We certify that the prototype of the Crying Baby Analyser designed by D. Pedro Monagas, has been checked in our Neonatal Unit, reaching the following results and conclusions:

The accuracy of the prognostics given by the Baby Crying Analyser reached 87.6% in those cases studied.

The details by category are:

Prognostic	Accuracy	Comments
Hungry	93%	100% contrasted against symptoms table.
Bored	83%	""
Annoyed	89%	""
Sleepy	91%	""
Stress	82%	""

We can also assure that when using both techniques; the Baby Crying Analyser and the symptoms table, the general accuracy of this device reached 98% when used at home.

We recommend using both techniques together in order to get the maximum level of accuracy.

Comments.

The symptoms table could be improved with adding more symptoms, and the advice table on the reverse of the device could also include additional advice more related to clinical aspects.

We consider this device to be extremely useful and influential in supporting and assisting parents and carers in understanding their baby.

We recommend the analyser as a useful device to assist parents and carers in identifying the aforementioned symptoms, thus improving the understanding of the baby.

Signed on 11 October 2000.

José Angel Rábano.
Number : 32866

The object of this study was to compare the results of the prognosis given by the Baby Crying Analyser with the Medical criteria/diagnosis of a trial group of 86 x babies ranging from 0 – 12 months old.

The readings of the prognosis were taken twice for their validation in case there was some variation, with an interval of approximately 2 minutes.

The study was carried out in the External Neonatal Units of the General Hospital, Catalonia, under quiet conditions and by the distance according to the weight of the baby prescribed by D. P.Monagas. A table identifying the infant population used throughout the study is shown below:

INFANT POPULATION : 86 BABIES

AGE	SEX		RACE			
	Female	Male	White	Black	Oriental	Others
0 to 1month	15	11	20	2	3	1 Rumanian
2 months	10	8	16	1	1	0
3 months	6	6	11	0	1	0
4 to 6 months	5	6	9	1	1	0
7 to 10 months	6	4	6	0	2	2 Gypsy
>12 months	4	5	4	2	2	1 Mixed

SUCCESSFUL CRITERIA

The Successful positive is the result to compare the Medical criteria/diagnosis the with the Prognosis given by the Baby Crying Analyser and the pursuit of its indications to calm to the baby by a long period of time.

Population	Hunger	Boredom	Uncomfortable /Pain	Sleep	Stress/Colic
0-1month 26	18	-	2	1	5
2months 18	6	2	6	1	3
3months 12	2	4	4	-	2
4-6months 11	4	3	3	1	-
7-10months 10	1	2	5	1	1
12months 9	1	2	4	-	2
Totals 86	32	13	24	4	13
Successful Icons 30	11	21	3	10	
Successful Table 32	13	24	4	13	

Successes of Icons with the illumination directly .

Successes of Table considered the table of the corporal language and the instructions to identify the cry.

Summary of the results obtained based on the categories:

Hunger:
Presentation of the Hunger Icon proved 93% successful and when using the Table it was 100%.

The babies were tested for food demands, mainly during the mornings. There was no prior knowledge of the babies' condition, i.e whether they had soiled their nappy. Additionally, there was no prior knowledge of their actual environmental surroundings or the conditions they had come from, so as not to influence another category of cry.

It is obvious that in this category of cry the action to take to calm the baby was to give the corresponding food.

In two of the cases the crying indicated nervous stress, although it seems logical that if the demands were not met, then the baby would become stressed.

Boredom:
Presentation of the Boredom Icon proved 83% successful and when using the Table it was 100%.

The babies had been fed before the test.
Only in one case, baby n°44 aged 3 months presented/displayed a corporal temperature of 37.9°C. The cry was not of stimuli necessity and after doing the recognition the baby was diagnosed as suffering the Otitis principle. Note that the analyser advice table identifies that the corporal temperature should be checked if the baby is crying.

Uncomfortable/Pain:
Presentation of the Uncomfortable/Pain Icon proved 89% successful and when using the Table it was 100%.

In this group of babies it was not know whether the babies' had been fed, nor was there any prior knowledge of the babies' condition i.e whether they had soiled their nappy, or the environmental conditions they had come from, so as not to influence another category of cry.

Results of the different pathologies:

Conditions of hygiene (dirty nappy)...3 cases
Abdominal Pain (gases)……….…..... 2 cases
Constipation……….……….……….4 cases
Balanitis …………………………..1case
Eczema …………………………...3 cases
Otitis media…………….…….......... 3 cases (1 prognosis of Boredom)
Dentition…………….……….……2 cases
Aftas ……………………………...1 case
Cold (irritant cough)………….…...2 cases

Sleepy :
Presentation of the Boredom Icon proved 91% successful and when using the Table it was 100%.

The babies were tested after a period of rest and preferably in the first hours of the afternoon In this group of babies it was not known whether the babies' had been fed, nor was there any prior knowledge of the babies' condition i.e whether they had soiled their nappy, or the environmental conditions they had come from, so as not to influence another category of cry.

Adding noise, lights and voices etc. modified the environmental conditions and the babies were stimulated to keep them awake.

It is obvious that in this category of crying the action to take to calm the baby was to prepare the baby in a suitable position and a calm place to sleep.

Stress/Colic :
Presentation of the Stress/Colic Icon proved 82% successful and when using the Table it was 100%.

The babies were tested between feeding and sleeping and later in the day without knowing if any of the babies had suffered from colic. Although it was known that all of babies had nervous characters. There was no prior knowledge of the babies' condition i.e whether they had soiled their nappy, or the environmental conditions they had come from, so as not to influence another category of cry.

Adding noise, lights and voices etc. modified the environmental conditions and carers other than their parents stimulated the babies to keep them awake, this was to try and saturate their nervous system with information.

It is obvious that the in this category of crying the cases of babies aged 10 month and 12 month , the only presence of the Paediatrician was a stimulus to them for nervous , in the other ten babies cases was typical of Colic or saturation by stimuli.

The action to take to calm the baby was to prepare a room ,lowering the noise level lights and placing the baby in a suitable position in his mothers arms .

Conclusion

According to the results obtained, we have concluded in this report that we consider the Baby Crying Analyser to be a insightful factor for those parents for whom the process of learning their baby's cries will accelerate. In addition, we consider the Baby Crying Analyser is a valid instrument to aid the early stimulation and the emotional development of the baby from their first days of life.

Hospital General de Catalunya , Sant Cugat 11 de Octubre del 2000

Fdo. Dr.José Ángel Rábano
        Col.nº32866

Note: A certificate will be issued in addition to this summary.