

ASSOCIATION BETWEEN URINARY OXYTOCIN LEVEL AND MATERNAL PARENTING BEHAVIORS

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Background and aims: Oxytocin level is known to be associated with social behaviors, including parenting. Previous research has reported the association between oxytocin level and parenting of infants; however, the association between oxytocin level and parenting of toddlers has been poorly investigated. This study aimed to investigate the association between oxytocin level and maternal parenting of toddlers.

Method: The study included healthy volunteer pairs (N = 20) of mothers and children aged between 20 and 48 months. Spot urine samples of mothers were collected between 11:00 AM and 2:00 PM and stored frozen at -40°C . Urinary oxytocin concentrations were measured using a radioimmunoassay by adjusting the creatinine level. Parenting behaviors were measured by self-administered questionnaires using the Parenting Scale (laxness, overreactivity, verbosity, and total score).

Results: Urinary oxytocin level was significantly inversely associated with laxness ($r = -0.48$, $p = 0.045$). On the other hand, urinary oxytocin level had a tendency to be positively associated with verbosity ($r = 0.40$, $p = 0.096$). However, overreactivity and total score of the Parenting Scale showed no association with urinary oxytocin level ($p > 0.5$).

Conclusion: In Japan, oxytocin level might be associated with specific maternal parenting behaviors such as less laxness or verbosity. Further research employing concrete measurement of oxytocin level, such as blood oxytocin level, is needed to confirm the findings of this study.