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A Study of Night Waking and  
Infant Crying

"What do I do to stop  
baby crying?"

A thesis presented in partial fulfilment of the  
requirements for the degree of Masterate in  
Education at Massey University

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1977

## ABSTRACT

This study investigates maternal responses to night waking and infant crying. It illustrates differences in the degree and the type of mothering that is practised with relation to

- (i) previous mothering experience
- (ii) prior and immediate circumstances surrounding the baby's cry, and
- (iii) educational level of the mother.

Two groups of mothers were interviewed: a primiparous group and a multiparous group. All mothers had babies between three and twelve weeks of age at the time of the interview. Mothers were from the Palmerston North area and surrounding environs, and were classified according to family socio-economic level, mother's education and number of other children. All mothers were given a similar interview to obtain information on

- (i) feeding style, i.e. breast or bottle
- (ii) amount of attention baby needs at night
- (iii) degree of grizzliness found in baby
- (iv) amount of help father gives
- (v) general health and temperament of baby
- (vi) ethnic group of mother and father
- (vii) what mother would do when baby wakes up and cries at night
- (viii) mother's attitude to spoiling the baby.

In order to assess what mother does when baby wakes at night, four Vignettes were prepared to hypothesis four feeding states. Each Vignette was

followed by questions on what mother would do when baby cried, and how soon she would do it. A chi-square test was applied to assess the significance of the difference between the scores of multiparous and primiparous mothers.

Observations from this survey show differences in waiting times with relation to the experience of the mother, and differences in response styles to cope with baby crying at night with relation to

- (i) mothering experience
- (ii) amount of time given to attending to basic physical or social needs
- (iii) amount of time repeatedly spent attending to basic physical needs,

and differences in feeding style with relation to the educational level of the mother.

Results of some earlier surveys are reinforced, and recommendations are made for future work on this topic.

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- (d) Vignette IV



## INTRODUCTION

The purpose of this study is primarily to investigate the methods used by mothers to stop their baby crying. The interest in this study comes from the changing attitude toward dealing with a crying baby with regard to 'spoiling' the child (Bell and Ainsworth 1967), the increased awareness of why the baby cries (Illingworth 1955, Wolff 1966, Korner 1969, Bernal 1972), the reinforcement of other social and nonsocial responses that are incompatible with crying (Parsely and Rabinowitz, 1975), and the differences in the mothering procedures of primiparous and multiparous mothers.

In 1969 Ainsworth and Bell investigated the proposition that attending to the child whenever it cried was to spoil it. The raw data used in their study consisted of narrative reports of observations and interview findings obtained on visits to the subjects' homes surveying patterns of interaction between the mother and infant in the feeding situation. The classification system used employed methods to emphasise the sensitivity of the mother to the baby's rhythms, signals, pacing and preferences. Mothers who could see things from the baby's point of view tended to adopt infant care practices which led to harmonious interaction, not only in feeding, but generally. Those babies whose behaviour both in social and feeding situations gave rise to consistently rewarding or interesting feedback tended

to cry less, to learn modes of communication other than hard expressive crying, and to gain more tolerance and more regular, predictive rhythms than babies whose behaviour made little or no difference in determining what happened to them. Ainsworth and Bell state, however, that it is reasonable to believe that it is easier for a mother to interact harmoniously with a predictable and understanding baby that reacts with pleasure rather than one that reacts with frustration and distress.

The feeding patterns which Bell and Ainsworth found most successful were those which explicitly or implicitly gratified the baby and regulated his rhythms while allowing him to take an active rather than a passive part in the feeding situation: regardless of whether demand on schedule, bottle or breast feeding was practised. The active participation was seen to facilitate the establishment of smooth and mutually gratifying mother-infant interaction. If the baby obtains favourable feedback to his signals, actions and communications, he builds up confidence in his ability to influence what happens to him. White (1963) refers to this reciprocity as the baby's experience in influencing his mother's behaviour through his own actions which it seems most likely will influence the nature of his attachment to her.

Previously, psychoanalytic writers have perceived the infant as passive in relation to his environment rather than in an active relation to it. Escalona and Sander (1962) viewed early learning as

passive and associative. Piaget sees development as an active process of assimilation and accomodation. Ainsworth (1963) cited in Child Development 40. 1969, was convinced by direct observation, that infants were very much more active and much less passively recipient than theoretical accounts portrayed them to be.

The case for crying as a communicative activity is not resolved, yet crying appears to be the primary means of early communication. It is the key note in early mother-child interaction. If baby cries, he needs his mother, and in reverse, if he does not cry, mother does not need to attend. When baby cries before mother feeds, he is participating actively in the feeding dyad. He is not a passive recipient. As a result of his crying the baby comes to see his mother's face and presence as a signal of gratification and in this way acquires a drive to be close to her and seek her attention. As his signals become longer and more expressive they are intended to evoke a response from the mother, or other attachment figure and in this light attending to the baby's cry is not spoiling the child but primarily communicating with him.

Bell and Ainsworth's (1969) studies reinforced this view. They found that infants tended to cry less frequently, to have shorter bursts of crying and to exhibit a greater variety of alternative modes of communication more frequently, with mothers who responded to their crying over the first year of life promptly. Means of communication, such as smiling,

which are incompatible with crying, were increased as crying decreased. This was confirmed by Brackbill (1958) and Etzel and Gewirtz (1967). Bell and Ainsworth found a strong relationship between infant crying and ignoring of the cries by the mothers. The more unresponsive the mother in one quarter year, the greater the increase in crying in the next quarter year. The unresponsive mother is likely to acquire a crying baby who is likely to be undeveloped in means of communication other than crying. Bell and Ainsworth established that crying could not be extinguished by ignoring since the baby must be fed, clothed etc., which would tend to reinforce the crying. What is important therefore in the crying/soothing relationship is not extinguishing the cry, but the schedule and type of intermittent reinforcement that is used.

While some mothers may ignore much crying, no mother can ignore all crying. Brackbill (1958) found that picking up, smiling and playing with the infant reinforced smiling, as a means of communication. A low proportion of reinforcement led to the maintenance of a response at a high rate that was difficult to extinguish. It is highly probable, therefore, that infants who have a high level of crying have received a low rate of intermittent reinforcement of their cries.

Although smiling and bodily gestures alongside facial expression may be an effective means of communication, close proximity is essential for their

effectiveness. Crying is not a proximal but a distal communication cue (Murray, 1975). What is becoming recognised today through the work of researchers such as those mentioned above, is that prompt response to crying makes a wide and beneficial mark on the child's early cognitive and social development, and does not constitute a cry reinforcement. Murray (1975) states that maternal responsiveness to the cry was associated with secure rather than ambivalent attachment patterns, and with greater compliance to maternal demands. Bell and Ainsworth showed that babies whose expressive crying signals had been heeded learnt that their actions did have consequences and were less likely to become 'spoiled' children, than those whose mothers ignored their cries. The mother who is responsive to distress signals is responsive to other signals as well, and is likely to spend more time socially with the baby. Whereas crying was thought to be a dependent behaviour necessary only for basic needs and not for socialisation, now it is seen to be an individualistic behaviour for social or physical need gratification. Murray (1975) refers to crying as an 'ethological' behaviour, a behaviour building character.

Wolff (1965) says that multiparous mothers and primiparous mothers respond differently to the baby's cries. Primiparous mothers will respond immediately to a cry, whereas multiparous mothers may or may not come when they hear a cry. What multiparous mothers will do on hearing a cry depends, according to Wolff, on their general style. Most experienced mothers are

guided by what has happened in the preceeding three or four hours, whereas most primiparous mothers will feed before attempting other soothing measures. Bernal (1972) produces contradictory evidence on this issue. Her findings indicate that primiparous mothers respond slower than multiparous mothers in the first ten days, and that multiparous mothers respond more by feeding than primiparous mothers. Once again, however, the fact that response is related to general strategy of the mother is emphasised, and the sequence of events in the previous three or four hours is seen as being vitally important. The only reference Wolff makes to the 'spoiling syndrome' is in relation to what he calls a 'faking cry'. The characteristic of this cry is that the baby is not distressed, but wants attention. This cry is often ignored by mothers until its intensity increases whereby a comforting gesture is employed. Illingworth (1955) refers to a cry of this type as a social or boredom cry in that moving the position of the baby, or putting the baby in a position where the mother may be observed arrests the crying. Undressing, bathing, losing a toy, being put down too soon all cause crying but seldom distress such as colic, other physical pain or hunger might cause. Bernal draws attention to the type of cry emitted also in that both the cry type and the previous relevant events are used by the mother in determining what type of response to make. Previous events are seen as being more important than cry type. Only a small

group of mothers in Bernal's sample considered the type of cry to be a determinant of their response, whereas all considered time since last feed as being an important determinant both of how to respond and how quickly to respond.

Burns, Sander, Stechler and Julia (1972) speak of the general style of the mother also, but in a slightly different way. They found that the mother needed to feel she 'knew' the baby before she knew what he needed or how to satisfy him. Burns and Sander see synchronization between intrinsic infant rhythms and the caretaking schedule as of primary importance to the establishment of a satisfactory mother-infant interaction. Crying at night is seen to be disruptive and stressful to the satisfactory development of synchronization. If the mother adapts to the baby, disorganisation both to the mother and to the household may result. This lends to the assumption that there will be a differentiation of response type and immediacy of response to crying at night from during the day. Once again differences are seen between multiparous and primiparous mothers. Multiparous mothers report less distress occurring during feeding than primiparous mothers.

Burns and Sander's (1972) synchronization concept parallels Ainsworth and Bell's (1969) mother-infant interaction syndrome and Thoman's (1974) mutuality of influence. Thoman sees the mother-infant adaptation as a dyadic feedback relationship, and lends further support to the concept of the infant having an

active rather than a passive participation in his environment. Korner and Thoman (1970) illustrate the functional notion of feedback by the example of the mother picking the baby up when he cries and the baby stopping crying and engaging in scanning of the environment. Thoman also recognises differences in maternal response with regard to primiparous and multiparous mothers. Her studies found that primiparous mothers fed more often than multiparous mothers. Research on crying relevant to this study also focuses on why babies cry, and what soothes them as distinct from how and why the mother responds. Wolff (1965), Bench (1969), Birns, Blank, Wagner and Escalona (1965) Ashton (1971) and Zelago (1975) have been important contributors here.

Wolff (1965), Eisenson (1963) and others assign the primary cause of crying to hunger, and the general acceptance by mothers of feeding as a primary pacifier bears out this assumption. Wolff states that food was the only successful pacifier for a hungry baby. Sham feeds and pacifiers to suck on did not arrest crying or induce sleep. Food introduced after sham feeds induced sleep and stopped crying within five to ten minutes after the feeding was commenced. This 'bluffing' technique had a different outcome in relation to changing nappies however, in that babies who were given a sham change, i.e. wet nappies put back on, stopped crying as did the babies who had dry nappies put back on. The babies with dry, warm nappies slept more peacefully,



and longer than those babies who were cold and damp. Coldness may therefore raise arousal level and cause irritability which in a warmer temperature would not be disturbing.

Physical pain also causes crying and Wolff puts colic under the heading of physical pain. Gastrointestinal discomfort has been found to differ from other cry types in that the pitch is higher, it is non-rhythmical and it is interspersed with shrill shrieks that have no constant configuration. Illingworth (1955) found the colic cry to be particularly distressing to mothers. He describes it as pain caused by localised collections of wind in the intestine. In 1975, Illingworth prescribed dicychomine hydrochloride as a specific treatment for the condition in that if relief did not occur then the diagnosis of colic had been incorrect. Paradise (1965), Begg (1975) and Liley (1966) all support the findings of colic being generally confined to one to three month old babies and generally occurring in the evening. Periods on the tummy, baby aspirin and holding prone over the shoulder are suggested by Paradise, Begg and Liley, as possible ways of alleviating distress.

Birns, Blank, Wagner and Escalona (1965) support the popular belief that lullabies soothe babies by the investigations they have conducted on various sounds and the effect of these sounds on the baby's arousal state. Birns, Blank Wagner and Escalona, found that a low frequency sound was a more effective inhibitor of behaviour than a high frequency sound. Music, the

hum of motors and the human voice were all found to soothe irritable babies. Wolff found that harsh sounds, such as those produced by a rattle, temporarily arrest a cry more often than pleasing sounds such as a bell, but that the effect is usually only transitory in that crying may stop for a minute and then continue. Wolff lists four major ways of intervening to stop crying - contact/comfort, such as the soothing mentioned above, feeding and pacifier sucking, and passing gas are the others. Of pacifier sucking he believes that this quiets the baby not so much because it directly answers the baby's instinctual or instinctive needs, but because it inhibits diffuse motility and interrupts the self-arousing cycle of crying and thrashing and promotes the necessary preconditions for sleep.

Murray (1975) quotes Clarke-Stewart (1973) who state that the mother who is responsive to distress signals is responsive also to other signals, and is likely to spend a great deal of time playfully stimulating her baby. This statement can be interpreted in the opposite light also in that sub-optimal mothering could occur when a mother is unresponsive to the baby's cry. Personality characteristics, attitudes toward child rearing and behaviour patterns that have been found to be associated with sub-optimal mothering have also been used to describe the child batterer who typically attacks the infant during a bout of excessive crying. This type of attitude toward crying could well be indicative of a mother who believes that attending to the baby's cry is spoiling

the baby. In this situation a total disregard would be shown for the infant's own needs and abilities, and the infant would be thought to exist primarily to satisfy parental needs. Murray states that today, the cry of a baby is a legitimate action signalling a need for contact with the mother. It is no longer seen as necessary for basic needs and not for socialisation. Ostwald (1972) emphasises the fact that crying may have unprecedented results. The cry of an infant stimulates intense emotions and evokes powerful reactions from almost everyone within earshot - not the least of whom may be the mother who cannot interpret or will not differentiate between this cry and any other.

The following survey will examine the responses of multiparous and primiparous mothers to night waking and infant crying, with reference to the research cited in the introduction. An attempt will be made to confirm or refute the observations of overseas researchers, in the light of findings from the New Zealand environment.