

An Investigation of the Safety of the SIDS Prevention Supply of the Snuzu

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Abstract. In this study a safety inspection is performed using a SIDS prevention supply, Snuzu, which has been largely used in other countries of the world even though it is not distributed yet in Korea, in order to provide a few issues to be aware of or dangerous factors in using it to parents of infants through implementing its safety inspections. The subjects of this study are the five infants (0~12 month old babies) cared by five different nursery schools in G Metropolitan City, Korea, and the infants are observed for five days. The observation results are summarized as follows. First, the 'movement monitor lamp' of the Snuzu is normally operated regardless of the sleeping position. Second, in the satisfaction of the functional convenience of the Snuzu the power turn-on and battery level monitoring functions represent the highest level and the price shows the lowest satisfaction level.

Keywords: SIDS, Snuzu, safety inspection

1 Introduction

1.1 Necessity and objective of study

For considering the cognitive and technical aspects of safety in Korea, it is likely that one of the weakest areas is infant mortality rate. Surely, it is vulnerable to disasters. The reason that the infant mortality rate is the weakest area is due to the fact that there are still no specific prevention methods for it. Comparing negligent accidents in adults are largely due to industrial disasters, the characteristics of accidents in infants are usually caused by combining the characteristics of infants and the disapproved products and facilities. Safety supplies for preventing sudden infant death have been used in advanced countries but it does not distributed in Korea. It becomes an issue of such sudden infant death. Therefore, it is necessary to develop or import such safety supplies for preventing the sudden infant death.

For providing advantages, attentions, and danger factors in such a safety supply to parents, in this study safety inspections are applied to a selected safety supply for

preventing sudden infant death that has been largely used throughout the world even though it has not distributed in Korea.

1.2. Objectives

First, is the safety supply for preventing sudden infant death normally operated regardless of sleeping positions?

Second, how is the functional convenience of the safety supply for preventing sudden infant death?

2 Research Method

2.1 Sample and Survey Instrument

The subjects of this study are the five infants (0~12 month old babies) cared by five different nursery schools in G Metropolitan City, Korea. The main inspection was five days (Friday 14, Monday 17, Tuesday 18, Thursday 20, and Friday 21 December, 2012). The results for each group are summarized in Table 1.

Table 1. Test results for each group

Items	Group A	Group B	Group C	Description
Sleeping position (Front, Left, and Right)	○	○	○	- A person in each group films a video (at least two hours) - For each infant (by marking the position, front, left, and right)
Convenience of using the Snuzza	○	○	○	- Writing a checklist after completing the test

*The Snuzza is only weared during sleep and checked every 30 minutes.

2.2 Experimental supply

The supply of SIDS, Snuzza Go, used in this experiment has been used in 57 countries as an 'aid for caring infants' instead of a medical tool. It is a tool for helping infant cares by wearing it on a diaper for a sleeping baby. There will be a warning beep as the breath of an infant is stopped for a specific time (20 seconds).

3 Result

3.1 Results of the Snuza operation (movement monitor lamp) according to sleeping positions

Table 2. Results o the Snuza operation in different cases

<i>Items</i>	<i>Dec. 14</i>	<i>Dec. 17</i>	<i>Dec. 18</i>	<i>Dec. 20</i>	<i>Dec. 21</i>	<i>Total</i>	<i>Remarks</i>
A	A total of 6 times Normal	A total of 6 times Normal	A total of 6 times Normal	A total of 6 times Normal	A total of 6 times Normal	A total of 30 times Normal	
B	A total of 4 times Normal	A total of 6 times Normal	A total of 6 times Normal	x	A total of 11 times Normal	A total of 27 times Normal	
C	A total of 8 times Normal	A total of 8 times Normal	A total of 8 times Normal	A total of 6 times Normal	A total of 8 times Normal	A total of 38 times Normal	Frequencies in sleeping positions: Front>Left>Right
D	A total of 8 times Normal	A total of 10 times Normal	A total of 9 times Normal	A total of 9 times Normal	A total of 9 times Normal	A total of 45 times Normal	
E	A total of 8 times Normal	A total of 4 times Normal	A total of 8 times Normal	A total of 7 times Normal	A total of 4 times Normal	A total of 31 times Normal	
Total						A total of 171 times Normal	

In the analysis results as show in Table 2, the supply, Snuza, represents normal operations of ‘movement monitor lamp’ in a total of 171 tests for five infants cared in five different nursery schools regardless of sleeping positions. It reveals that sleeping positions do not affect operation of the Snuza.

3.2 Functional conveniences of the Snuza

Table 3. Results of the functional convenience of the Snuza

<i>Items</i>	<i>Question</i>	<i>Greatly Yes</i>	<i>Little Yes</i>	<i>Yes</i>	<i>Little No</i>	<i>No</i>
Power On	1. Are the ‘battery check’ and ‘movement monitor’ lamp ‘On’ and ‘Off’ with a starting beep as the ‘power button’ is activated during the test?	4	1	-	-	-
Battery Check	2. Is the ‘battery check’ lamp normally operated during the test?	4	1	-	-	-
Color/Check of the movement monitor lamp	3. Is it easy to understand different colors of the ‘movement monitor’ lamp of the Snuza during the test?	-	5	-	-	-
	4. Is it easy to identify colors of the	1	3	1	-	-

		'movement monitor' lamp during the test?				
Wearing	5. Is it easy to put the Snuza on the diaper of your baby during the test?	1	3	1	-	-
	6. Do you usually use the setting of the 'Talk' sound during the test?	1	2	1	-	1
Setting the 'Talk' sound	7. Is the function of the setting of 'Talk' sound helpful to you?	-	3	1	-	1

As shown in Table 3, the survey on the functional convenience represents the results as follows. The power On and battery check items show excellent results as Greatly yes (4) and Little yes (1). In the understand of the color/check of the movement monitor, it represents Little yes (5) and Greatly yes (1) / Little yes (3) and Yes (1). In the wearing, it shows Greatly yes (1), Little yes (3), and Yes (1). In the setting of the talk sound, it shows Greatly yes (1), Little yes (2), Yes (1), and No (1) / Little yes (3), Yes (1), and No (1).

4 Conclusion and a proposal

4.1 Conclusion

First, the 'movement monitor lamp' is normally operated regardless of sleeping positions based on the measurement results for each case.

In the test of operating the Snuza for five infants cared in different nursery schools over a total of 171 trials, the 'movement monitor lamp' is normally operated regardless of sleeping positions (Front, Left, and Right). It reveals that its functions are normally operated and safe in usual sleeping positions.

Second, in the satisfaction for each application area in the Snuza the power On and battery check functions show the highest level and the price represented the lowest level.

Based on the convenience for each application area in the Snuza, the power On and battery check functions represent very excellent levels. Also, the functions of understand color/check, wearing, talk sound setting excellent levels.

4.2 Proposal

It is difficult to generalize the study results because it is performed for five infants in five different nursery schools. In further researches, it is necessary to participate more infants and organizations. In addition, there are limitations in investigating considerations or disadvantages sophisticatedly in using the Snuza because the test is performed for a short period of time (five days). Therefore, the study will be performed for long term period of time in further researches.

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