DEVELOPMENT OF INFANT SELF-SOOTHING AT BEDTIME AND OVERNIGHT: A RANDOMIZED CONTROLLED STUDY OF TWO SLEEP INTERVENTION METHODS

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INTRODUCTION

Behavioral sleep interventions aim to promote the development of infant nocturnal self-soothing capacities, by reducinge parental involvement at bedtime and during the night . These interventions are effective in treating early childhood sleep difficulties (Mindell et al., 2006). However, many parents find it challenging to implement them due to the concern that it may cause infant distress (Sadeh, Tikotzky, & Scher, 2010). As a result, more gradual approaches that focus on changing only parent bedtime involvement have gained attention in recent years.

The current study examined whether infants with insomnia develop self-soothing abilities during bedtime and nighttime following a sleep intervention. In addition, the study explores whether the extent of self-soothing development differs between two intervention groups: one focusing only on bedtime (“Bedtime checking group”) and the other addressing both bedtime and night-wakings (“Standard checking group”). We hypothesized that infants in both groups will show improvement in bedtime self-soothing, but that nighttime self-soothing will increase to a greater extent in the Standard checking group.

METHOD

The study was approved by the Helsinki Ethics Committee of Soroka Medical Center and parents signed informed consent before baseline assessment. The sample included 71 families with infants aged 9–18 months (M = 13.25 , SD = 2.91); 32 were girls. Inclusion criteria were early childhood insomnia (DSM-5).

Following a baseline assessment, families were randomly assigned to either the bedtime checking group (intervention applied only at bedtime) or the standard checking group (intervention applied also during night-wakings). A follow-up assessment was conducted two weeks later.

Sleep was assessed using the Brief Infant Sleep Questionnaire (BISQ) (Sadeh, 2004), completed by parents before and two weeks post intervention. For the purpose of this study, we used the items that asked parents to indicate how their infant falls asleep at bedtime and after night-wakings. The options were: (1) no involvement/self-soothing; (2) parental passive presence; (3) parental active involvement outside the infant's crib (e.g., holding, feeding). Intervention guidelines: parents were instructed to place the infant in the crib while awake and minimize their involvement. If the infant cried, parents briefly checked and comforted the infant every few minutes, without taking him/her out of the crib. Parents then left the room until the next visit.

RESULTS

Infant self-soothing increased significantly from baseline to follow-up across both groups ($p < .001$), (see Figure 1).

No significant differences were found between the groups in infant self-soothing at bedtime ($p = .971$, see Figure 2). Infant self-soothing during nighttime awakenings increased more in the Standard checking group, as shown by a significant group × time interaction ($p = .020$; see Figure 3).

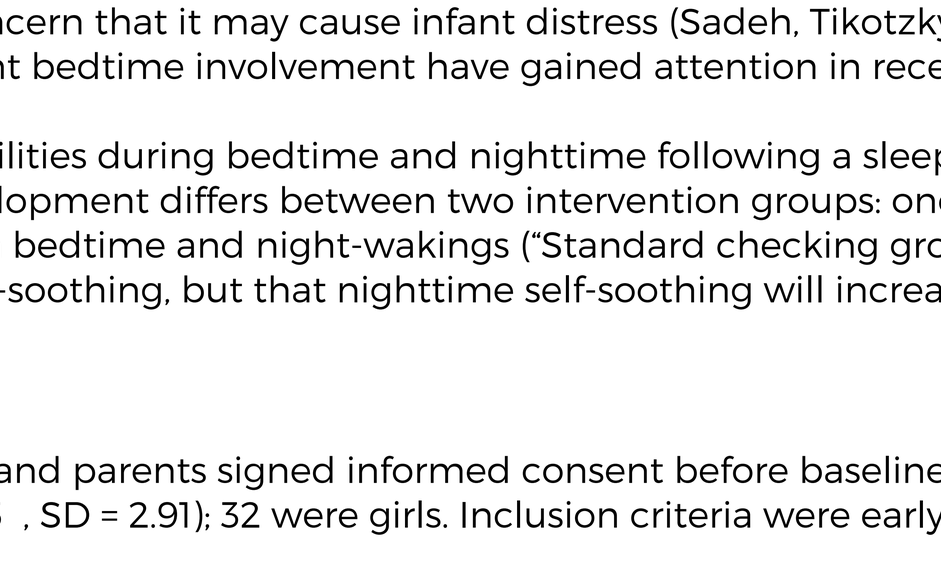

Figure 1. Change in settling method (%) by group from baseline to follow-up

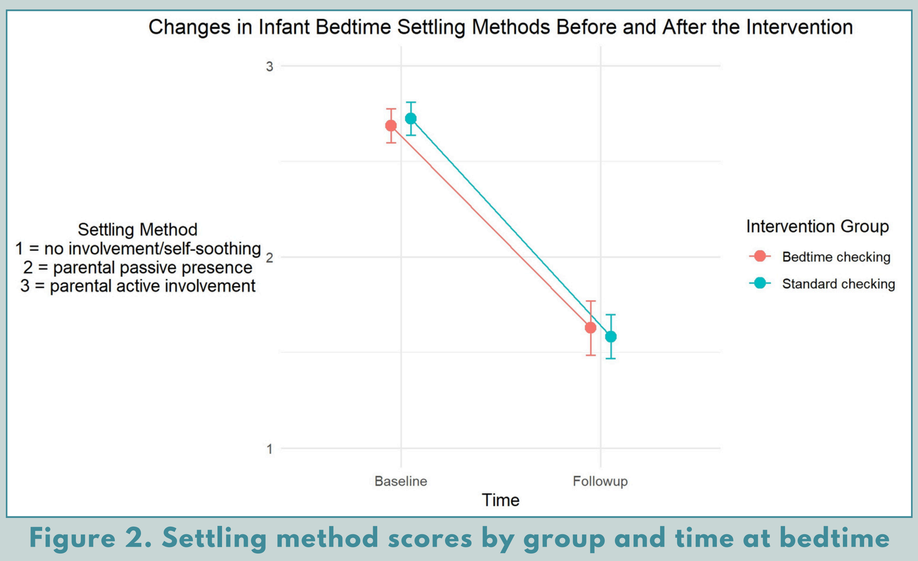

Figure 2. Settling method scores by group and time at bedtime

$F(1, 69) = 0.001$, $p = .971$, $ges = .00001$ (group);
$F(1, 69) = 117.66$, $p < .001$***, $ges = .418$ (time);
$F(1, 69) = 0.16$, $p = .688$, $ges = .001$ (group × time).

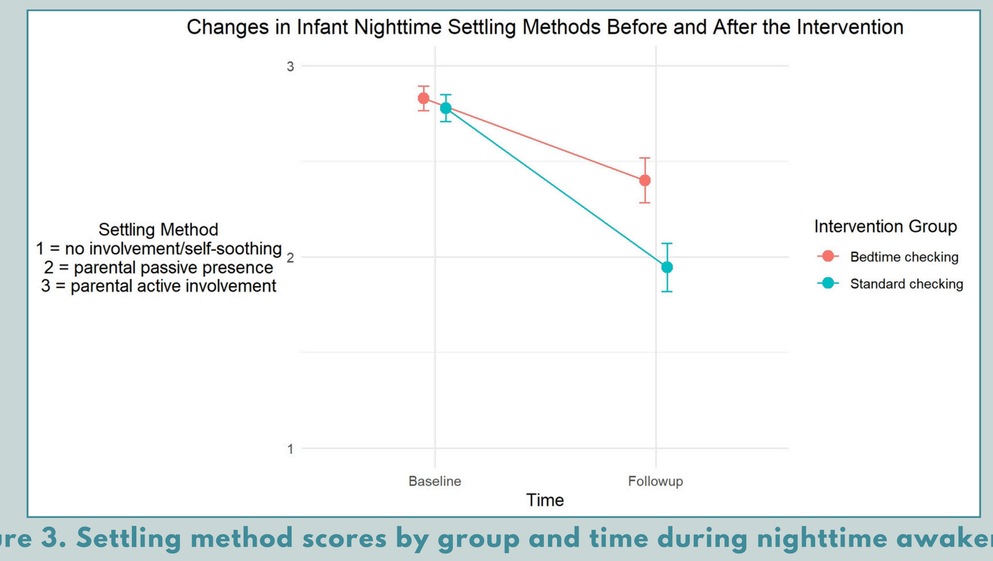

Figure 3. Settling method scores by group and time during nighttime awakenings

$F(1, 69) = 5.29$, $p = .025$*, $ges = .046$ (group);
$F(1, 69) = 54.82$, $p < .001$***, $ges = .229$ (time);
$F(1, 69) = 5.64$, $p = .020$*, $ges = .030$ (group × time).

DISCUSSION

In line with the hypotheses, findings suggest that both interventions led to increased infant self-soothing capacities at bedtime, but the Standard checking group showed a greater improvement in infant self-soothing during the night. This may suggest that although the bedtime intervention leads to increased self-soothing at bedtime, this ability does not necessarily generalize to night-wakings.

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