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## Relationship between unexplained subfertility and sedentary lifestyle behavior among women in the urban city of Colombo

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Infertility is defined as the absence of conception after 12 months of regular, unprotected intercourse. Unexplained infertility is infertility which is idiopathic. The objective of this study was to identify the relationship between unexplained infertility and sedentary lifestyle behaviour, body mass index, body fat and sedentary occupation among young female population in urban city of Colombo. A case-control study was conducted among 250 women (125-infertile/case group/125-fertile/control group) in the age group of 18–32 years, who were clinically diagnosed with infertility, while pregnant mothers in their first trimester at gynaecology wards at three government hospitals in Colombo district were taken as the control group. A convenient sampling method was used. Details and medical history of the women were collected in an interviewer-administered questionnaire. To evaluate the activity level (sedentary lifestyle behavior), the short form of the International Physical Activity Questionnaire (IPAQ) was used. BMI was calculated according to the standard equation and SFT was measured by using skin fold caliper. Data were statistically analyzed using SPSS software version 23.0 using Pearson Chi-Square test. A significant positive association ( $P < 0.05$ ) was found between obesity and female infertility. There was a significant association of high fat content levels and female infertility. A significant positive association ( $P < 0.01$ ) was found between low IPAQ scores (sedentary lifestyle behavior) and female infertility. Women aged  $\geq 28$  years and sedentary occupations were found to be associated with infertility ( $P < 0.01$ ). Finally, it is concluded that there is a significant association between unexplained infertility and sedentary lifestyle, obesity, increased skin fold thickness and age 28 years or more among women in the urban city of Colombo.

**Keywords:** Unexplained infertility, International Physical Activity Questionnaire, BMI (Body Mass Index), SFT (Skin Folder Thickness), occupation

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