

Activity Follow-up Rehabilitation & Health Västra Götaland Region

Follow-up of children and adolescents 0 – 18 years in Västra Götaland Region having treatment with weighted blanket

Bosse Zetterlund
Aid coordinator
Rehabilitation & Health
Västra Götaland Region

Ellen Odéus
Reg Occupational Therapist
Queen Silvias Children- and Youth hospital

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Translation
Jacob Sandelin
SPEAB SensiSereni

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If you have any questions please contact

Bosse Zetterlund bosse.zetterlund@vgregion.se

Hjälpmedelssamordnare
Habilitering & Hälsa

Ellen Odéus ellen.odeus@vgregion.se

Leg. Arbetsterapeut

Drottning Silvias Barn- och ungdomssjukhus

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Summary

Västra Götaland Region in Sweden has had prescription of heavy weighted blankets since 2008. The weighted blanket as a treatment for children and adolescents up to 18 years has increased markedly in the Västra Götaland Region. It is of great interest to find out whether the treatment improves sleep so that the effect is achieved in the daily activities. With a questionnaire sent to 312 children and adolescents who have had treatment with weighted blankets at least 12 months were asked questions such as: What were the problem areas that was the cause for treatment with weighted blanket? How is the weighted blanket used, time of day and frequency? Have the treatment reduced the medication for insomnia?

A majority, 81%, have difficulties in sleeping as the cause of starting the treatment. In the entire group, 75% have found the blanket beneficial and effective. 25% say “no” or “do not know” on the question whether the treatment is of any benefit or effect.

Treatment with weighted blanket has reduced the medication of insomnia in 30 children, which is 17% of the group that answered the question.

The results show a small effect on the activity capability in addition to morning and evening activities. Of the 150 children who indicated benefit and effect of the treatment 50% had easier to wake up and get up, 39% found it easier to go to bed, and 87% slept better.

There is a clear link between the benefit and effect and daily use. Therefore, treatment with weighted blanket should be terminated* when the frequency of use is less than every evening and night of the week.

Estimation of satisfaction with the information at the onset of treatment is good, but nearly half, 43% are not satisfied with the follow-up treatment. There is therefore reason for the responsible treatment occupational therapists to improve the quality of follow-up treatment with weighed blanket.

* In most regions in Sweden the weighted blankets are prescribed free of charge and should be returned if the treatment is terminated. (Translators comment)

Introduction

Weighted Blanket as a treatment for children and adolescents up to 18 years has increased markedly in the Västra Götaland Region.

The prescription of weight blanket in the Västra Götaland region aims to:

- Counteract the motor disturbance and reduce sleep disturbances in order to improve the ability activity (Product instructions in the manual for the prescription of personally prescribed aids).

It is of great interest to find out whether the treatment improves sleep so that this will influence the daily activities.

Aids Coordinator in Rehabilitation and Health has conducted a comprehensive survey, to in a group level investigate whether the weighted blankets prescribed have had the desired benefit and effect. The result of the survey is also a basis for revision of the existing guidelines, which is a support to prescribers at the testing and monitoring of weighted blankets.

Background

Insomnia

There are times when children and adolescents sleep less, reasons for this may be the development phases or circumstances in life such as social insecurity, worry, or stress. When families seek help in health care for sleep problems in their children and young people the problems have often lasted for a longer time and affects the whole family negatively. The 24-hour-cycle has been unbalanced and child/youth who get too little sleep, perceives irritable, have difficulty concentrating and even memory and ability of activity may be adversely affected. Sleep problems among young people and children affects both children's and parents' quality of life and should be taken very seriously. The basis for achieving a good sleep patterns requires peace and security, adequate boundaries and good habits. You have to have a good activity balance over the day and the TV, computers and mobile phones switched off in good time before bedtime (Smedje).

A neuropsychiatric disorders in children often results in difficulties with regulating activity of the day. This applies particularly to children diagnosed with ADHD. These children often have great trouble to come to rest in the evenings and get the quality sleep necessary to cope with today's demands of school and social settings. Other diagnoses where you see insomnia in children is Cerebral Palsy, and children with acquired brain injuries.

Weighted Blankets

Based on Jean Ayres theories of Sensory Integration (SI), a weight blanket, called a ball blanket, was developed in Denmark in the early 1990s. A blanket was filled with hollow plastic balls that distributed evenly over the body. Tactile stimulation occurs by the balls as the pressure varies against the body. This, combined with the heat blanket allows the body's own sleep hormone, oxytocin, is secreted. Body Awareness is increasing and the blanket brings a sense of physical demarcation of the room. Many feel that a ball blanket made it easier to come to rest, relax and sleep with better quality. (Hvolby, Aremyr)

Region Västra Götaland has had prescription of ball weighted blankets since 2008. They have different weight, commonly between 5-8 kg. Since October 2010, is also chain weighted blankets in line with similar weight classes that ball weighted blankets. The function of the Chain weighted blanket (Somna.nu) is of the same character but means that chains are sewn into channels in the covers instead of balls.

Other treatments

Other treatment interventions in health care means primarily to address environmental factors that can disrupt sleep. According to the SBU (Swedish Agency for Health Technology) gets about 15% of children aged 5-9 years who are treated with methylphenidate for ADHD also the hormone melatonin. This occurs despite the fact that MPA has not accepted this for use for children. Melatonin seems to have a good effect even if the research is sparse. There are no studies on what happens with long term use.

Evidence for weighted blankets

A Danish study of children with ADHD examined ball weighted blankets effect on insomnia. The time to fall in sleep for a group of 21 children (8-13 years) with ADHD were measured with and without the use of ball weighted blankets and was compared with a comparison group of 21 healthy children. The results showed that the sleep time for the children in the ADHD group were positively impacted by the ball weighted blanket and the number of awakenings during the night fell. (Hvolby)

Region Skåne published in 2012 the research report "How is the aid ball weighted blanket experienced by children and adolescents and their families? ". The survey is based on a questionnaire to 304 children aged 3-19 years. The result shows that sleep problems are the overwhelming reason that ball weighted blanket was prescribed, secondly, it is the user's need of a soothing action. 66% use the blanket at bedtime, and 25% even in the daytime. The conclusion to draw from this report is that it is very important that the prescriber provides clear information about the tool and to monitor closely the use of the effect to be as good as possible.

Västmanland County Council published 2012 the report "Monitoring the use of heavy weighted blankets". The monitoring is based on a questionnaire to 158 people, also adults were included in the study. The results were similar to Skåne (above) but it also shows that medication for motoric and mental anxiety has decreased as a result of weighted blanket treatment.

In the spring of 2013 was an intervention study made at Gothenburg University as a bachelor thesis. The study indicated that the adults fell asleep faster and that they felt more alert during the day (Lindqvist). In his discussion Lindqvist takes up the difficulties that there is not so much evidence about the use of weighted blankets and that current testing protocols are not validity and reliability tested. It is desirable that this needs to be further developed and structured to increase its performance characteristics and validity, to become a better support for prescribers to prescribe and monitor weighted blankets.

Purpose

The purpose of the survey is to get an overall picture of how weighted blankets are used and the benefits the treatment give the patient.

Issues:

- What were the problem areas that was the cause for treatment with weighted blanket?
- Has the treatment any effect on sleep disorder and what activities/occasions during the day has been positively affected?
- How is the weighted blanket used, time of day and frequency?
- Has the treatment reduced the medication for insomnia?
- Estimation of satisfaction with the information at the beginning of treatment and at follow-up of treatment.

Method

The survey was conducted with a questionnaire for children and adolescents who in March 2013 had an on-going treatment with weighted blanket and where treatment was started for at least twelve months ago. The data retrieved from the web SESAM (aids register).

The questionnaire is directed both to children/young people and their parents/network. For some children it can be difficult to independently answer the questions. Therefore, it is up to the family to decide who respond to the questionnaire.

Selection and loss

Selection was based on treatment with weighted blanket started for at least twelve months ago and resulted in 312 children and adolescents.

Five people were excluded because of protected identity or unclear address details. A questionnaire on treatment with weighted blanket was sent in March 2013 to the remaining 307 children and young people who used the weighted blanket for at least twelve months. A reminder was sent after two weeks to those who have not responded.

Results

Background information

Totally 65% of the questionnaires were answered. The age distribution of the respondents is evenly distributed from 7 years and up with some fewer young people aged 16-18 years. There are very few children in preschool age.

The questionnaire was answered by the parents in 63% and by parents and children together 30% and by the user in 7% of the responses.

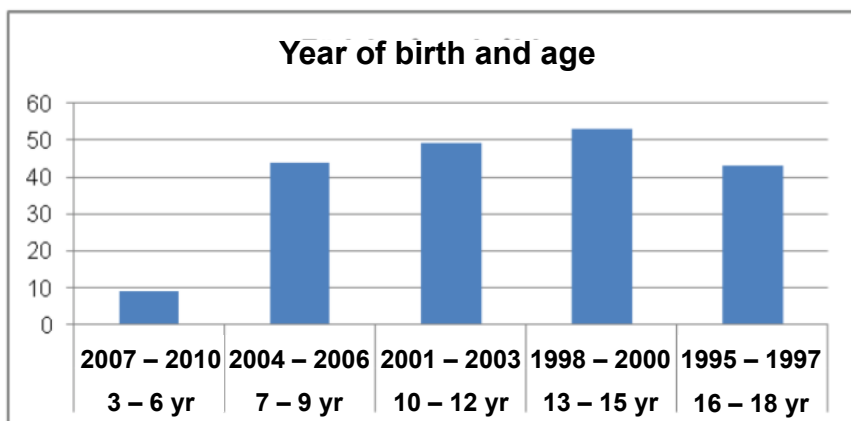


Fig. 1. Year of birth and age of the 198 children and youth that have answered

The gender distribution of the respondents is 69% boys and 31% girls. An analysis of the balance per year of birth shows that the group 7-8 years has a more even distribution between girls and boys.

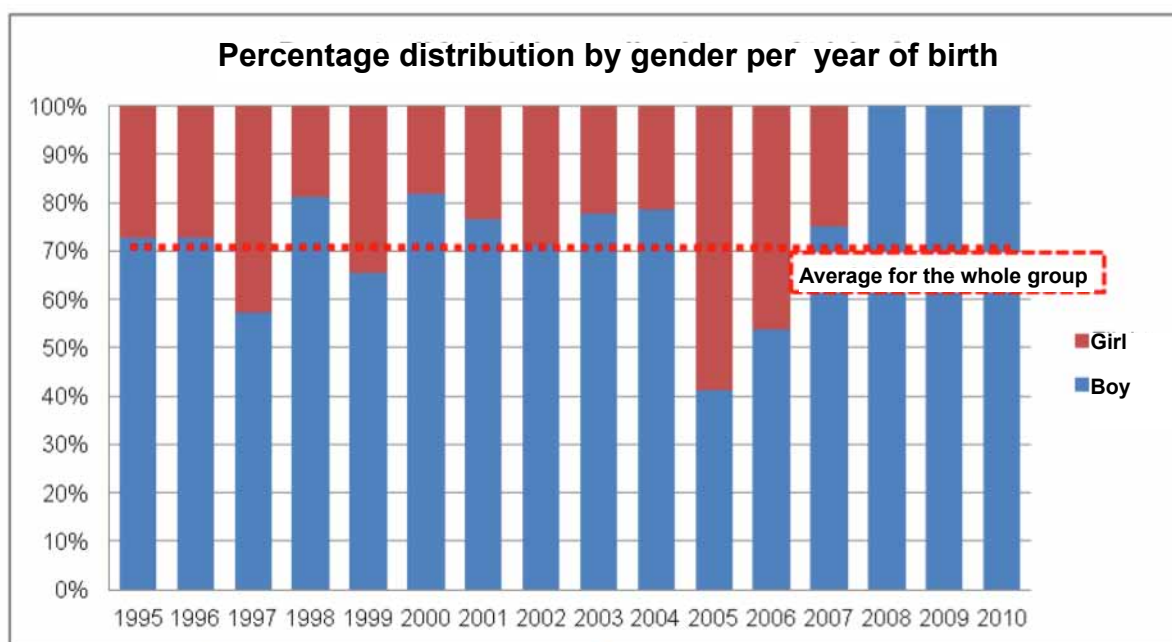


Fig.2. Percentage distribution by gender per year of birth of the 198 children and youth that have answered

Reason for starting treatment

A majority, 81%, have difficulty sleeping as the cause of starting treatment. Only 5% have difficulties to settle down during the day as the cause of starting treatment, 14% indicate both reasons for starting treatment.

Benefit and effect

75% of the entire group found the weighted blanket useful and efficient. 25% say “no” or “do not know” if the treatment has any benefit or efficacy.

Of the 10 children who started treatment with weighted blanket to come to rest during the day, half of them found the treatment useful and efficient.

On the small group of preschool children the treatment have a lower benefit and effect. In the large group of school children there is no difference between ages. There is a minor difference between boys and girls, 77% of boys and 72% of girls have benefits and effect while 23% of boys and 28% girls say “no” or “do not know” if the treatment has any benefit or effect.

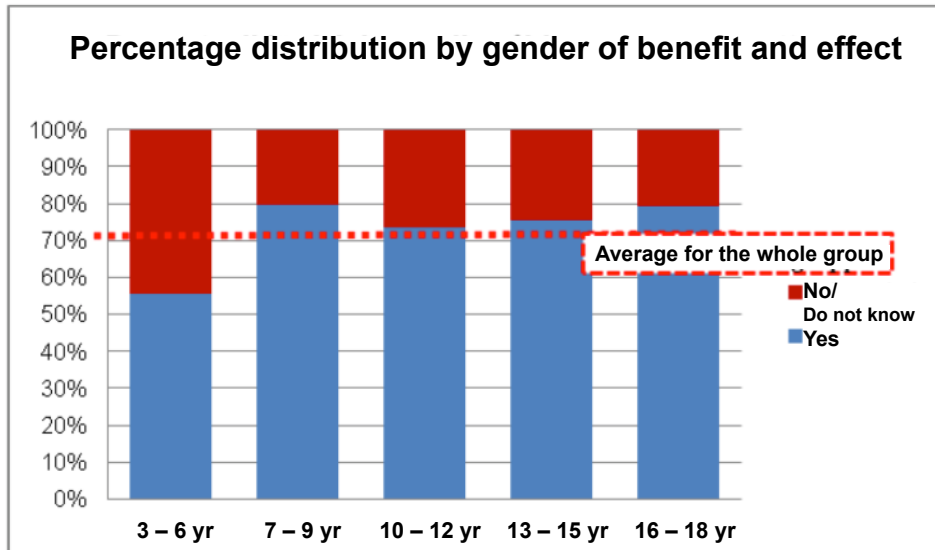


Fig.3. Percentage distribution by gender of benefit end effect

Improved ability to perform activities due to reduced sleep disorder

The survey questions about activities that were positively affected by treatment were distributed over the day. The results show a small effect on the activity capability in addition to the morning and evening activities. Of the 150 children who had the benefit and effect of the treatment is 50% found it easier to wake up and get up, 15% have a positive impact on pre-school/school-activities during the morning session. A few felt some impact on the afternoon activities. In the evening, 39% had easier to go to sleep and 87% slept better.

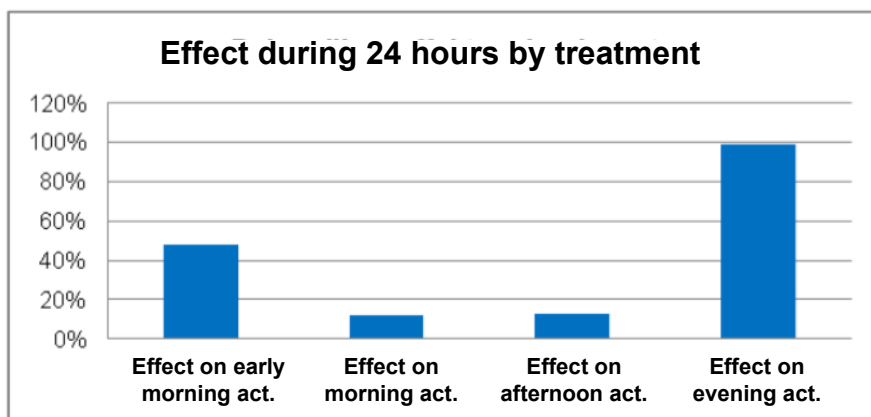


Fig. 4. Effect during 24 hours by treatment

Frequency of use

The result shows that the 75% who have benefit and effect of their treatment have a high frequency of use.

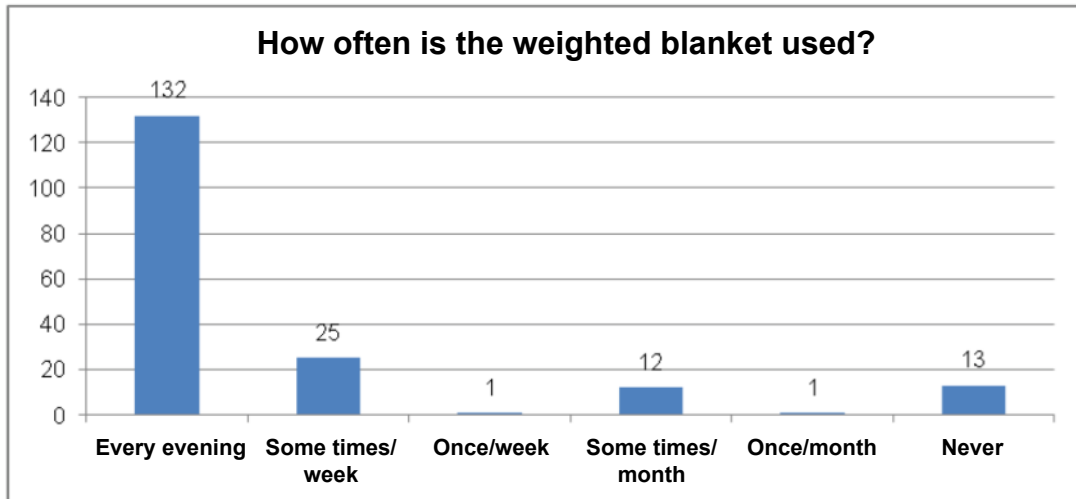


Fig. 5. Frequency of use

Impact on medication for insomnia

Treatment with weighted blanket has reduced the medication of insomnia in 30 children, which is 17% of the group who answered the question.

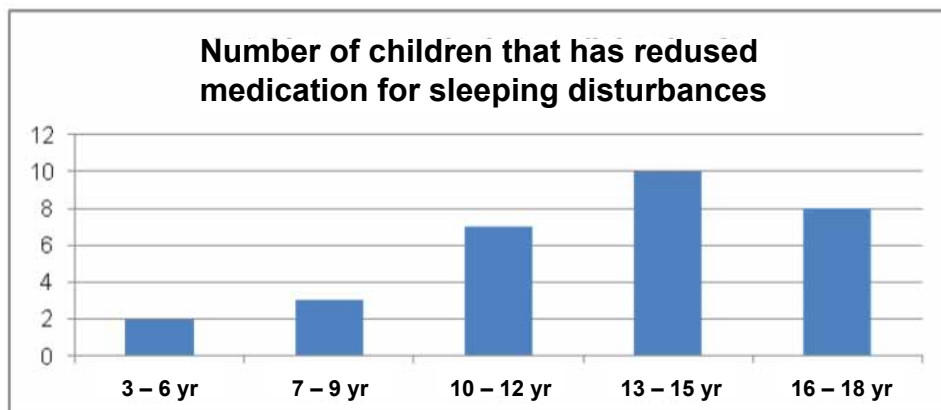


Fig.6. Reduced medication for sleeping disturbances

Satisfaction with the information at the onset and follow-up of treatment

The majority of families, 82% are very satisfied with the information at the start of treatment. 43% of the families are not satisfied with the information in the follow-up of treatment.

Discussion

Results Discussion

Parents usually have answered the questionnaire, but in 37% of the responses have children / young people participated, compared to 50% of the participants are between 13 - 18 years and are expected to have a participatory assessment of their treatment.

Reason for starting treatment is crucial if the treatment may have benefit and effect for the person. Results show that there is no reason to treat anxiety during the day with weighted blanket with the goal of influencing activity ability. However demonstrates a good result in the treatment of insomnia where 75% indicate that they have the benefit and efficacy of their weighted blanket. The results also show a doubtfulness to treat young children with weighted blanket when less benefit and effect is seen in preschool children compared with schoolchildren.

Treatment with weighted blanket only seem to influence activity ability positively in the morning and evening. But the prerequisite for to easier get up in the morning and make it easier to settle at bedtime and sleep better at night is to use the weighted blanket every evening and night. Thus there is a clear link between the benefit and effect and daily use. That cause to terminate treatment with weighted blanket when the frequency of use is less than every evening and night of the week.

Estimation of satisfaction with the information at the onset of treatment is good, but nearly half, 43%, are not satisfied with the follow-up treatment. There is therefore reason for the responsible treatment occupational therapists to improve the quality of follow-up treatment with weighed blanket. The relationship between the benefit and usage frequency justifies a follow-up every 6 months during treatment with weight blanket and to stop treatment when the usage frequency is not daily.

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