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AN EXAMINATION

OF THE RELATIONSHIP OF SLEEP HABITS WITH EMOTION REGULATION

UN EXAMEN DE LA RELACIÓN DE LOS HÁBITOS DEL SUEÑO CON LA REGULACIÓN EMOCIONAL

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ABSTRACT

The aim of this study was to assess preschool children's sleep habits and sleep problems and to examine their relationship with emotion regulation. The teachers and mothers of 308 preschool children participated in the study. A Child Information Form and Sleep Habits Questionnaire were applied to the mothers. In this way, the children's age and gender information, co-sleeping habits, bedtime resistance, sleep onset delay, sleep duration, sleep anxiety, night wakings, parasomnias, sleep-disordered breathing, and daytime sleepiness were evaluated. The teachers were requested to fill in an Emotion Regulation Questionnaire. The research findings revealed that scores in the lability/negativity subdimension of the emotion regulation scale were statistically higher in boys. Similarly, scores of 5-year-old children were higher in the emotion regulation negativity dimension. According to the research findings, it was determined that sleep problems did not affect the children's emotion regulation skills.

Keywords: Sleep, emotion regulation, childhood period.

RESUMEN

El objetivo de este estudio fue evaluar los hábitos de sueño y los problemas de sueño de los niños en edad preescolar y examinar su relación con la regulación de las emociones. Los maestros y madres de 308 niños en edad preescolar participaron en el estudio. Se aplicó un formulario de información infantil y un cuestionario de hábitos de sueño a las madres. De esta manera, se evaluó la información sobre la edad y el sexo de los niños, los hábitos de sueño compartido, la resistencia a la hora de acostarse, el retraso del inicio del sueño, la duración del sueño, la ansiedad del sueño, los despertares nocturnos, las parasomnias, la respiración con trastornos del sueño y la somnolencia diurna. Se solicitó a los maestros que rellenaran un cuestionario de regulación emocional. Los resultados de la investigación revelaron que los puntajes en la subdimensión de labilidad / negatividad de la escala de regulación de las emociones fueron estadísticamente más altos en los niños. Del mismo modo, las puntuaciones de los niños de 5 años fueron más altas en la dimensión de negatividad de la regulación de las emociones. Según los resultados de la investigación, se determinó que los problemas de sueño no afectaban las habilidades de regulación de las emociones de los niños.

Palabras clave:Sueño, regulación emocional, período infantil.

INTRODUCTION

Sleep hygiene is undoubtedly very important for a balanced life. During the first few years of life, significant changes occur in both sleep duration and sleep content. A newborn child sleeps 15-17 hours per day, but this decreases to 14 hours after the first year and later, gradually falls to 10 hours by the age of 8. Changes in the structure of sleep also occur during this period, and a sleep architecture resembling that of adults appears around the age of 5.

These distinct changes in sleep reflect the maturation of the chronobiological and homeostatic mechanisms that regulate the structure of sleep. These mechanisms enable adaptation to changing conditions affected by environmental, biological, psychosocial and cultural factors. Among children, just as in adults, insufficient or poor-quality sleep is closely related with behavioural and emotional problems. Moreover, good-quality sleep is vital for normal cognitive and emotional development.

It is known that lack of sleep intensifies neural and autonomic reactions given to negative stimuli. In human behaviour, even after only one night's loss of sleep, the changes that occur related to the frontal networks are significant, since the prefrontal cortex (PFC) in particular is sensitive to sleep loss. Furthermore, the PFC plays an important role in emotional regulation. When performing information processing, it exhibits control over the brain structures (e.g. the amygdala) that are at the same time emotionally sensitive.

When considering impairment in the functions of the prefrontal regions, it is not surprising that loss of sleep leads to emotional disorder. In one study that was conducted, it was revealed that a 60% increase occurred in amygdala activation as a response to increased negative stimuli following one night's loss of sleep. Moreover, the connection between the amygdala and medial PFC weakens with lack of sleep. In addition, a more intense amygdala activation occurs in response to negative emotional stimuli.

When faced with loss of sleep, the necessary functions for carrying out effective emotional regulation are also seriously impaired. Sleep disorders affect the capacity to evaluate uncertain situations, recognise facial effects and manage negative emotional stimuli. In children, these impairments in the cognitive processes can manifest themselves as irritability and outbursts of anger. This gives rise to the thought that an improved sleep situation can be converted into reduced levels of these symptoms.

Particularly in children, very little is known about the connections between chronic sleep problems and continuing dysfunctions in emotion regulation. In a study carried out on seven-year-old children, it was found that among a wide range of behavioural problems, sleep irregularities were mostly associated with emotional imbalance. In another study conducted with children, it was found that sleep problems reported by parents of children with Disruptive Mood Dysregulation Disorder were significantly higher than those of children who did not suffer from Disruptive Mood Dysregulation Disorder.

Conversely, it was seen that children with greater sleep problems had a significantly higher number of symptoms of Disruptive Mood Dysregulation Disorder than children with no sleep problems. For these behaviours, chronic sleep problems can cause significant increases in irritability and outbursts of rage in children due to the presence of other regulatory deficiencies. Evidence that sleep problems are a risk factor for a wide range of emotion regulation disorders is increasing, and recommendations are being made to the effect that normalisation of sleep patterns in children can improve state of mind and behaviour.

In this study, the relationship between emotion regulation skills of children in the preschool period and their ages, genders, sleeping habits, bedtime resistance, sleep onset delay, sleep duration, sleep anxiety, night wakings, parasomnias, sleep-disordered breathing, and daytime sleepiness is examined.

MATERIALS AND METHODS

The study was carried out between the dates of September 2018 and January 2019 with mothers and teachers of 308 children aged 5-6 in 7 independent nursery schools affiliated to Bursa Regional Directorate of Education.

First of all, ethical approval for the research was obtained. Then, permission was obtained from the institutions that agreed to take part in the research. Written consent was obtained in the institutions from the mothers and teachers agreeing to participate in the study. A Child Information Form and Sleep Habits Questionnaire were applied to the mothers, while the teachers were asked to complete a Child Emotion Regulation Questionnaire.

The study universe consisted of independent nursery schools affiliated to Bursa Regional Directorate of Education located in the centre of Bursa according to the January 2018 data. Seven nursery schools were selected as the study sample by means of the simple random sampling method. Forms that included the aim and scales of the study were submitted to these nursery schools, and the consent form for participation in the study was sent to a total of 428 students of the 19 teachers agreeing to take part in the research. 308 children of the 428 families

to whom the form was sent were given permission for inclusion in the study. In this way, 308 children (158 girls and 150 boys) were specified. These children's emotion regulation skills were determined by means of the questionnaire answered by the children's teachers (n:19), while their sleep habits and sleep problems were determined by means of the questionnaires answered by the mothers (n:308) of the children who took part in the research.

A form was prepared aimed at determining the sociodemographic information and sleep habits of the children participating in the study. The form consists of two sections. In the first section, questions related to the child's age and gender are included. The second part contains questions related to how the child slept, until what age the child slept with his/her mother and/or father, whether the child shared the same bed and whether the child slept in a separate room.

The Children's Sleep Habits Questionnaire (CSHQ), which aims to investigate children's sleep habits and sleep-related problems, was developed by Owens, Spirito & McGuinn (2000), and the reliability and validity of its Turkish version were tested by Perdahlı-Fiş, et al. (2010). The Short Form of the Children's Sleep Habits Questionnaire (CSHQ) consists of a total of 33 items. An important feature of this questionnaire is that it has been prepared based on the International Classification of Sleep Disorders (ICSD).

Although the original scale consisted of 45 items, in the analyses of the community study conducted by Owens, et al. (2000), 33 items that were functional for the scoring and the creation of the subscales were analysed, and thus the short form of the scale was obtained. In the scale, eight subscales are defined, and these can be listed as bedtime resistance (items 1, 3, 4, 5, 6 and 8), sleep onset delay (item 2), sleep duration (items 9, 10 and 11), sleep anxiety (items 5, 7, 8 and 21), night wakings (items 16, 24 and 25), parasomnias (items 12, 13, 14, 15, 17, 22 and 23), sleep-disordered breathing (items 18, 19 and 20) and daytime sleepiness (items 26, 27, 28, 29, 30, 31, 32 and 33).

Mothers are requested to evaluate their children's sleep habits for the previous week. The scale items are coded as 3: generally (if the stated behaviour occurs 5-7 times per week), 2: sometimes (if the behaviour occurs 2-4 times per week) and 1: rarely (if the behaviour occurs 0-1 times per week). Items 1, 2, 3, 10, 11 and 26 are reverse coded (1: generally, 2: sometimes and 3: rarely). Items 32 and 33 are coded as 0: does not seem sleepy, 1: seems very sleepy, and 2: falls asleep. A total score of 41 is accepted as the clinical cut-off point and scores above this are evaluated as "clinically significant". The questionnaire was used to determine the sleep problems of children aged 3-6.

The Emotion Regulation Questionnaire (ERQ) was developed by Shields & Cicchetti (1997), and is a 24-item scale which assesses emotional reactivity and regulation and expression of emotions according to the conditions of the environment. This scale is used to measure both children of preschool age and children of school age. The ERQ consists of two subscales.

The Lability/Negativity (L/N) subscale measures lability in emotional state and disposition towards negative affectivity in the child (e.g. his/her emotional state is very changeable; he/she is easily disappointed and loses his/her temper). The Emotion Regulation (ER) subscale measures the child's ability to express his/her emotions appropriately for the environment (e.g. he/she can say that he/she is sad, has lost his/her temper, or is afraid). Mothers or teachers evaluate the behaviours listed in the questionnaire with a Likert-type scale ranging from 1-4 according to how frequently they observe them in the child. The validity and reliability of this scale are supported with studies carried out in the international literature (Miller, et al., 2006).

The Turkish adaptation of the ERQ for the 6-13 age group was conducted by Kapçı, et al. (2009). As in the original scale, a two-factor structure was obtained and, with the exception of one item, the items loaded onto these factors correspond to the original scale. The internal consistency coefficients of the ERQ subscales and test-retest correlations made with an interval of two weeks were found to be high. When the Turkish samples in the preschool age group were examined, Yağmurlu & Altan (2010), revealed that mothers' and teachers' assessments of emotion regulation showed that children's mood characteristics were correlated with mothers' sensitivity in the expected direction. Moreover, Yağmurlu & Altan (2010), reported that the internal consistency coefficients of the scale were .75 for mothers' assessments and .84 for teachers' assessments. The reliability coefficient for the measurement reliability of the scale was recalculated by Koçyiğit, Yılmaz & Sezer (2015), and a reliability coefficient of .76 was found. In this study, emotion regulation scores were obtained by conducting teacher evaluation.

The data obtained in this study were analysed using the SPSS 21 software package. Where data were not normally distributed, the Mann-Whitney U test was used for two-group comparisons, while the Kruskal-Wallis H test was used for comparisons between three or more groups. Correlation between variables was examined with correlation analysis. 0.05 was used as the level of significance,

and it was determined that the difference was significant when $p<0.05$, while there was no significant difference when $p>0.05$.

RESULTS AND DISCUSSION

It is seen that 51.3% of the children participating in the study were girls, while 48.7% of them were boys. Regarding the ages of the children who took part in the study, 59.7% of them were aged 5 and 40.3% of them were aged 6 (Table 1).

Table 1. Children's socio-demographic characteristics.

		n	%
Gender	Female	158	51.3
	Male	150	48.7
	Total	308	100.0
Age	5	184	59.7
	6	124	40.3
	Total	308	100.0

Table 2. Results for children's emotion regulation skills with regard to gender variable.

n		Gender						Mann-Whitney U test		
		Mean	Median	Minimum	Maximum	sd	Mean Rank	z	p	
Emotion Regulation	Female	158	16.28	16.00	3.00	24.00	4.24	153.7	-0.2	0.867
	Male	150	16.27	17.00	3.00	24.00	4.19	155.4		
	Total	308	16.27	16.00	3.00	24.00	4.21			
Lability/ Negativity	Female	158	10.61	9.00	0.00	35.00	6.99	139.7	-3	0.003
	Male	150	13.79	12.00	0.00	44.00	9.28	170.0		
	Total	308	12.16	10.00	0.00	44.00	8.33			

The Table 2 shows that mean scores of boys for the lability/negativity subscale of the Emotion Regulation scale were significantly higher than those of girls. With this finding, it was determined that boys displayed more angry and aggressive behaviour than girls ($p<0.05$). Regarding scores for the emotion regulation subscale, however, no significant difference was observed between genders ($p>0.05$).

Examination of the literature reveals that similar results have been obtained. A number of studies have found that there are significant gender differences in social interactions of preschool children, and that boys in particular display more negative emotions and more dysregulation (Eschenbeck, Kohlmann & Lohaus, 2007). According to Fabes, et al. (1997), in terms of affective expression and regulation, boys can be more emotionally sensitive to stimuli, and once they are stimulated they find it difficult to regulate their emotions.

The gender difference in Lability/Negativity scores reveals that there was no significant difference in the emotion regulation dimension in this study ($p>0.05$). Examination of the literature reveals that different findings were obtained in this dimension. For example, according to Ural, et al. (2015), emotion regulation in boys is lower than in girls. Similarly, in Samuelson, Krueger & Wilson's (2012), study, girls displayed superior emotion regulation and management performance than boys. On the other hand, Seçer (2017), did not find a significant difference in children's emotion regulation according to gender.

According to these findings, it can be said that boys behave more openly when expressing negative emotions, while girls are more successful than boys in controlling their emotions. In terms of emotion regulation, however, no significant difference was revealed between genders.

Table 3. Results for children's emotion regulation skills with regard to age variable.

n		Age						Mann-Whitney U test		
		Mean	Median	Min	Max	sd	Mean Rank	z	p	
Emotion Regulation	5	184	16.08	16.00	3.00	24.00	4.28	150.3	-1	0.316
	6	124	16.56	17.00	4.00	24.00	4.09	160.7		
	Total	308	16.27	16.00	3.00	24.00	4.21			
Lability/ Nega-tivity	5	184	13.46	11.00	0.00	44.00	8.84	168.1	-3.2	0.001
	6	124	10.23	9.00	0.00	31.00	7.11	134.4		
	Total	308	12.16	10.00	0.00	44.00	8.33			

In Table 3, it is seen that mean scores for the lability/negativity subscale of the Emotion Regulation scale were significantly higher in 5-year-olds than in 6-year-olds. With this finding, it was determined that 5-year-old children displayed more angry and aggressive behaviour than 6-year-old children ($p<0.05$). Regarding scores for the emotion regulation subscale, however, no significant difference was observed between ages ($p>0.05$). A significant difference according to age was seen in emotional expression, which is the first key aspect of emotional competence and which is shown by the lability/negativity scores in this scale ($p<0,05$). Younger children obtained higher scores for lability/negativity than their peers who were only one year older than themselves. In fact, preschool children may be inexperienced with regard to managing how to show reactions in the experiences they have at school, which is their first social environment.

As children get older and they get used to their social environment, they will also develop with regard to learning how to express negative emotions and opinions. This explains why the children's negativity and lability scores were higher in favour of younger children. Emotion regulation, however, is the second key aspect of emotional competence; it is children's ability to regulate their experience and expression of emotions within their context.

Emotion regulation is children's system for control of the emotions that they experience and/or express. According to Cole, Martin & Dennis (2004), emotions can be experienced or expressed without being regulated, but regulation is based on an already expressed or unexperienced emotion. For this reason, children may experience and/or express positive or negative emotions that may or may not require regulation in line with the situations they experience. The ages of the children who took part in the research did not make a significant difference with regard to emotion regulation ($p>0.05$).

Table 4. Results for relationship between children's emotion regulation skills and their sleep habits.

n		Children's sleep habits						Kruskal-Wallis H test			
		Mean	Median	Min	Max	sd	Mean Rank	H	p	Paired Comparison	
Emotion Regulation	In same bed as mother-father	54	16.37	16.50	8.00	24.00	4.23	154.8	0.4	0.835	-
	In separate bed in parents' room	53	16.51	16.00	3.00	24.00	4.13	160.9			
	In separate room	201	16.18	16.00	3.00	24.00	4.24	152.7			
	Total	308	16.27	16.00	3.00	24.00	4.21				
Lability/Negativity	In same bed as mother-father	54	13.13	10.00	0.00	32.00	8.05	167.7	8	0.018	3-1 3-2
	In separate bed in parents' room	53	14.98	11.00	2.00	38.00	9.69	179.5			
	In separate room	201	11.15	9.00	0.00	44.00	7.84	144.4			
	Total	308	12.16	10.00	0.00	44.00	8.33				

When Table 4 is examined, it is seen that sleeping in a separate room or together with their parents in the same room did not make a significant difference to the children's emotion regulation scores ($p>0.05$). However, it is seen that "lability/negativity" scores of children sleeping in separate rooms from their parents were significantly lower ($p<0.05$). This finding signifies that children sleeping in separate rooms from their parents expressed their anger or negative emotions less frequently. The Lability/Negativity (L/N) subscale measures lability in emotional state and disposition towards negative affectivity in the child (e.g. his/her emotional state is very changeable).

From the viewpoint of type of structuring of sleep during the first years of life, the effects of sleeping together with parents or sleeping in a separate room have been a subject of debate for researchers for many years. Part of this argument has focused on the benefits and risks of sleeping together with children and especially of sharing a bed. Although bed sharing can be implemented due to a number of reasons, it is a subject worthy of attention for the American Academy of Pediatrics due to its link to Sudden Infant Death Syndrome (SIDS). Yet some researchers claim that the connection between bed sharing and SIDS has decreased compared to previous years, and even that it has been eliminated in the absence of certain baby and environmental risk factors including premature births or sick babies. The literature has revealed the positive or negative effects of bed sharing habits for babies and children with many studies. However, evidence for the relationship of bed sharing with child emotion regulation, or with behavioural problems or psychopathology is not clear.

In Finland and USA, in terms of internalisation or externalisation, co-sleeping problems or general behavioural problems of co-sleepers did not differ from those of children sleeping alone. In the Netherlands, Jansen, et al. (2011), and in Turkey, Kaymaz, et al. (2015), found that there was no relationship between symptoms of anxiety or depression in children who slept in the same bed as their parents. Similarly, in a study conducted in China by Narvaez, et al. (2015), it was concluded that bed sharing was not correlated with children's behaviour regulation. In contrast with the findings of the study, however, in USA, it was found that babies who shared a bed were more reactive, less compliant and less rhythmical than those who slept alone.

In a clinical example of children with behavioural problems, it was reported that bed sharing was correlated with tantrums, lack of self-confidence and aggressive behaviours. In one of several longitudinal studies, no positive or negative effects of bed sharing at five months and at three, four and six years were found on behavioural or affective maturity measures at six years, including mood and affect, school adaptation, interpersonal relations, personal acceptance, vandalism, delinquency and substance use. The mixed findings of studies such as these may be based on different motivations of mothers for bed sharing, the fact that they were conducted in different cultures or children's individual differences.

In this study, it was also found that children's sleeping in a separate room, that is, their not sharing a bed, reduced their negative expressions of emotion. On the other hand, it is stated that children who sleep together with their parents experience more frequent night wakings than children who sleep in separate rooms. Waking up at night may accompany emotional, behavioural and attention problems. Night wakings probably affect the mother's and child's sleep quality and may increase the amount of expressed negative emotion.

Table 5. Results for relationship between children's emotion regulation skills and length of time they spent sleeping with their parents.

n		Period spent sleeping with child						Kruskal-Wallis H test			
		Mean	Median	Min	Max	sd	Mean Rank	H	p	Paired Comparison	
Emotion Regulation	0-6 months	79	16.05	16.00	5.00	24.00	4.29	148.1	0.7	0.706	-
	6 months-1.5 years	94	16.56	16.00	4.00	24.00	3.90	159.4			
	2-6 years	135	16.20	16.00	3.00	24.00	4.38	154.9			
	Total	308	16.27	16.00	3.00	24.00	4.21				
Lability/ Negativity	0-6 months	79	12.38	11.00	0.00	44.00	8.05	160.9	1	0.598	-
	6 months-1.5 years	94	12.47	10.00	0.00	42.00	8.61	157.2			
	2-6 years	135	11.81	10.00	0.00	36.00	8.34	148.9			
	Total	308	12.16	10.00	0.00	44.00	8.33				

In Table 5, no significant difference is seen between groups (p>0.05). This finding indicates that the period of continuing to sleep in the same room as their parents or in the same bed as their parents did not make a significant difference to the children's emotion regulation or their lability/negativity scores. Although researchers have concluded that the percentage of newborn babies' sleeping together with their parents varies in different cultures, this period varies from country to country. For example, in eastern culture, sleeping together with the child is a common practice, whereas it can be said that children in western culture are encouraged to sleep independently after a short time. In a study conducted with health personnel in Turkey, the rate of sleeping together with the baby was determined to be around 17%. This difference in relation to western cultures is also striking in this study. A large percentage of parents who participated in the study reported that they continued to sleep together with their children until they were more than 2 years old.

In Table 5, no significant difference in scores between groups can be seen (p>0.05). This finding means that the length of time that children continued to spend sleeping in the same room or the same bed as their parents did not make a difference to their emotion regulation or lability/negativity scores. When Table 5 is examined, it is seen that %26 (n:79) of the children slept with their mothers for the first 6 months, %31 (n:94) slept with them for between 6 months and 1.5 years, and %43 (n:135) slept with them for between 2 and 6 years. In the study, it is seen that most children slept with their mothers for between 2 and 6 years. In a study related to frequencies of sleep disturbance in children, Karaçal (2010), reported that the great majority of children aged 0-3 slept in the same room as their parents.

More recently, Gözün Kahraman & Ceylan (2018), examined sleep habits in children aged 0-3 in Turkey.

The researchers determined that 82.2% of children aged 0-6 months, 79.3% of children aged 7-12 months, 79.7% of children aged 13-18 months, 73.2% of children aged 19-24 months, and 61.8% of children aged 25-26 months slept in the same room as their parents. These results show that a very large percentage of children aged 0-3 slept with their mothers and fathers. These findings support the findings of this study. Sleeping patterns of young children change and vary over time. According to the study findings, it is striking that although the percentage of young children sleeping with their parents decreased with age, this percentage remained very high for all ages. The reason for this may be due to the fact that in the sleep process, which is stressful for small children, they feel the need for their parents to pacify them and to make this process easier.

Studies conducted up to the present day reveal that sleep problems in small children, especially difficulties experienced at bedtime and night wakings, are generally related to lack of self-soothing.Moreover, the fact that children still sleep with their parents despite being older may be explained by cultural factors. Although researchers have concluded that co-sleeping by newborn babies with their parents varies in different cultures, this period also varies from country to country (Mindel, et al., 2013), since sleep habits may have different norms in different cultures. Sleeping together with babies is a common behaviour especially in eastern societies.

Generally, for small children there is a high degree of parental participation at sleep onset and in sleep monitoring; this reveals significant differences in parental behaviours among cultural groups. For example, while Japanese mothers believe that sleeping with their babies for a time has a positive effect on the babies' emotional security, they do not consider that it affects their independence. American mothers, however, give more importance to individualism and, for the sake of fostering children's independence at an early age and protecting their private lives, do not prefer sleep sharing. On the other hand, in this study, the periods that children spent sleeping with their parents did not result in a significant change in their emotion regulation or lability/negativity scores.

The reason for this may be explained by the fact that corticosteroid balance, which is necessary for healthy growth, is better in babies who sleep with their mothers. In studies carried out with animals, levels of growth hormones and enzymes, which are necessary for brain and heart development, were higher in babies that were close to their mothers (Suskind & Schanberg, 1978). Moreover, the physiology of co-sleeping babies was more stable, including more constant temperatures, more regular heartbeats, and shorter pauses in breathing than in babies who slept alone (Reite & Capitanio, 1985).

According to the research, besides advantages in children's physical development, co-sleeping can also encourage long-term emotional wellbeing. In long-term studies that monitored babies sleeping with their parents or alone, it was observed that co-sleeping children were happier and less worried, and had greater self-respect, less fear of sleep and fewer behavioural problems, and tended to be more comfortable with intimacy (Beijers, et al., 2019). In a longitudinal study begun by Okami, Weisner & Olmstead (2002), in 1975, interesting data were obtained regarding parent-child bed sharing. In the study,

bed sharing in infancy was found to be significantly correlated with increased cognitive competence measured at the age of 6, although the effect size was small.

Bed sharing in babyhood and early childhood was found not to be related to sleep problems, sexual pathology or any other problem at age 6. Bed sharing in babyhood and childhood was found not to be correlated with pathology or problematic outcomes at the age of 18. Considering the findings of the study, it was concluded that co-sleeping with the mother did not have an effect on the baby's emotion regulation or lability/negativity. Management of stress and behaviours progresses from external to internal control during childhood, and co-sleeping may play an important role in development of self-regulation. Sleeping together may increase the level of intimacy between parent and child.

Because the possibility of parents' interaction with the baby is greater, this may contribute to higher socio-emotional regulation by the baby. Studies reveal that co-sleeping has a positive effect on parent-child intimacy. On the other hand, research findings that partially conflict with the results of the present study are also found. For example, in the study by Chu (2014), it was determined that children who slept alone had higher levels of self-regulation than those who co-slept. Considering this finding, it can be said that self-regulation had a negative effect on the emotion regulation that it included.

CONCLUSIONS

According to the research results, scores of boys in the lability/negativity subdimension of the emotion regulation scale were found to be statistically higher. Similarly, the emotion regulation negativity dimension was higher in children aged 5.

The research findings revealed that sleep habits did not affect children's emotion regulation skills. Sleep has a very important effect on the healthy growth and development of the child. Parallel to the rapid change and development especially in the first three years of life, distinct changes may occur in sleep-wake cycles and sleep regulation. The sleep habits and sleep environment that are fostered in the child are very important for the child to have good-quality sleep.

The acquisition of correct sleep habits also depends on parental practices in this process. While parents are fostering sleep habits in their children, it is essential that they include practices and routines that enable the children to regulate and pacify themselves in the process of falling sleep. Since the number of studies aimed at sleep habits of young children is very low, it is thought that there is a need for further studies to be conducted on this subject.

In particular, studies can be made on understanding the factors affecting sleep hygiene in children and the cultural effects of sleep. Experimental and qualitative studies to be made in this regard can contribute more detailed information on the subject to the literature. There is a need for future studies related to co-sleeping with mothers and development of emotion regulation.

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