events.

2.2. Method

The investigation by a questionnaire, was the used in this study and allowed us to collect donnéesnécessaires with mothers of children aged 0 to 5 years.

2.3. The Study Site

The study was conducted in four health areas of Tshitenge health zone.

2.4. Study Population

The study population consists of mothers with children aged 0 to 5 years in their households.

2.5. Sample

It is 422 mothers randomly selected from four of the area health areas. SPSS has enabled the analysis of data using the chi-square of Pearson (Khi2) to compare and test the statistical significance.

2.6. Data Sources

As indicated below each table, all collected data to source our surveys of mothers.

3. Results

3.1. Results of Descriptives Analyzes

The data in **Table 1** show that on household occupation represent 49.5%. The distribution of the sample according to the ages of children under 5 years indicates that the most represented age group is between 12 to 23 months (28, 9%) followed by 0 to 11 month 25.8% and that of 24 to 35 months with 18.0%. Regarding the educational level of subjects of study, the majority (33.2%) have completed secondary studies unfinished, 27.7% A primary level, 18.2% Have completed secondary level education. For the number of children under 5 years, households in 1 (A) to 3 children represent 67.3%. Regarding the sex of children under 5 years, 57.1% were female with a sex ratio of 0.75.

Table 2 indicates that the knowledge of the age of onset of SPC at birth is 46.7%.

Regarding the knowledge related to the age where SPC must stop, 37.9% of mothers surveyed said that at birth to 8 months, 26.1% at 2 years and 19.2% at 1 year. Regarding the knowledge of the importance of CPS vaccination is 32.2%, followed by 21.1% nutrition and weighing 17.1%. Knowledge of the activities taking place at SPC: vaccination 30.3%, appointments securing the 26.8% and 19.4% weighed. 76.8% of mothers answered that the most important activity of the SPC is vaccination.

Table 3 indicates that 60.7% of the mothers surveyed reported having attended SPC during the last three months. Regarding the reason for the consultation SPC, vaccination represents 44.5%, 22.7% weighing and monitoring of growth 18.8%. As for the time of day when the CPS is organized 97.4% answered before noon. Time spent SPC most represented is less than one hour (68.5%), 100% of mothers reported they pay 100 FC and 100 per session, 72.7% had an SPC card and the appointment was noted on the plug at 74.6%.

3.2. Results of Bivariate Analyzes

Table 4 indicates there is an association between the use of SPC and some socio-cultural characteristics of mothers such as the level of education ($p = 0.002$), the profession ($P = 0.000$) and the number of children under 5 years in the household ($p = 0.028$).

In **Table 5**, There is no significant link between the use of SPC and the knowledge of the age of onset SPC knowledge related to the age where SPC must stop, knowledge the importance of CPS, knowledge of the activities taking place at SPC. By cons there is a link between the use of SPC and the most important activity of SPC for the respondent ($p = 0.043$).

In **Table 6**, the time of day when the CPS is organized, spent time at SPC and the fact of having a listing of SPC are not statistically associated with the use of SPC, but there a connection between this and having a go on the card ($p = 0.001$) (**Table 5**).

4. Discussion

The data in **Table 1** show that the household Occupation is 49.5%. The distribution of the sample according to the ages of children under 5 years indicates that the most represented age group is between 12 to 23 months (28, 9%) followed by 0 to 11 month 25.8% and that of 24 to 35 months with 18.0%. Regarding the educational level of subjects of study, the majority (33.2%) have completed secondary studies unfinished, 27.7% Primary level, 18.2% have completed secondary level education.

Table 1. Distribution of respondents according to the socio-cultural.

Characteristics	Categories	n = 422	%
Study level	No	64	15.2
	Primary	117	27.7
	Secondary unfinished	140	33.2
	Secondary completed	77	18.2
	Graduated	10	2.4
	Graduated	14	3.3
Profession	A pupil or student	98	23.2
	Household	209	49.5
	Informal sector	66	15.6
Number of children under 5 years	Public sector	49	11.6
	A 3 children	284	67.3
	0 to 11 months	109	32.7
	12 to 23 months	122	28.9
	24 to 35 months	76	18.0
Ages of children under 5 years	36 to 47 months	67	15.9
	48 to 59 months	48	11.4
	Male	181	42.9
Gender of children under 5 years	Female	241	57.1

Source: our field investigations.

Table 2. Distribution of respondents by knowledge of SPC.

Characteristics	Categories	n = 422%	
Knowledge of the age of onset of SPC	At birth	197	46.7
	1 month	119	28.2
	At 2 months	72	17.1
	3 months	9	2.1
	To 4 months	19	4.5
	To 5 months	6	1.4
	At birth to 8 months	160	37.9
	At 9 months	64	15.2
Knowledge related to the age where SPC must stop	1 year	81	19.2
	2 years	110	26.1
	3 years	5	1.2
	4 years and 5 years	2	0.5

Continued

	Growth monitoring	73	17.3
	Monitoring of nutritional status	89	21.1
Knowledge of the importance of CPS	The vaccination	136	32.2
	The weighing	72	17.1
	Disease	52	12.3
	The weighing	82	19.4
Knowledge of activities taking place at SPC	Physical examination	44	10.4
	The vaccination	128	30.3
	Health and nutrition education	55	13.0
	Fixing appointments	113	26.8
The most important activity of SPC for the respondent	Other	98	23.2
	Vaccination	324	76.8

Source: our field investigations.

Table 3. Distribution of respondents according to the use of pre-service.

Characteristics	Categories	n = 422%	
Having attended SPC during the last three months	Yes	256	60.7
	No	166	39.3
Reason for consultation SPC	The growth monitoring	48	18.8
	The monitoring of nutritional status	14	5.5
	The monitoring of the health status	21	8.2
	The vaccination	114	44.5
	The weighing	58	22.7
	Disease	1	0.4
Time of day when the CPS is organized	Before noon	411	97.4
	Afternoon	11	2.6
Time spent on SPC	Less than an hour	289	68.5
	An hour and more	133	31.5
Number of money paid per session	Nothing at all	0	0
	100 FC and more	422	100
Having a listing of SPC	Yes	307	72.7
	No	115	27.3
See an appointment on the plug	Yes	315	74.6
	No	107	25.4

Source: our field investigations.

Table 4. Association between the sociocultural characteristics of respondents and the use of SPC.

Characteristics (N = 422)	Using SPC		X2	P	S
	Yes	no			
	n = 256	n = 166			
Study level					
No, primary and secondary unfinished	182	139	8.83	0,002	S
Secondary and higher completion	74	27			
Profession					
Household	176	139	11.9	0.000	S
Other professions	80	27			
Number of children under 5 years					
Less than 4 children	162	122	4.7	0.028	S
4 more children	94	44			
Ages of children under 5 years					
0 to 23 months	111	80	0.94	0.329	NS
24 months and 59 months	145	86			
Gender of children under 5 years					
Male	115	66	1.09	0.295	NS
Female	141	100			

Source: our field investigations.

Table 5. Links between knowledge of SPC and its use.

Characteristics (N = 422)	use		X2	P	S
	Yes	No			
	n = 256	n = 166			
Knowledge of the age of onset SPC					
Knows (at birth)	140	85	0.49	0.483	NS
Do not know (other city age)	116	81			
Knowledge related to the age where SPC must stop					
Knows (5 years)	183	122	0.20	0.652	NS
Do not know (other city age)	73	44			
Knowledge of the importance of CPS					
Good knowledge (more than 3 magnitudes cited)	174	124	2.19	0.138	NS
Poor knowledge (3 months magnitudes cited)	82	42			

Continued

Knowledge of activities taking place at SPC					
Good knowledge (all the above activities)	132	80	0.45	0.498	NS
Poor knowledge (within 3 above activities)	124	86			
The most important activity of SPC for the respondent					
Vaccination and health and nutrition education	68	30	4.07	0.043	S
Weighing, physical examination and other	188	136			

Source: our field investigations.

Table 6. Links between certain characteristics related to organization of the SPC service and use of SPC.

Characteristics (N = 422)	Using SPC		X ²	P	S
	Yes	No			
	n = 256	n = 166			
Time of day when the CPS is organized					
Before noon	249	162	0.04	0.837	NS
Afternoon	7	4			
Time spent on SPC					
Less than an hour	86	47	1.30	0.254	NS
An hour and more	170	119			
Having a listing of SPC					
Yes	182	125	0.89	0.342	NS
no	74	41			
See an appointment on the plug					
Yes	177	138	10.41	0,001	S
No	79	28			

Source: our field investigations.

For the number of children under 5 years, households in 1 (A) to 3 children represent 67.3%. Regarding the sex of children under 5 years, 57.1% were female with a sex ratio of 0.75. Our results differ from those of Kasole who revealed in his study that the majority of mothers had, 40% had a level primary study [8]. By cons they approach Kamwasha Katonga who observed that 33.6% had a level of unfinished secondary study [5].

Table 2 indicates that the knowledge of the age when SPC begins at birth is

46.7%. Regarding the knowledge related to the age where SPC must stop, 37.9% of mothers interviewed told from birth to 8 months, 26.1% at 2 years and 19.2% at 1 year .

Regarding the knowledge of the importance of CPS vaccination is 32.2%, followed by 21.1% nutrition and weighing 17.1%. Knowledge of the activities taking place at SPC: vaccination 30.3%, appointments securing the 26.8% and 19.4% weighed. 76.8% of mothers answered that the most important activity of the SPC is vaccination.

According to **Table 3**, 60.7% of the mothers surveyed reported having attended SPC or during the last three months. Regarding the reason for the consultation SPC vaccination is 44.5%, 22.7% weighing and monitoring of growth 18.8%.

As for the time of day when the CPS is organized 97.4% answered before noon. Time spent SPC most represented is less than one hour (68.5%), 100% of mothers reported they pay 100 FC and 100 per session, 72.7% had an SPC card. The appointment was noted on the card at 74.6%.

According to **Table 3**, there is no association between the use of SPC age of children under 5 years and sex of children under 5 years. By cons, there is a statistically significant link between the level of education ($p = 0.002$), the profession ($P = 0.000$), the number of children under 5 years ($P = 0.028$). These results are consistent with one hand a study of the Democratic Republic of Congo on Causes of low utilization of pre-consultation service in urban areas. If the Kamalondo health zone, conducted by Kamwasha Katonga which revealed an association between socio-demographic characteristics (level of education and profession mothers) on one hand and the reasons for non-attendance at least for preschool consultation 'somewhere else ; there was a link is significant with the profession against it is not significant to the level of study [5].

While in Rwanda, a prospective study by Munyamahoro and Ntaganira in the district From Rubavu, showed that the use of health services by households, including the pre-consultation was based on various factors related to both the individual (age, sex, level of education of the household head ...) and in the [1] [4] [9] [10] environment.

In view of **Table 5**, there is no significant link between the use of SPC and the knowledge of the age when the early SPC knowledge related to the age where SPC has to stop, the knowledge of the importance of the SPC, knowledge of the activities taking place at SPC. By cons there is a link between the use of SPC and the most important activity of SPC for the respondent ($p = 0.043$).

Table 6 reveals that the time of day when the CPS is organized, time SPC and having a listing of SPC are not statistically associated with the use of SPC, but there a connection between this and having a go on the card ($p = 0.001$).

5. Conclusion

To achieve higher level of knowledge and further increase the utilization rate of preschool consultation, it should raise awareness of mothers on the use of

preschool consultation even after completion of the immunization schedule for children 0 to 59 months, the revival of home visits for children whose mothers give preschool consultation a sufficient basis. For this, we suggest that the CPS in general and especially the growth of surveillance, continues steadily to 59 months. Thus, officials of Health Provincial Division must revitalize the activities of the pre-consultation in Tshitenge Health Zone.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- [1] Parkin and Stanfield, P. (2001) Growth and Development. In: Stanfield, P., Brueton M., Chan, M., Parkin, M. and Waterstone, T., (Eds.), *Diseases of Children in the Tropics and Subtropics*, ELST, London, 7-13.
- [2] Onys Million Frongillo, E.A. and Blossner, M. (2001) Is Malnutrition Declining? Analysis of the Evolution of Child Malnutrition Since 1980. *Bulletin of the World Health Organization: The International Journal of Public Health*, **78**, 1222-1233.
- [3] Luboya, O. (2010) Health Service Organization, Notes. School of Public Health. UNILU. Academic Year, 31-43.
- [4] Ngandu, D., Okitolonda, W. and Kayembe, K.P. (2007) Attendance of Preschool Consultation in Kisenso Health Zone. *Medical Congo*, **4**, 32-38.
- [5] Katonga, K. (2009) Causes of Low Utilization of Pre-Consultation Service in Urban Areas. If the Kamalondo Health Zone in the DRC, University of Lubumbashi, Unpublished, 45-67.
- [6] Wed (2010) Social Factors of Non-Use of Antenatal and Postnatal Services or Their Misuse in Ivory Coast. *African Evaluation Journal*, **2**, 12 p.
<https://doi.org/10.4102/aej.v2i1.79>
- [7] UNICEF (2011) The Preschool Reference Guide, PRONANUT/UNICEF, Kinshasa, 45.
- [8] Kasole, L. (2000) Identification Testing of Determinants of Access to Health Care in the Health Zone of Ngaba, Memory, Faculty of Economics/UNIKIN, 67-75.
- [9] Munyamahoro and Ntaganira (2012) Determinants of Use of Health Services by Households in the Rubavu District in Rwanda. *Medical Journal/Rwandan Medical Journal*, **69**, 12-17.
- [10] Ngandu, H.G. (2002) About Monitoring the Growth of Children 0 - 5 Years in the CITY of Kinshasa. *Medical Congo*, **3**, 5-7.