Management of Night-Waking in Young Children

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Abstract

Regular waking at night is one of the most common problems encountered by parents of young children. In a family counselling programme in Auckland, a night-waking programme has been used with 208 children referred during a two year period. The programme involved organized bed-time routines, procedures for settling the child and non-reward of crying, calling out and getting out of bed. Programme introduction was followed by daily phone calls to parents in which appropriate parent behaviours were prompted and reinforced. Further face to face sessions were held after one week and then if needed. Parent reports show high rates of parent implementation of procedures and rapid change of child sleep behaviour with improvements being maintained at follow up. In a survey of 48 of the parents, positive changes in the daytime behaviour of children were reported as coinciding with improved sleep habits. Also there was an absence of negative side effects, and generally, parent satisfaction with the programme was high.

Night-waking is a common problem with young children. Surveys are consistent in showing that around a quarter of one to two year olds wake on most nights (Bernal, 1973; Jenkins et al., 1980; Moore and Ucko, 1957; Richman, 1981a; Werry and Carlielle, 1981). It is also the child behaviour problem that parents most commonly complain about (Fergusson et al., 1981; Jenkins et al., 1980; Richards and Bernal, 1974). As children grow older, most surveys (but not all, see Werry and Carlielle, 1981) show that the problem diminishes. At three years 14 per cent compared with 25 per cent wake at night (Jenkins et al., 1980; Richman et al., 1975).

While it must be a relief for parents to know the problem will eventually diminish or disappear, for many the problem will persist for long periods. This is worsened by the fact that there is a high probability of there being a sibling with the same problems (Richman, 1981a). Furthermore, night-waking has a high correlation with later behaviour problems (Richman, 1981a; Richman et al., 1975), suggesting the possibility of a causative relationship. Thus an understanding of the aetiology of night-waking, and the development of effective interventions is a priority for child health personnel.

Existing studies are unclear as to the causes of night-waking. A relationship has been found with perinatal adversity, restlessness and high activity at birth (Bernal, 1973; Blurton-Jones et al., 1978; Moore and Ucko, 1957; Richman, 1981a), and with rating of activity, wakefulness, and excessive crying at three months old (Bernal, 1973; Fergusson et al., 1981; Moore and Ucko, 1957; Snow et al., 1980). This has led to the notion that there are basic differences in temperament between wakers and non-wakers and

so to a postulate of physiological causation (e.g. Blurton-Jones et al., 1978; Thomas et al., 1968). Research has also focused on parental handling. Significant relationships have been found with both excessive or minimal nursing of the infant over and above feeding time (Moore and Ucko, 1957), incorrsistent responding to night waking (Bernal, 1973; Moore and Ucko, 1957) and marked responsiveness to daytime crying (Bernal, 1973; Blurton-Jones et al., 1978). However, it seems most likely that night waking is the product of an interaction between parental behaviour and inborn child temperament (Richman, 1981a, 1981b; Snow et al., 1980). A child with a difficult temperament may produce tentative and overly responsive parenting, which in turn maintains irritability and wakefulness in the child.

While the causes of night-waking may be unclear, even more unclear is its treatment. A high proportion of parents seek professional advice, with the most consulted professional group being family doctors (Fergusson et al., 1981; Ounsted and Hendrick, 1977; Werry and Carlielle, 1981.) A New Zealand survey found doctors usually prescribed sedatives and gave the advice that the child would soon outgrow the problem (Werry and Carlielle, 1981). What little research has been done shows sedatives to be of doubtful efficacy in dealing with young children's sleep (Rappoport et al., 1978; Richman, 1981b), and children may take years to "outgrow" the problem. Research on practical parent management of sleep (without drugs) is absent from the literature, although there are a few discussion articles in medical journals (e.g. Bax 1980; Richman, 1981b; Schmitt, 1981; Spock, 1957).

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At Leslie Centre, a child and family counselling programme in Auckland, the demand for assistance with problems of night waking led to the development of a management programme that could be implemented by parents in their home. In the absence of any clear guidelines to treatment from the literature, the programme was derived from (a) our observations of the behaviour of parents and children with nightwaking difficulties, and (b) our application of a behavioural analysis of these observations in order to discover how parent behaviours may be causing and maintaining the problems. Typically, what we found was:

a) Children had no regular, parent-organised bedtime routine. Children were difficult to manage approaching bedtime and had much of the control over when and how they went to bed. These observations agree with surveys that found nightwaking to relate to difficulty getting children to bed, and to settle (Jenkins *et al.*, 1980; Ragins and Schachter, 1971; Richman, 1981a; Roberts and Schoellkopf, 1951).

b) Parents either remained with their child until asleep (often feeding with breast or bottle), or they attended to their child repeatedly in response to calling out or crying. Other parents allowed the child to fall asleep in the living area, transferring the child to bed when asleep.

c) When the child awoke during the night, parents again either stayed with their child until asleep (often repeating feeding) or took them in to their bed. These observations agree with survey results (Bernal, 1973; Blurton-Jones *et al.*, 1978; Ragins and Schachter, 1971; Richman *et al.*, 1975; Werry and Carlielle, 1981).

A learning analysis of these parent and child behaviours suggests that child settling and waking problems are the result of the child's failure to learn the appropriate discriminative stimuli for sleep. Falling asleep is associated with parent's presence and/or feeding, rather than being associated with the temporal stimuli of a regular bed time and routine, and the appropriate setting stimuli of the child's bed, bedroom, cuddly toys and blankets. In addition, not settling and later waking is reinforced by parental attention and/or feeding. The lessening of these child behaviours would require removal of parent reinforcement of not settling and waking, with parent attention being given instead to appropriate night-time behaviours such as sleeping through.

This paper describes the intervention programme for night waking used at Leslie Centre, and its results with 208 cases seen during 1979-1981, the total of all cases seen during that period.

METHOD

Setting

Leslie Centre is a community-oriented, child and family service situated in Auckland, and takes clients from throughout the metropolitan area (population approximately 800,000). Staff have a variety of backgrounds and formal qualifications (psychology, social work, teaching, nursing, child care). Work with families is short term, problem-solving oriented and employs Behavioural and Family Therapy models of intervention.

Clients

A total of 208 children from families with night-waking problems were seen from when Leslie Centre opened in 1979, to the end of 1981. Clients were predominantly referred by community Well-Baby Nurses or were self referred.

Characteristics of the children are shown in Table 1. Consistent with surveys of night-waking, there was little difference in the sex of children, and the number of children fell away after two years (Bernal, 1973; Blurton-Jones *et al.*, 1978, Fergusson *et al.*, 1981; Moore and Ucko, 1957; Richman, 1981a; Werry and Carlielle, 1981). The majority of children were from two-parent families, consistent with population distribution.

Most of the children were referred for sleep problems only, although some of these were later seen for problems other than night-waking. In all, 34 per cent had treatment goals in addition to sleep.

TABLE 1 Characteristics of Children and their Families

SEX:	Female 46%	Male 54%			
AGE:	0-1 Yr 24%	1-2 Yr 31%	2-3 Yr 28%	3-4 Yr 10%	4-6 Yr 7%
BIRTH (ORDER:	Only chi 35%	ild Fi. st 26		her child 39%
FAMILY	COMPOSI	TION: Sir	ngle parer 13%		parents 37%

Measures

Before intervention, parents were asked to supply a record of night behaviour of their child, including time to bed, time to settle, and times awake during the night. This record was repeated during the course of intervention. If incomplete, it was used to form an estimate of nights awake per week. At follow-up parents were asked to recall the number of nights, during the last week that their child had awoken.

In addition to these results that were taken for all 208 children, a more detailed interview was conducted with 48 parents seen during 1980. This included all families who had received the programme in that year and who could be contacted. Interviews were conducted by phone, by one of the authors (M.D.). A list of standardized questions were asked.

Parents were seen either in small groups or individually. Groups were employed to improve efficiency in the face of increasing demand for service. They were seen individually when groups were not available at the time of referral or because of anticipated complications (e.g. if their child had multiple behaviour problems or medical complications).

To begin with, a phone call was made to each parent, requesting them to keep records for 4 to 7 days of (a) time their child was put to bed, (b) time to settle, (c) times awake during the night, and (d) period to re-settling. Then an appointment was made. In two-parent families both parents were asked to attend because of our experience that parents of nightwaking children are often in conflict over management of the problem. Our assumption when introducing the intervention is that this is the result of night-waking, not its cause.

The first session with a family seen individually typically took about one hour. Group sessions for three to five families typically took about one and a half hours. The steps followed in these sessions were as follows:

- 1. Parents were asked details about their child's night time behaviour referring, as appropriate, to their records. Attention was paid to night time routines, procedures to settle the child, and parent responses to night-waking. Current illnesses, physical disabilities, and whether the child was on any form of medication, were investigated. If there was any doubt in these areas, programme implementation was delayed until staff had consulted the family doctor or specialist involved.
- 2. Parents were asked about their expectations of their child's sleep. Any unrealistic expectations about bedtime or sleep duration were discussed. Information was given about the normal requirements for sleep in young children in order to shift these parents'expectations. Further information was given that included the notion that children who are chronic night-wakers are probably sleep deprived and that this will have certain physical affects such as excessive day-time irritability, poor concentration and over-active

behaviour. Thus parents were affirmed for regarding night-waking as a problem that deserved responsible parent intervention.

- 3. A general explanation for night-waking was given in terms of habit-learning. Some children have never learned to sleep through. For these children, parents were encouraged to see their child's ability to fall asleep using their own resources and sleeping through as normal developmental tasks their child had yet to acquire. As with learning to walk, talk, use the toilet and feed independently, some children needed more active parent intervention than others before these skills were attained. Reference was made to the research which showed basic differences in temperament between those children who wake at night and those who do not. Other children have previously slept through, but later reverted to night-waking. These parents were encouraged to see night-waking as a learned habit. Factors in the child's history (an illness, a move of house or bedroom) were offered as reasons the habit may have begun. Thus, in either case, parent culpability for the problem is diminished while an explanation based on habit-learning is maintained. It is difficult to produce change with parents who feet guilt and failure. To attain maximum engagement of parents in the programme, it was found to be of most help when they saw their contribution to the problem as being in maintaining night-waking, and not in causing it.
- 4. The ways that parents typically maintain night-waking were presented by referring to our previous clients rather than the present group. These were, (a) children control bedtime and there is little routine, (b) parents are usually present when the child falls asleep, (c) when children awoke, parents went in to their room and stayed with their child until they were again asleep, or they allowed the child into their bed. Some discussion of how these points may relate to the present clients' children would then follow.
- 5. A description of the successfulness of our programme was given so as to produce an expectation of success.
- 6. A programme was then described in a general way before attending to any individual variations required for particular families. The physical environment of the child's sleeping arrangements was checked. For at least the period of establishing appropriate sleep, parents were urged to have children in a room on their own (to avoid disturbing siblings) and definitely not in their parents"

bedroom. The proximity of neighbours was checked in case it was necessary for parents to talk to them before inplementing the programme. An agreed upon bedtime was then set. For older children especially, a bedtime set by the clock was recommended since this is impersonal and thus avoids unpleasant negotiation as the child is about to settle. A routine before bed was established, with attention to a regular bath time, feed time, then period of play or parent-child interaction immediately prior to the child going to bed. This attention-time took place in the living area, and not the bedroom. The parent was instructed that he/she was to take the child to bed and stay briefly, merely to establish that the child was comfortable, and then to say goodnight. Thus a clear distinction was drawn between the living area being for play, and the bedroom being for sleep. With older children a cuddly toy or special cuddly rug was usually recommended, since this may assist children to fall asleep more easily without parents' presence (Luce and Segal, 1969). It was emphasised that parents' behaviour around bedtime should be caring but firm, thus conveying to the child that anything other than quiet settling was not expected.

Then parents were instructed to ignore any crying. They were told their child could be expected to cry for a long time the first night, less the next night, and hardly at all at the third night. It was pointed out that by going in after a long period of crying, they risked training their child to cry louder and longer. If they heard from the cry that the child was in physical distress they should attend with the minimum attention needed.

For older children who come out of bed, parents were instructed to return the child immediately without talking to or cuddling the child, or getting angry with the child. If the child left the bed again, they were to be returned and the door closed and held closed for 10 minutes or until the child was quiet. It was then to be quietly opened, and left open. This procedure is similar to Time Out as used in the management of child daytime misbehaviour (Hobbs and Forehand, 1977). It was not recommended that the door be left shut all night. If the child fell asleep in the room other than in their bed, he/she was to be returned to bed later.

Waking during the night was then treated in the same manner. It was emphasised not to let the child into the parents' bed. If the child persisted in coming into the parents' room, parents were advised to shut their own bedroom door. This also

countered the problem where parents did not awaken when the child climbed into their bed.

For older children, parents were advised to explain and rehearse the programme before beginning. Explicit reinforcement for sleeping through was also included, such as coming into parents' bed in the morning (when parents are awake), something special for breakfast, phoning a grandparent, and most important, praise from parents.

Times for daytime sleeps were decided, and parents were instructed to manage these just as for night time sleep. Daytime sleeps were employed for all but a few children for, paradoxically, fatigue from no daytime sleep may lead to a longer night settling period and a shorter duration of night time sleep (Illingworth, 1964).

Written instructions were given out to complement the verbal description of the programme and parents were told the staff member would phone them the next day to check progress, help solve any unforeseen problems, and offer encouragement. These phone calls were usually made each day for three days, and more if needed.

A second interview was arranged for a week later, at which time any remaining problems were solved and parents were congratulated for improvements and success. At the end of another week they were phoned to check progress, and again two weeks later. Then a series of follow up calls were made, at one, three and six month intervals. While these had the primary purpose of collecting information for programme evaluation, they also served as an opportunity to give further advice and re-establish management programmes if needed.

RESULTS

208 Night Waking Programmes

The number of nights per week children were reported to have woken before, during and following implementation of the night-waking programme, is shown in Table 2. Of the 208 children, the parents of 11 children (5 per cent) did not implement the programme and a further four (2 per cent) moved or were unable to be contacted after being seen at the initial interview and having commenced the programme. Thus data are reported for 193 children whose parents did implement the programme, and who completed the treatment period of one month. Follow ups were attempted for all clients but, as could be expected, an increasing number were lost at each follow up period.

The results show improvement within the first week. Before intervention only one child slept

TABLE 2
Number of nights per week children were reported to have woken at nights before and following intervention, and at follow ups.

Nights Before	0	.	344 -1				Follow up							
		Week one		Week two	End of treatment		1 month		3 months		6 months			
				%		%		%		%		%		%
0	0	(0)	11	(6)	46	(24)	80	(41)	102	(55)	110	(60)	112	(65)
1	0	(O)	15	(8)	27	(14)	40	(21)	26	(14)	32	(17)	30	(17)
2	2	(1)	14	(7)	31	(16)	30	(16)	18	(10)	12	(7)	14	(8)
3	3	(2)	28	(15)	22	(11)	18	(9)	12	(6)	8	(4)	2	(1)
4	3	(2)	27	(14)	27	(14)	5	(3)	1	(1)	3	(2)	2	(1)
5	12	(6)	30	(16)	10	(5)	3	(2)	1	(1)	0	(O)	1	(1)
6	16	(8)	31	(16)	14	(7)	2	(1)	4	(2)	2	(1)	7	(1)
7	157	(81)	37	(19)	15	(8)	15	(8)	21	(11)	17	(9)	11	(6)
	N*	193	N=	193	N=	193	N=	193	N=	185	N=	184	N=	173

through on more than four nights, whereas 21 per cent slept through in the first week. Some children were reported as not waking from the first night of implementing the programme. The improvement in the number of children sleeping through continued in week two, and to the end of the treatment period. At week two 52 per cent slept through four or more nights, and at end of goal period 78 per cent did so. These figures were maintained at about that level in follow up. Nights slept through for the 193 cases before and at the end of the intervention was subjected to a Chi squared test (Siegel, 1956), and this showed change resulting from treatment was significant (p < 0.05).

Figure 1 presents the record of average nights woken for all children for whom treatment was implemented by parents, and for whom data was available at follow up. Average nights woken was 6.63 before intervention, 1.57 at end of treatment and 1.00 at six month follow up.

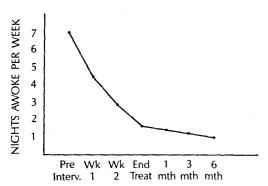


Figure 1: Average of nights children awoke per week prior to intervention, during intervention and at follow ups.

The data were also analysed using Chi squared test to find whether outcome was independent of client characteristics shown in Table 1. Sex, age and birth order of children and marital status of parents, were all shown to be independent of outcome.

Interviews of 48 Parents

The responses of the 48 parents to the standardized interview are shown in Table 3. These data confirm the observation made above that many children revert to night-waking at some stage. About half of this sample reverted within a six month period. Reverting appeared to be related to life-change events. Reasons given by parents included illness, teething, moving house, father leaving, and starting school. However, for two thirds of those who reverted, parents implemented the programme again, and children recommenced sleeping through.

Nearly three quarters of parents report positive changes to their child's daytime behaviour coinciding with learning to sleep through. For some, specific work had been done with daytime management in addition to sleep, but for the majority, work had been with sleep only. Commonly reported changes were that the child became "happier", "easier to handle", "less aggressive" "less grizzly", "more settled". Only one parent reported negative change ("more grizzly") but since she had reported positive change as well, this seemed of minor significance.

Finally, the interviews revealed a high level of parent satisfaction with the programme (81 per cent) and only one parent went on to consult another agency about the problem.

TABLE 3

Responses of parents to a standardized interview conducted during 1981 with 48 parents.

	Positive Response
"Did your child revert at any stage to old sleeping habits after the initial im-	
provements?"	52%
"If your child reverted, did you suc-	
cessfully put your child back on the	
sleep programme?"	68% (of those who reverted)
"Did you notice any positive changes	in
your child's daytime behaviour at the	
time you first got your child to sleep	
through the nights?"	73%
"Did you notice any negative changes" "Are you happy now with your child's	2%
sleep pattern?"	81%
"Have you contacted any other agence about your child's sleep problems since	
coming to Leslie?"	2%

DISCUSSION

Recent research has revealed the high incidence of night waking in young children yet very little attention has been given to the development of effective procedures for the management of this problem. Thus, this study is of particular significance. Results are reported for a very large sample. From a total of 208 children, results are given for 193 with whom the programme was implemented.

The programme met with a high level of parent implementation of procedures and rapid and sustained change in night-waking in the vast majority of cases. Furthermore, from a smaller sample of clients, parents reported that positive changes in daytime behaviour occurred when sleep behaviour improved, negative side effects were absent, and general satisfaction with the programme was high.

Probably the most controversial aspect of this management programme is leaving children to cry in order that they learn to fall asleep using their own resources. Those of certain theoretical persuasions. would see this as potentially harmful to the developing child, perhaps producing insecurity and mistrust in adults. For parents with this belief, taking the child into their own bed is a reasonable and practical solution, and is in keeping with the practice of many cultures outside the Western world (Bax, 1980). Others have based their objection on the fact that anxious parents or parents with close neighbours (Bax, 1980; Richards and Bernal, 1974), or perhaps all parents (Schmitt, 1981) will quite simply be incapable of ignoring their child. Yet in this study, 95 per cent of parents did implement the procedures. including the ignoring of crying. A further concern relates to the belief that much waking is from nightmares or night terrors. But these phenomena are relatively rare in young children (Coates and Thoresen, 1981; Werry and Carlielle, 1981), and in any case, usually discernable from the suddenness of the child's awakening and severity of crying and therefore may be attended to without harming progress toward sleeping through.

Parents will ignore crying if they believe it is not going to harm their child, if adequate assurance is given that the problem will improve if they persist, and if adequate ongoing support is provided through daily phonecalls and subsequent interviews. Merely advising parents to ignore their child and leaving them to their own resources is inadequate in many cases, and possibly harmful in that a parent already lacking in confidence may face yet another failure. Research is currently being conducted at Leslie Centre to evaluate the significance of various levels of staff support.

The rapid changes resulting from this management programme provide support to the argument that parental handling is an important factor in maintaining children's night-waking (Richman, 1981b). There is a need for prospective studies of infants to show how parental behaviour may contribute to the original development of night-waking. From this, effective preventative advice may be derived, thus saving thousands of families from the discomfort of this common problem. None of this denies that inborn temperamental differences in children may be a factor. It merely argues that such differences may be less important than some have thought (e.g. Blurton-Jones et al, 1978; Snow et al, 1980).

In the absence of effective prevention, night-waking will continue to be present in a large number of families. The programme described here provides an effective alternative to the "she/he will grow out of it advice" and to medication. It is economic for agencies since the average contact time (interview and phone) is less than three hours, and people can be seen in groups of up to five families a time. The programme is also a powerful metaphor for child management. Parents discover that behaviour problems are usually learned, not fixed, and may therefore be unlearned. They discover that their children's behaviour is somehow related to their interaction with them, such that by changing their behaviour they may change their child's behaviour. They discover that in the attainment of self control and competence, children at first need firm but caring parent-control. It is a respectful, optimistic and empowering message.

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