

## Developing an effective forest therapy program to manage academic stress in conservative societies: a multi-disciplinary approach

### ABSTRACT

We conducted a multi-disciplinary research to develop a forest therapy program that could manage academic stress in students. The first part of the study comprised of a survey to develop a forest therapy program based on the expectations of students, and involved 412 students aged 19–24 years ( $21.73 \pm 2.33$  years). The second part was a field study to determine the sustained effects the forest therapy program had on the blood pressure of students, involving twenty-nine students aged 21–23 years ( $21.83 \pm 0.711$ ). The survey determined that students were suffering from academic stress but their fear of societal stigma prevented them from seeking assistance. The majority (57.26%) expressed interest in forest therapy, and wanted a half-day forest therapy program during the weekend. Systolic (SBP) and diastolic (DBP) blood pressure were used as measurement indices for the field study, and was conducted before breakfast, lunch and dinner. Readings were taken 3 days before (baseline values), during, 3, 5 and 7 days after the forest therapy program. The blood pressure reading 3 days prior to the program served as a representation of the participants' every blood pressure levels. When compared to the everyday blood pressure levels (124/81 mmHg), both the SBP and DBP significantly decreased during the forest therapy (117/77 mmHg), and the decrement maintained 3 days (114/77 mmHg) and 5 days after (118/79 mmHg). There was no significant decrease in blood pressure between the everyday levels and 7 days after. In conclusion, a half-day forest therapy program is able to decrease students' SBP and DBP, and the decrements were maintained for 5 days. The exit survey reaffirmed the blood pressure results, whereby the participants believed that forest therapy had reduced their stress.

**Keyword:** Academic stress; Blood pressure; Conservative societies; Forest therapy; Resource-based tourism