

Research Paper :

Impact of safflower petal decoction supplementation on anthropometric measurements of selected subjects

T.N. KHAN, V.M. NALWADE AND J.P. NERLEKAR

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ABSTRACT

Safflower (*Carthamus tinctorius* L.) florets contain two pigments Carthamin which is red and insoluble in water, and safflower yellow Carthamidin, which is soluble in water. Safflower pigments are safe for food and has curative effects on diseases. India is the largest producer of safflower (2.0 lakh tones). But it is cultivated as an oil seed crop and the valuable safflower petals are being wasted. Safflower petals decoction was prepared with 1.5 and 2.0 per cent concentration. A total number of 54 subjects, consisting of 18 hypertensive, 18 diabetic and 18 multiple health problems, were selected. Further these 18 subjects were divided into 3 groups and administered the different concentration of safflower petals decoction for 60 days. The anthropometric measurements were recorded at 0, 30 and 60 days. Administration of decoction of higher concentration for longer time had significant impact on reducing anthropometric measurements like body weight, body mass index, mid arm circumference and triceps skin fold.

See end of the article for authors' affiliations

Correspondence to:

T.N. KHAN

Department of Foods and Nutrition, College of Home Science, Marathwada Agricultural University, PARBHANI (M.S.) INDIA

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Safflower (*Carthamus tinctorius* L.) is one of the world's oldest crop. Flower colour varies from whitish yellow to red orange, the most common being deep yellow. Safflower florets contain two pigments Carthamin which is red and insoluble in water, and safflower yellow Carthamidin, which is soluble in water. The yellow (20%) and red (2%) pigments extracted from safflower are widely used as stain, additive in food, beverages, cosmetics, printing and dyeing (Wang and Fan, 1989). Safflower pigments are safe for food and has curative effects on diseases such as lack of oxygen, coronary heart diseases, myocardial infarction, cerebral thrombosis, renal thrombosis etc. (Shouchun *et al.*, 1993). Some of medicinal uses of flower are the extract of florets, which contain pigments that are used in treatments of many illnesses such as menstrual problem, cardiovascular diseases, pain and swelling associated with trauma.

On the other hand India is the largest producer of safflower (2.0 lakh tones), in the world with highest acreage (4.3 lakh hectares). But it is cultivated as an oil seed crop and the valuable safflower petals are being wasted although they are known to have certain medicinal value. Therefore, it is considered worthwhile to put efforts to establish the scientific data on the evaluation of therapeutic value of safflower petals thus, the present study was undertaken to find out the impact of safflower petal decoction supplementation on anthropometric measurements of hypertensive, diabetic and multiple health problem subjects.

METHODOLOGY

The safflower petal decoction was prepared by standardized procedure (Deodhar, 2001). Safflower petals decoction freshly prepared with different concentrations *viz.*, 1.0, 1.5 and 2.0 per cent was given to all the selected subjects daily in the morning hours in an amount of 100 ml for a period of 60 days and the observations were recorded before giving treatment (T_0 = initial), and 30th and 60th days of study period. A total number of 54 subjects consisting 18 hypertensive, 18 diabetic and 18 multiple health problems were purposively selected for the study. The selected 18 hypertensive subjects were divided into three groups; each group consisting of 6 subjects. Among three group first group (1.0), second group (1.5) and third group (2.0) per cent concentration of safflower petal decoction was supplemented for 60 days. The same experimental technique was followed for diabetic subjects and multiple health problems subjects.

The body measurements of the selected subjects recorded during the experimental period were weight (kg), height (cm), mid arm circumference (cm) and triceps skin fold thickness (mm) by following the standard procedures described by Jelliffe, (1966) and body mass index (BMI) was calculated by using the standard formula. The statistical analysis was carried out to know the overall effect of the treatment the mean of all the treatments was compared with the control (initial) by using 'F' test. (Snedecor and Cochran, 1967).