

THE EVALUATION OF A MULTI-LEVEL ORAL HEALTH INTERVENTION TO IMPROVE ORAL HEALTH PRACTICES AMONG CAREGIVERS OF PRESCHOOL CHILDREN

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Abstract. This study reports the effects of a pilot multi-level oral health intervention on caregivers' oral health practices and their determinants. Quasi-experimental, pretest-posttest evaluations using a comparison group design were employed to evaluate the effectiveness of a proposed intervention for promoting caregiver oral health behavior. The intervention consisted of three components: home visits by lay health workers (LHWs), enhancing oral health education and services at health centers, and community mobilization. These components were designed to target factors at intrapersonal, interpersonal, organizational and community levels based on a Social Ecological Model (SEM). Four oral health behaviors associated with early childhood caries (infant bottle feeding, tooth brushing, snack consumption and fluoride use), and multi-level determinants were assessed during pre- and post-tests. The one-year intervention demonstrated a positive effect on tooth brushing, using toothpaste, and fluoride supplements, but did not have a significant effect on bottle feeding and snack consumption among children. The intervention also had no effect on dental caries; in fact caries increased in both control and experimental groups. The caregiver knowledge, attitudes, outcome expectations, and self-efficacy towards these behaviors were significantly increased in the experimental group after intervention. Caregivers in the experimental group received greater social support by LHWs and health center staff than those in the control group ($p < 0.001$). The program had an impact on integrating oral health services at health centers and community participation in children's oral health. These findings confirm multi-level factors influence reported oral health behavior, but not outcomes in terms of caries. Process evaluation is needed to determine actual implementation levels, barriers and suggests for modification of the program in the future to improve outcomes in terms of caries.

Keywords: social ecological model, oral health promotion, early childhood caries, caregivers, preschool children

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