

ORIGINAL ARTICLE

THE ASSOCIATION BETWEEN KNOWLEDGE OF DIETARY BENEFITS OF GREEN TEA AND ITS CONSUMPTION ON PERCEPTIONS OF BODY WELL-BEING AMONG NURSING STUDENTS IN UNIKL-RCMP, IPOH, PERAK

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ABSTRACT

This study was conducted to determine the level of knowledge of the benefit of green tea consumption and its association with perceptions of body well-being among nursing students in UniKL-RCMP, Ipoh, Perak. A stratified random sampling technique was applied to get samples. The data was collected by using an online survey (Google Forms) which comprises sociodemographic characteristics, knowledge of the beneficial effects of green tea consumption, consumption of green tea intake and perceptions of general well-being. 53.4% of the respondents were found to have high knowledge of the beneficial effects of green tea intake and 85.8% had drunk it. Female nurses significantly consumed more green tea (87.8%) as compared to males (57.1%). There was a significant association between level of knowledge and perception of body well-being. 86.3% of nurses having a high knowledge of the beneficial effects of green tea consumption had a good perception of their body well-being, however, no significant association was found between green tea intake and perception of body wellbeing. In conclusion, most of the nursing students were knowledgeable about the dietary effects of green tea consumption, however, the positive benefits of green tea intake have not yet been seen in the present study.

Keywords: Green tea, knowledge, perception of body well-being, nursing students.

INTRODUCTION

Green tea is a non-fermented tea, derived from the *Camellia sinensis*, the small leaf variety of the tea plant which has a sweeter taste¹. The non-fermentation process of green tea retained the polyphenolic compound that exhibited the protective effects against non-communicable diseases (NCDs) such as cancer², overweight and obesity³, type 2 diabetes mellitus⁴, cardiovascular diseases⁵ and psychological disorders⁶.

The knowledge and intake of green tea intake vary in different populations and cultures. In Nepal, a study shows that teachers and students enjoyed taking green tea more than milk tea, 60.5% and 39.5% respectively⁷ (Ahmad and Pandey 2015) whilst a study in Pakistan, milk tea was preferable to drink over green tea (77% versus 23%)⁸. However, both populations believed that green tea is useful in reducing weight and beneficial in fighting against infection and cancer. Among dental students, 66% of the study participants had an intake of green tea intake and 75% are aware of the health effects of green tea consumption⁹.

Disordered eating such as chronic restrictive eating, skipping meals, binge eating, dieting, and the use of laxatives and diet pills to control weight has become a lifestyle in some societies, especially among young females and students. A

study among university students in Kuala Lumpur and Selangor showed that 20.3% of students experienced disordered eating mainly due to body size dissatisfaction and negative body image, especially among female students¹⁰. The strong desire for thinness was more among female students due to societal acceptance which was promoted by the media and the fashion industry^{10,11}. An intake of a healthy diet is more beneficial in maintaining body wellbeing. Body well-being means the perceptions of a positive state of physical, psychological, emotional, and social health involving the feeling of happiness, satisfaction, strengths, optimism, and positive traits. Whether the intake of green tea can help in improving body wellbeing is a question in this study.

The present study aims to determine the level of knowledge and green tea consumption among nursing students in RCMP, Ipoh, Perak, and its association with their perception of body wellbeing. It was hypothesized that the level of knowledge and consumption of green tea was low among the nursing students and there was no association between the level of knowledge and green tea consumption with sociodemographic factors and perception of body well-being.

METHODS

The study was a descriptive, cross-sectional design conducted among nursing students at

Royal College of Medicine (RCMP), Universiti Kuala Lumpur, Ipoh. The sample size was calculated based on a 50% estimation of the proportion of the knowledge level on dietary benefits of drinking green tea and intake of green tea consumption among the nursing students with a confidence interval (CI) of 95% and a level of significance of 5%, giving a total of 278 respondents. The samples were then selected using stratified random sampling. The strata used were a diploma and degree level.

The data was collected through an online survey using Google form from 19th until 26th of March 2021. The link and QR code of the online survey form was distributed to the nursing students through WhatsApp Messenger after giving their informed consent. The questionnaire consisted of socio-demographic factors, perceived general well-being, knowledge, and intake of green tea consumption. There were 15 multiple-choice questions for knowledge consisting of "Yes", "No" and "I don't know" responses. Point for each answer was given, where "Yes" = 1 point while "No" and "I don't know" = 0 points. Hence, the aggregate score ranges from 0 to 15 points. Thus, participants' overall knowledge was categorized using modified Bloom's cut-off point, as high knowledge if the score was between 74%-100% (11-15 points) and low knowledge if the score was less than 74% (<11 points)¹². The scale of General Well-Being (SGWB) consisted of 14-item tools to assess the well-being of the participants. The 14-SGWB was constructed by Longo et al., (2018)¹³ which is a brief assessment of multiple indicators of well-being including happiness, vitality, calmness, optimism, involvement, awareness, acceptance, self-worth, competence, development, purpose, significance, congruence or consistency, and connection. This scale was using 5-point Likert scale for each item where 1 = not at all, 2 = a bit true, 3 = somewhat true, 4 = mostly true, and 5 = very true¹³. The score ranges from 14-70, the scores above 40 represent 'good' well-being while less than 40 represent 'poor well-being'. The data were analysed for descriptive statistics using the Statistical Package for Social Sciences (SPSS) for Windows, Version 17. Chi-square analysis was used to determine the association between sociodemographic factors, knowledge, and intake on the dietary benefits of green tea consumption with body well-being. $p < 0.05$. is taken as a significance level.

This study was done after getting approval from the Medical Research Ethics Committee (MREC) of UniKL-RCMP, and permission from the Dean of Faculty of Medicine and Head of Nursing Department of UniKL-RCMP.

RESULTS

Profile of samples

219 respondents participated in this study (response rate of 78.8%). 93.6% were females, 97.7% were Malays and 80.8% were from a diploma program.

Perception of body well-being

170 respondents (77.6%) had a good perception of their body well-being, while 49 respondents (22.4%) had a poor perception of their bodily well-being.

Level of knowledge and green tea consumption.

It was found that 53.4% of the respondents had a high knowledge level of the beneficial health effects of green tea consumption, while 46.6% had poor. In terms of intake, the majority of the respondents had to drink green tea (85.8%) and consumed or eat green tea-flavoured snacks or beverages (75.3%). Only 4% never consume green tea. Among those who consume tea, most of the respondents (61.2%) preferred to drink green tea rather than any type of tea available in the market, followed by 19.6% for milk tea, 9.6% for flavoured tea, and 9.6% for black tea. Among green tea drinkers, 49% consumed one to two cups per day and 5% consumed three to four cups per day, the rest took them occasionally. Most of them preferred drinking cold green tea (41.6%) whilst 37.0% prefer warm green tea and 21.5% like hot green tea.

The reason for taking green tea was refreshment (66%), followed by health purposes (51%), strategy to reduce weight (51%), the taste (45%) and to stay up (2%).

Association between socio-demographic factors and the level of knowledge of the beneficial effects of green tea consumption

Based on Table 1, there was no association between gender and race with the level of knowledge of the beneficial effects of green tea consumption.

Association between socio-demographic factors and the intake of green tea.

Based on Table 2, there was a significant association between gender and the intake of green tea. Female nurses consumed more green tea (87.8%) as compared to males (57.1%). No significant difference in terms of green tea consumption between Malays and Non-Malays.

Association between the level of knowledge of beneficial effects of green tea consumption and green tea intake with the perception of general body well-being

Based on Table 3, out of 170 respondents which had a good perception of their body well-being, 86.3% were having a high knowledge of the beneficial effects of green tea consumption

whilst 49 respondents had poor perceptions of their body well-being, 67.6% they were having high knowledge. The association was significant (p-value < 0.05). However, no association was found. perceptions of body well-being with an intake of green tea intake. Table 3.0: Association

between the level of knowledge of beneficial effects of green tea consumption and green tea intake with the perception of general body well-being.

Table 1: Association between sociodemographic factors and the knowledge of the beneficial effects of green tea consumption

Variables		Low Knowledge N (%)	High Knowledge N (%)	X ²	df	p
Gender	Male	6 (42.9)	8 (57.1)	0.083	1	0.77
	Female	96 (46.8)	109 (53.2)			
Race	Malay	100 (46.7)	114 (53.3)	0.889	2	*0.64
	Non-Malay	2 (40)	3(60)			

Significance level, p < 0.05 * Fisher exact test

Table 2: Association between sociodemographic factors and the intake of green tea

Variables		Intake of green tea		X ²	df	p
		Yes	No			
		N (%)	N (%)			
Gender	Male	8 (57.1)	6 (42.9)	10.14	1	0.001
	Female	180 (87.8)	25 (12.2)			
Race	Malay	184 (86.0)	30 (14.0)	0.56	2	*0.76
	Non-Malay	4(80)	1(20)			

Significance level, p < 0.05 * Fisher exact test

Table 3: Association between the level of knowledge of beneficial effects of green tea consumption and green tea intake with the perception of general body well-being

Variables		Good perception of body well- being N (%)	Poor perception of body well- being N (%)	X ²	df	p
Level of knowledge of beneficial effects of green tea	High knowledge	101 (86.3)	16 (13.7)	10.95	1	0.001
	Low knowledge	69 (67.6)	33 (32.4)			
Intake of green tea	Yes	147 (78.2)	41 (21.8)	0.24	1	0.62
	No	23 (74.2)	8 (25.8)			

Significance level, p < 0.05

DISCUSSION

This study aimed to determine the knowledge of dietary benefits of green tea and its consumption and its association with perceptions of body well-being among nursing students in UniKL-RCMP, Ipoh, Perak. 219 students participated in the study. The findings revealed that 85.8% of the participants have consumed green tea and 53.4% are knowledgeable about the beneficial effects of green tea consumption. The percentage of consumption of green tea was higher as compared to another study elsewhere, however,

the knowledge and awareness of the benefit of green tea were less. A study among 124 respondents involving teachers (16.94%) and bachelor's degree students (83.06%) in Nobel College, Kathmandu Nepal found that 67.7% of them preferred to drink green tea and had a good knowledge of the potential effects of green tea⁷. A study in Chennai to assess the benefits of green tea and its side effects on general health among 200 young adults aged 18 to 25 years has reported that 51% of them had consumed green tea on daily basis and 87% of the subjects were aware regarding the benefit of drinking green tea¹⁴. Another study conducted by Ansari et al.,

(2020) on green tea drinking habits and their awareness among 200 dental students found that 66% of the participants had an intake of green tea and 75% are aware of the knowledge of the health effects of green tea consumption⁹.

The frequency of green tea intake may influence by various factors, Mansur, (2019) stated that the tea culture in Malaysia was merely a social gesture and tradition¹⁵. The communities preferred to have a glass of "teh tarik" (milk tea) during a family gathering at home or a casual get-together at local restaurants. Green tea is less popular or less in demand in the community. The price of green tea is also more expensive compared to other local teas so the students had to restrict their urge to fulfil their needs of having green tea on regular basis and tend to consume it occasionally. Similar situation in China, a study among undergraduate students from eleven universities reported that 63.4% of the respondents prefer to drink green tea, however, due to financial constraints only 19% regularly purchase green tea¹⁶.

The current study found that there was no significant association between the knowledge of the benefit of green tea between males and females. However, there was a significant difference between gender and the intake of green tea. Female nurses consumed more green tea (87.8%) as compared to males (57.1%). Ansari 2020 found in his study that there was no difference in the consumption of green tea among males and females. His study also indicated that there was no association between gender and the knowledge of the benefit of green tea⁹. The small number of male students in the current study may introduce selection bias that affects the association. Similar reasoning for the association between race and knowledge.

Body well-being means the perceptions of a positive state of physical, psychological, emotional and social health involving the feeling of happiness, satisfaction, strengths, optimism, positive traits and other facets of human thriving which may be influenced by body image, knowledge and intake of healthy diet¹⁷⁻²⁰. The present study focused on the association between knowledge and green tea consumption on the perception of body well-being. The current study showed that there was a significant association between perceptions of body well-being with knowledge of the benefits of green tea, however, the association was not significant with the intake of green tea. Among respondents who had a good perception of their body well-being, 86.3% were having a high knowledge of the beneficial effects of green tea consumption as compared to 67.6% among respondents who had poor perceptions of their bodily well-being. No comparison was found to another study.

The present study is subject to the following limitations. Firstly, the findings of this study may not be generalised to all nursing students in higher institutions. As of the unprecedented situation of Covid-19, some difficulty was faced in getting higher responses through online survey since the majority of the Diploma nursing students were undergoing posting at various healthcare facilities. Being a cross-sectional survey, any association between sociodemographic profiles, knowledge level towards effects of green tea intake, green tea consumption and perception of body well-being should be interpreted cautiously. Many other factors such as dietary intake, food supplements, and psycho-social factors were not controlled and may confound the association. There is a need for further study in the future to identify directionality.

CONCLUSION

The study concluded that nursing students in UniKL-RCMP, Ipoh, and Perak have adequate knowledge of the dietary effects of green tea consumption. Although a high percentage of them had consumed green tea, however, the frequency was still on occasion. Drinking green tea is more of a social gesture instead of its medicinal benefits. Further enhancement of knowledge on the dietary effects of green tea among young people, easily available products and reasonable prices will promote realisation and habitual consumption of green tea among the population.

Conflict of interest

The authors declare no potential conflict of interest.

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