

PENGARUH PEMBERIAN SOYGHURT BUNGA TELANG (*Clitoria ternatea* L.) TERHADAP KADAR KOLESTEROL TOTAL DAN TRIGLISERIDA TIKUS WISTAR (*Rattus norvegicus*) DISLIPIDEMIA

INTISARI

Melin Dwiyanua Shinta¹, Fatma Zuhrotun Nisa'², Setyo Utami Wisnusanti²

Latar Belakang : Penyakit kardiovaskuler merupakan penyebab utama kematian di seluruh dunia yang dapat disebabkan oleh dislipidemia. Hiperkolesterolemia dan hipertrigliseridemia merupakan faktor utama dislipidemia. Dislipidemia dapat dicegah dengan mengonsumsi makanan hipolipidemik yang mengandung isoflavon seperti kedelai dan antosianin seperti bunga telang. Fermentasi kedelai menjadi *soyghurt* dapat menurunkan kadar kolesterol total dan trigliserida. Penambahan sari bunga telang dalam *soyghurt* diharapkan dapat berpengaruh terhadap penurunan kolesterol total dan trigliserida.

Tujuan : Mengetahui pengaruh pemberian *soyghurt* bunga telang terhadap kadar kolesterol total dan trigliserida tikus wistar dislipidemia. .

Metode : Jenis penelitian ini adalah *quasi experimental* dengan desain *pre-post test*. Tikus wistar sebanyak 24 ekor dibagi menjadi 4 kelompok intervensi, yaitu kelompok diet *soyghurt* (P0), *soyghurt* 4% bunga telang (P1), *soyghurt* 6% bunga telang (P2), dan *soyghurt* 8% bunga telang (P3). Tikus diadaptasi selama 7 hari kemudian diinduksi pakan hiperkolesterol selama 2 minggu. Intervensi dilakukan selama 28 hari dengan dosis 3,6 ml/gBB. Uji kadar kolesterol total dan trigliserida dilakukan sebelum dan setelah intervensi.

Hasil : Pemberian *soyghurt* 4% bunga telang menurunkan secara signifikan ($p<0,05$) kadar kolesterol total (-50,79 mg/dL) dan trigliserida (-23,19 mg/dL). Pemberian *soyghurt* 6% bunga telang menurunkan secara signifikan ($p<0,05$) kadar kolesterol total (-70,62 mg/dL) dan trigliserida (-33,57 mg/dL). Penurunan kadar kolesterol total (-86,97 mg/dL) dan trigliserida (-41,81 mg/dL) paling banyak terdapat pada kelompok yang diberi *soyghurt* bunga telang 8%.

Kesimpulan : Pemberian *soyghurt* bunga telang dapat menurunkan kadar kolesterol total dan trigliserida secara signifikan.

Kata kunci : dislipidemia, kolesterol total, trigliserida, bunga telang, *soyghurt*, isoflavon, antosianin

¹ Mahasiswa Gizi Kesehatan Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan Universitas Gadjah Mada, Yogyakarta

² Program Studi Gizi Kesehatan Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan Universitas Gadjah Mada, Yogyakarta

THE EFFECT OF BUTTERFLY PEA (*Clitoria ternatea* L.) SOYGHURT ON TOTAL CHOLESTEROL AND TRIGLYCERIDE LEVELS OF WISTAR RATS (*Rattus norvegicus*) DYSLIPIDEMIA

ABSTRACT

Melin Dwiyanua Shinta¹, Fatma Zuhrotun Nisa², Setyo Utami Wisnusanti²

Background: Cardiovascular disease is the main cause of death worldwide that can be caused by dyslipidemia. Hypercholesterolemia and hypertriglyceridemia are the main factors of dyslipidemia. Dyslipidemia can be prevented by consuming hypolipidemic foods that contain isoflavones such as soybean and anthocyanins such as butterfly pea flower. Fermentation process of soybean into soyghurt can reduce total cholesterol and triglyceride. The addition of butterfly pea extract in soyghurt is expected to reduce total cholesterol and triglyceride.

Objective: To observe the effect of butterfly pea soyghurt on total cholesterol and triglyceride levels in dyslipidemic wistar rats.

Method: This research was a quasi-experimental study with pre-post test design. Twenty-four wistar rats divided into 4 intervention groups: soyghurt (P0), soyghurt with 4% butterfly pea (P1), soyghurt with 6% butterfly pea (P2), and soyghurt with 8% butterfly pea (P3). Rats adapted for 7 days and then induced by hypercholesterolemia diet for 2 weeks. Intervention was given at dose 3,6 ml/200gBW for 28 days. Total cholesterol and triglyceride levels were analyzed before and after intervention.

Results: Soyghurt with 4% butterfly pea significantly reduced ($p < 0.05$) total cholesterol (-50.79 mg/dL) and triglyceride (-23.19 mg/dL). Soyghurt with 6% butterfly pea significantly reduced ($p < 0.05$) total cholesterol (-70.62 mg/dL) and triglycerides (-33.57 mg/dL). The highest reduction in total cholesterol (-86.97 mg/dL) and triglycerides (-41.81 mg/dL) were found in the P3 group that were fed soyghurt with 8% butterfly pea.

Conclusion: Butterfly pea soyghurt significantly reduced total cholesterol and triglyceride levels.

Keywords: dyslipidemia, total cholesterol, triglycerides, butterfly pea, soyghurt, isoflavones, anthocyanins

¹ Student of Health and Nutrition Faculty of Medicine, Public Health, and Nursing, Gadjah Mada University, Yogyakarta

² Lecturer of Health and Nutrition Faculty of Medicine, Public Health, and Nursing, Gadjah Mada University, Yogyakarta