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The Effectiveness of Atraumatic Care Health Education with Video and Flip Chart Media on Nurse's Knowledge and Behavior in Atraumatic Care Application in Cibabat Hospital

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Abstract:
Background*: Children on hospitalization in a hospital is an unpleasant experience that can cause stress and anxiety for children, it can cause new problems, especially prolonged trauma, so to reduce children's anxiety, health workers are required to apply atraumatic care to intervention and environment. To improve the quality of atraumatic care in reducing anxiety due to hospitalization, nurses can be given education about the importance of atraumatic care. This study to determine the effectiveness of atraumatic care health education with video and flip charts on nurse's knowledge and behavior of atraumatic care in Cibabat Hospital.*
Materials and Methods*: The research design is a quantitative research with Quasi Experimental with pre and post test. The population in this study were all 36 pediatric nurses. The sample for the intervention group was 18 people and the control sample was 18 people. The instrument used was a 20-question with Guttman scale and a behavioral questionnaire by Likert scale with 16 statements. The data analysed by univariate and bivariate methods using paired and unpaired t-tests.*
Results*: The results showed that there was an effect of video and flip chart health education on knowledge and behavior. There is no difference between video and flip chart media on knowledge with p-value 0.379>0,05. There is a significant difference between video media health education with flip chart with p-value 0.000 <0.05 (alpha 5%) on the behavior, flip chart media more effective than video.*
Conclusion: *Intrathecal Bupivacaine with Buprenorphine 60µg caused prolonged duration of postoperative analgesia when compared to intrathecal Bupivacaine with Nalbuphine 2mg.*
Key Word*:* ***Atraumatic Care, Flipchart, Knowledge, Behavior, Video***

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I. Introduction

According to Pulungan and Purnomo (2017), the experience of being hospitalized also affects a child's level of anxiety. Children who have been treated previously have lower levels of anxiety than children who are admitted to the hospital for the first time. To overcome children's anxiety during hospitalization, an Atraumatic care approach is needed (Apriliawati, 2011). One of the roles of pediatric nurses is to provide services to pediatric patients with the principle of atraumatic care. To be able to carry out atraumatic care, nurses must have knowledge. Knowledge is the main and important foundation for health workers. The increasing knowledge of nurses about atraumatic care will affect behavior in carrying out nursing actions oriented to atraumatic care actions. Researchers use educational media that are used efficiently, do not require large funds and do not interfere with the work pattern of nurses, so the atraumatic care education method using video media and flip charts was chosen to be tested on the knowledge and behavior of nurses.

II. Material And Methods

This research is a quasi-experimental research using pre and post test design. In both groups, pre-test and post-test were conducted to determine knowledge and behavior scores. Group one is given health education video group two health education flipchart.
Study Design: Quasi-experimental research using pre and post test
Study Location: Cibabat Hospital, Cimahi, Indonesia
Study Duration: March 2022 to July 2022.
Sample size: 36 sample, 18 group 1- 18 group 2.

Sample size calculation: *The number of samples in this study was determined based on the type of unpaired numerical analysis study, determined by the average value and standard deviation in the previous study Oktiawati et al. (2017). The amount of sample required in this study is calculated based on the sample calculation formula:*

$$n = \frac{\sigma^2 (Z_\alpha + Z\beta)^2}{(\mu_1 - \mu_2)^2}$$

$$n = \frac{8^2 (1{,}96 + 0{,}84)^2}{(6{,}66 - 0{,}90)^2}$$

$$= \frac{64\ (8)}{(33)}$$

$$= \frac{512}{(33)} = 15{,}51 = 16\ 10\%\ \text{drop out}\ 18$$

Subjects & selection method: The study population was drawn from pediatric nurse who have minimum experience a year in Hospital. Respondents were divided into two groups (each group had 18 pediatric nurse) according to intervention (video & flipchart).
With the division of groups as follows:
Group A (N=18 pediatric nurse) – given helath education through video;
Group B (N=18 pediatric nurse) - given helath education through flipchart

Inclusion criteria:
1. Pediatric nurse who works at Cibabat Regional Hospital.
2. Pediatric nurse who fills out an informed consent sheet.
3. Pediatric nurse with at least one year of work experience
4. Minimum education Diploma III nursing

Exclusion criteria:
1. Pediatric nurses are not co-operative
2. The pediatric nurse who is not in the nursery anymore.

Procedure methodology

Selecting respondents who fit the inclusion criteria for the video group and flip chart group. All 36 respondents were recorded and selected by drawing/shuffling. Numbers 1 to 18 are designated as video groups and nos 19 to 36 are designated as flip chart groups. After the prospective respondents are determined, proceed with explaining the research objectives, research procedures and submitting an application as a respondent. After the prospective respondent declares that he is willing, the prospective respondent is asked to sign an informed concent. And all the respondents who were asked expressed their willingness to engage in the study.

On the first day, each respondent measured their knowledge and behavior (pre-test) to set an initial score using prepared instruments. Measurements are made one-by-one. Respondents of group 1 were given health education video. Respondents are asked to repeat watching twice every day for two days. Group 2, health education was through the flip chart media. Respondents were asked independently to repeat reading the flip chart twice a day for two days. The flip chart media is provided and stored at the nurse station table. Day 7 of activity measured their knowledge and behavior (post-test).

Statistical analysis

Data was analyzed using SPSS version 20 (SPSS Inc., Chicago, IL). Student's *t*-test was used to ascertain the significance of differences between mean values of two continuous variables and confirmed by parametric independent t test. In addition, paired *t*-test was used to determine the difference pre-post scores regarding nurse's knowledge and behavior.

III. Result

The results of this study; the effect of health education by video and flip charts on nurse's knowledge and behavior in the children's room with 36 respondents group 1 and group 2.

Table 1 shows that the majority (72.2%) of respondents video group were female and also most (88.9%) in the flip chart group of respondents were female. More than half (55.6%) aged 30-39 years in the video group and more than half (66.7%) aged 40-49 years in the flip chart group, then most of them have diploma 3 nursing education. In the video group, half (50%) had worked 3-5 years and in the flip chart group more than half (66.6%) of the respondents had worked >10 years.

Table no 1 Frequency Distribution of Respondents' Characteristics by Gender, Age, Education, and Length of Work

No	Karakteristik	Kel. Media Video		Kel. *Flip chart*	
		F	%	F	%
1.	**Sex**				
	Laki-laki	5	27,8	2	11,1
	Perempuan	13	72,2	16	88,9
	Total	**18**	**100**	**18**	**100**
2.	**Age**				
	21-29 Th	1	5,6	0	0
	30-39 Th	10	55,6	5	27,8
	40-49 Th	7	38,8	12	66,7
	50-58 Th	0	0	1	5,6
	Total	**18**	**100**	**18**	**100**
3.	**Education**				
	Diploma III	13	72,2	15	83,3
	Ners	5	27,8	3	16,6
	Total	**18**	**100**	**18**	**100**
4.	**Length of Work**				
	0-2 Th	1	5,6	0	
	3-5 Th	9	50	4	22,2
	6-8 Th	7	38,9	2	11,1
	>10 Th	1	5,6	12	66,6
	Total	**18**	**100**	**18**	**100**

Table no 2 shows that in the group with video, after given health education, more than half of them, 61.1% or 11 people have good knowledge. And in the group with flip chart, after health education, more than half showed that as many as 61.1% or 11 nurses had good knowledge.

Table no 2: Frequency distribution of Nurse Knowledge Before and After Health Education Atraumatic Care Media video and Flip Chart

Health Education Video Media				
Catagory	**Frequency**		**%**	
	Before	**After**	**Before**	**After**
Well	5	11	27,8	61,1
Enough	6	7	33,3	38,9
Not enough	7	0	38,9	0
Total	18	18	100	18
Health Education *Flip chart* Media				
Catagory	**Frequency**		**%**	
	Before	**After**	**Before**	**After**
Well	2	11	11,1	61,1
Enough	10	7	55,6	38,9
Not enough	6	0	33,3	0
Jumlah	18	18	100	100

Table no 3 shows that after given health education video, all 18 respondents (100%) had appropriate behavior in the application of atraumatic care. And it was also found that after being given atraumatic care health education with flip chart media, all 18 respondents (100%) had appropriate behavior in the application of atraumatic care.

Table no 3 Frequency distribution of Nurse Behavior Before and After Health Education Video and Flip Chart

Health Education Video				
Catagory	**Frequency**		**%**	
	Before	**After**	**Before**	**After**
Appropriate	14	18	77,8	100
Inappropriate	4	0	22,2	
Total	18	18	100	100
Health Education *Flip Chart*				
Category	**Frequency**		**%**	
	Before	**After**	**Before**	**After**
Appropriate	11	18	61,1	100
Inappropriate	7	0	38,9	0
Total	18	18	100	100

The results showed that the average knowledge (pre test) of video media was 12.61, while knowledge (post test) of video media was 15.83. Statistical test results obtained p-value 0.000 <0.05 (alpha 5%) meaning that there is a significant effect seen from the pre and post measurements. The results showed that the average behavior (pre test) of video media was 36.17, while the behavior (post test) of video media was 50.72. Statistical test results obtained p-value 0.000 <0.05 (alpha 5%) meaning that there is a significant effect seen from the pre and post measurements.

The results showed that the average knowledge (pre test) of flip chart media was 12.56, while knowledge (post test) of flip chart media was 16.50. Statistical test results obtained p-value 0.000 <0.05 (alpha 5%) meaning that there is a significant effect seen from the pre and post measurements. The results showed that the average behavior (pre test) of flip chart media was 34.00, while the behavior (post test) of flip chart media was 56.22. Statistical test results obtained p-value 0.009 <0.05 (alpha 5%) meaning that there is a significant effect of pre and post measurements.

Table no 4 The Effect of Video and Flip Charts Health Education on Knowledge and Behavior

Video			
Group 1	**Mean**	**P Value**	**N**
Knowledge (Pre test)	12,61	0,000	18
Knowledge (Post test)	15,83		
Behavior (Pre test)	36,17	0,000	18
Behavior (Post test)	50,72		
Flip Chart			
Group 2	**Mean**	**P Value**	**N**
Knowledge (Pre test)	12,56	0,000	18
Knowledge (Post test)	16,50		
Behavior (Pre test)	34,00	0,009	18
Behavior (Post test)	56,22		

The results of **table no 5**, data analysis showed that the average knowledge value (post test) of video was 15.83, while the average value of knowledge (post test) of flip chart was 16.50. The results of statistical tests obtained p-value 0.379> 0.05 (alpha 5%) meaning that video and flip chart health education is equally effective in increasing nurses' knowledge and behavior.

Table no 5 The Effectiveness of video and flip chart Health Education on Nurse's Knowledge

Variabel	**N**	***Mean***	**p-*value***
Knowledge (post test) Video	18	15,83	0,379
Knowledge (post test) flip chart	18	16,50	

The average value of behavior (post test) video is 50.72, while the average value of behavior (post test) flip chart is 56.22. The results of the statistical test obtained a p-value of 0.000 <0.05 (alpha 5%) meaning that health education with flip charts is more effective than video.

Table no 6 The Effectiveness of Video and flip chart Health Education on Behavior

Variabel	**N**	***Mean***	**p-*value***
Behavior (post test) Video	18	50,72	0,000
Behavior (post test) flip chart	18	56,22	

IV. Discussion

1. **Description of Respondents Characteristics**
   Friedman (2010) states that women play an important role as primary caregivers. Prabowo et al. (2014) which states that age affects the behavior or actions of nurses to patients. Nurses with an older age will perform better nursing actions, especially in the actions of pediatric nurses. Level of education and tenure affect motivation and job satisfaction, because the longer the tenure, the longer the tenure will make someone tend to love their job more. People who have worked for a long time and have a high level of education are usually more motivated to work than those who are new and have lower education (Siagian, 2015).
2. **Description of Nurse Knowledge Before and After given Health Education Video and Flip Chart**
   Work experience is the level of mastery of knowledge and skills possessed by nurses at work which can be measured from the period of service and the type of work that has been done during a certain period, work experience has a positive effect on the competence of nurses (Kaswan, 2012).

The researcher concludes that nurses' knowledge about atraumatic care has increased in a positive direction, influenced by health education using video media and flip charts, strengthened by working experience as a child nurse with more than two years of work experience.

3. **Description of Nurse Behavior Before and After given Health Education video and Flip Chart**

According to Lawrence Green in Damayanti (2017) the health of a person or society is influenced by two main factors, namely: behavioral factors (behavior causes) and factors outside of behavior (non-behavior causes). The behavior itself is determined or formed from three factors, namely predisposing factors, supporting factors and reinforcing factors.

The researcher concludes that the results of atraumatic care media video and flip chart health education indicate an increase in behavior in a positive direction. Positive behavior is based on predisposing factors, namely the knowledge and awareness of respondents, supporting factors, namely the availability of supporting infrastructure, and reinforcing factors, namely the attitudes and behavior of health workers when implementing atraumatic care.

4. **Effect of Atraumatic Care Health Education video and Flip Chart on Knowledge and Behavior**

According to Fitriani (2015), the factors that influence knowledge, namely the first is education that affects the process of learning, the higher a person's education, the easier it is for a person to receive information. Increased knowledge is not absolutely obtained in formal education, but can also be obtained in non-formal education. The more information entered, the more knowledge gained about health. Video health education has an effect on nurses' knowledge in the application of atraumatic care in the children's room.

Video media has the advantage of being able to stimulate motion effects so that it looks more attractive and easier to stimulate cognitive, affective, and psychomotor understanding (Nurhidayat, 2012). Video health education has an effect on the behavior of nurses in the application of atraumatic care. Sunaryo (2013) describes several ways to increase one's motivation, one of which is by motivating by identifying one's needs and desires through inculcating awareness on a cognitive basis. The process of providing education is one way to instill cognitive awareness, with the hope of being more motivated in accordance with the objectives of the health education carried out. This study uses flip chart media to support education for nurses, and it is proven that flip chart media affects nurses' knowledge. There is a significant effect between atraumatic care health education on nurses' knowledge about atraumatic care.

A similar study was conducted by Lailatul et al., (2021) with the results of $p = 0.006 < 0.05$ there was a difference in health education using audiovisual media and flip charts on the behavior of children before and after being given education in the treatment group, $p = 0.010$ 0.05 in the control group, $p = 0.010$ 0.05 in the treatment and control groups. This shows that there are differences in behavior before and after being given health education.

5. **Effectiveness of Atraumatic Care Health Education Video and Flip Chart on Nurse's Knowledge and Behaviour**

This is in line with the results of the research by Harsismanto (2019) which found that the education group using video media and flip charts got an average attitude and motivation score that had no significant difference. Another study was conducted by Nugroho, Sardjono & Ahsan (2011) which examined the difference in the effect of health educators between using audiovisual media and print media on increasing motivation to quit smoking in adolescents. This is because the use of audiovisual media (video) which has an influence in addition to increasing understanding and changing attitudes (Arsyad, 2014). As for the flip chart media, respondents can read written information that is more complete, and can be read at leisure during child care, so it can be concluded that the use of both media can increase respondents' knowledge.Video and flip charts can be just as interesting. So that both groups are equally effective in using the media.

There is a significant difference between video media and flip chart health education, and it appears that flip chart media is more effective in influencing nurse behavior than video media. It can be seen that the use of flip charts as teaching materials can improve cognitive abilities because this media is very practical to use in learning activities or other activities, it can also be used as a medium for delivering learning messages that are very effective, used in a planned manner or presented directly as introduction to learning messages (Yusanang, 2021). Flip chart media can be more easily accessed when nurses recall or need certain information on the media while on duty or before starting official activities.

V. Conclusion

1. There is an effect of video media and flip chart health education on knowledge and behavior.
2. There is no difference between video and flip chart media on knowledge, meaning that both media are equally effective. There is a significant difference between video media health education and flip chart on behavior, meaning that flip chart media is more effective than video media.

References

[1]. Arsyad, Azhar. (2014). Media Pembelajaran. Jakarta: Rajawali Pers
[2]. Apriliawati, A. (2011). Pengaruh biblioterapi terhadap tingkat kecemasan anak usia sekolah yang menjalani hospitalisasi di Rumah Sakit Islam Jakarta.
[3]. Irawati, J., & Damayanti, R. (2017). Perilaku Ibu Dalam Pemberian ASI Eksklusif . Wawasan Kesehatan, 3(2), 2087-4995.
[4]. Fitriani, N.L., Andriyani, S., 2015. Hubungan Antara Pengetahuan dengan Sikap Anak Usia Sekolah Akhir (10-12 tahun) Tentang Makanan Jajanan di SD Negeri Ii Tagog Apu Padalarang Kabupaten Bandung Barat Tahun 2015. J. Pendidik. KEPERAWATAN Indones. 1, 7. https://doi.org/10.17509/jpki.v1i1.1184
[5]. Friedman. (2010). Buku Ajar Keperawatan Keluarga: Riset, Teori, dan Praktek. Jakarta : EGC.
[6]. Harsismanto. (2019). Pengaruh Edukasi Media Video Dan Flipchart Terhadap Motivasi Dan Sikap Orangtua Dalam Merawat Balita Dengan Pneumonia 2019. Jurnal Keperawatan Silampari (Jks) 2 (2) 1-17. Doi :10.31539/Jks.V2i2.530
[7]. Kaswan., (2012), Manajemen Sumber Daya Manusia untuk Keunggulan Bersaing. Organisasi, Graha Ilmu, Jakarta.
[8]. Lailatul. Noviana. (2020). Pengaruh Pendidikan Kesehatan Menggunakan Media Audiovisual dan Flipchart terhadap Perilaku Anak dalam Pencegahan Covid-19. 17142010072-2021-MANUSKRIP.pdf (stikesnhm.ac.id)
[9]. Nurhidayat, O., Eram,T.P, Wahyono,B. 2012. Perbandingan media power point dengan flip chart dalam meningkatkan pengetahuan kesehatan gigi dan mulut.Jurnal Kesehatan masyarakat unnes (Unnes journal public health). 1(1).
[10]. Nugroho, S., Sardjono, T. & Ahsan. (2011). Perbedaan Pengaruh Penyuluhan Kesehatan antara Menggunakan Media Audio Visual dengan Media Cetak terhadap Peningkatan Motivasi untuk Berhenti Merokok pada Remaja.Tidak di publikasikan, Prodi Keperawatan Fakultas Kedokteran Universitas Brawijaya Malang.
[11]. Pulungan, Z. S. A., & Purnomo, E. (2017). Hospitalisasi mempengaruhi tingkat kecemasan anak toddler. Jurnal Kesehatan Manarang, 3(2), 58–63.
[12]. Prabowo et al. (2014). Hubungan Tingkat Kognitif Perawat tentang Caring dengan Aplikasi Praktek Caring di Ruang Rawat Inap RSU dr. H. Koesnadi Bondowoso. e-Jurnal Pustaka Kesehatan, vol 2. (no 1.) Januari 2014
[13]. Siagian, Sondang P. 2015. Manajemen Sumber Daya Manusia. Jakarta: PT. Bumi Akarsa
[14]. Sunaryo, A. S. 2013. Hubungan antara Persepsi tentang Kondisi Fisik Lingkungan Kerja dengan Sikap Kerja dalam Meningkatkan Etos Kerja Karyawan UD. ES WE di Surakarta. Talenta Psikologi. Vol. II No. 2 (106-116).

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