

Heavy Metals in Angelicae Sinesis (Danggui) Consumed by Postpartum Mothers and Its Health Risk

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ABSTRACT

INTRODUCTION: Consumption of Chinese Herbal Medicine (CHMs) have escalated globally. They are preferred treatment for minor diseases or disorders. In Malaysia, CHMs are common home remedies during pregnancy and postpartum. *Angelicae Sinesis* (Danggui) is a staple CHMs during postpartum for purpose of nourishing blood and resolving stasis. Concerns are raised over possible heavy metals toxicity. Thus, this study aims to determine danggui consumption among postpartum mothers and its heavy metals concentrations, namely Lead (Pb), Cadmium (Cd), Arsenic (As) and Chromium (Cr). **METHODS:** This is a cross sectional questionnaire study involving 147 postpartum mothers. Samples were collected from nine districts in Kuala Lumpur (Segambut, Seputeh, Cheras, Kepong, Bandar Tun Razak, Titiwangsa, Setiawangsa, Batu and Lembah Pantai). Then, they were extracted using microwave digester and analysed using Inductively Coupled Plasma Mass Spectrometry (ICP-MS) in triplicates; totalling 27 samples. Non-carcinogenic health risks for herbal medicine consumption were calculated using Hazard Quotient (HQ). **RESULTS:** Danggui was consumed by 10.1% of mothers (n=15). Among them, incidence of jaundice was 73.3% and need for phototherapy was 46.7%. Heavy metals contaminations were found in the decreasing order of Cr>As>Pb>Cd with median(interquartile) of 3996.3 (2805.6) µg/kg, 128.3(56.7), 98.6(99.1) and 37.0(35.0) respectively. Only As had significant non-carcinogenic health risks in worst case scenario with HQ>1 eliciting possible adverse health effect. As is a confirmed human carcinogen and can induce skin, lung and bladder cancer. **CONCLUSION:** Alarming concentrations of heavy metals were quantified in danggui warranting for further investigation to safeguard health of postpartum mothers.

KEYWORDS: Angelicae Sinesis (Danggui), postpartum mothers, heavy metals exposure, non-carcinogenic health risk

High Screen Time Among Under-5 Children: Associated Factors

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ABSTRACT

INTRODUCTION: High screen time is a health risk behaviour that develops during the early years, and once established tends to remain stable in to middle childhood causing physical, psycho-social and development problems. National data shows that 52.2 % of Malaysian children under-5 had exceeded screen time recommendations. However, little is known about the factors influencing screen time in this age group. This study aims at describing the factors associated with high screen time among under-5 children. **METHODS:** A cross sectional study using self-administered questionnaires was conducted among 489 parent-child dyad attending child health clinics in Petaling, Selangor in May 2019. **RESULTS:** Prevalence of high screen time among under 5 children was 91.4% with a median of 3.00±3.68hours. Malay children had significantly higher odds of high screen time compared with other ethnicities. Parental screen time of >2hours a day (aOR: 2.42; 95%CI: 1.24, 4.73), Parents aged above 30 (aOR: 3.12; 95%CI: 1.58, 6.16), Parents lower self-efficacy to influence child's physical activity (aOR:2.29; 95%CI: 1.01, 5.20) and parental perception on influence of screen time on child's cognitive well-being (aOR: 1.152; 95%CI: 1.01, 1.32) were all positive predictors of their child's screen time. **DISCUSSION:** A significant proportion of high screen time among children under 5 was explained by parental factors. Interventions that aim to foster healthy screen time habits may be most effective when targeting parents.

KEYWORDS: High screen time, under-5, associated factors