Factors instead of demographic characteristics related to nutrition label use

Introduction

Due to increasing demand for a healthy lifestyle, people now pay more attention to their health and nutrition intake, and nutrition labels are used to inform the consumer and help sell food products (Cheftel, 2005). Satia et al., (2005) maintained that nutrition labels on packaged foods help consumers to improve food choices and healthy eating practices. Labelling statements on food products can make consumers better informed and more health conscious (Tarasuk, 2006). Nutrition labels can simplify the whole concept of healthy eating and are useful for making better food choices (Grunert et al., 2010). Hence, nutrition labelling should be a critical reference for consumer selection of foods (Lai, 2012), and nutrition label usage is an important intermediate step in evaluating the effects of nutrition labels on purchase behaviour and actual consumption (Hieke and Taylor, 2012).

In recognition of the importance of nutrition labelling, many researchers have focused on demographic variables, attitudes, knowledge and use of labelling (Acheampong, 2013; Croft, 2004; Graham and Laska, 2013; Misra, 2007). However, Annunziata et al. (2011) reported significant differences in consumer attitudes and behaviour for ethical products and show the importance of new variables, other than demographic characteristics, that can influence purchasing behaviour and label information use. Some scholars now explore health consciousness, efficacy, and ethical issues more than demographics characteristics. For example, Kretser (2006) found that consumers with high health consciousness exhibit a positive attitude towards food labelling and prefer to buy healthy foods based on the use of food labelling to meet their personal health goals. Schwarzer and Renner (2000) found that nutrition self-efficacy operates best in concert with general changes in lifestyle. Ellison et al. (2013) found that due to consumers' different levels of health and nutrition knowledge, attitudes towards reading the calorie labelling may also differ among consumers. Consumers' health consciousness, nutrition self-efficacy, and nutrition knowledge are worth exploring in relation to their attitude towards nutrition labelling. Moreover, Michaelidou and Hassan (2008) emphasized that respondents' identification with ethical issues affects their attitude and subsequent consumption choices. Hence, this study intends to include ethical evaluation and analysing the factors that influence nutrition label use.

The objectives of this research are as follows. First, we explore the impact of consumer health consciousness and nutrition self-efficacy on their nutrition label attitude. Second,

we examine the moderating effect of nutrition knowledge between health consciousness and nutrition label attitude. Third, we research the impact of the consumer's nutritional label attitude on nutrition label use. Finally, we inspect the impact of the consumer's ethical evaluation of businesses on nutrition label attitude.

Literature review and hypotheses

Health consciousness and nutrition label attitude

Kaskutas and Greenfield (1997) viewed health consciousness as consisting of concern regarding nutrition and of seeking out health information. Neuhouser et al. (1999) found that individuals with high health consciousness have positive attitudes towards nutrition labels. Other studies have also shown that health-conscious individuals tend to be aware of and involved with nutrition and to hold positive attitudes towards nutrition labelling (Newsom et al., 2005). Persons with positive attitudes towards labelling tend to use labelling and to have higher health consciousness (Satia et al., 2005). Kretser (2006) found that consumers who hold high health consciousness had positive attitudes towards food labelling and prefer to buy healthy foods and beverages based on the use of food labelling. Kempen (2012) indicated that respondents who read the nutritional information on food labels were concerned about their personal health. Consequently, it can be inferred that when a consumer has concerns about nutrition and seeks health information, he or she will recognize the importance of nutrition labelling. Individuals with greater health consciousness will have more positive attitudes towards nutrition labelling. Therefore, hypothesis 1is proposed:

H1: The consumer's health consciousness will influence nutrition label attitude.

Nutrition self-efficacy and nutrition label attitude

Self-efficacy was shown to be a consistent predictor of behaviour across a variety of health domains, including diet (Glynn and Ruderman, 1986). Matheson et al., (1991) found direct relationships between self-efficacy and nutrition attitude and suggested the potential value of self-efficacy in instigating changes in nutrition behaviours. Satia et al. (2005) found that one of the strongest psychosocial predictors of nutrition label use was healthful eating self-efficacy. According to Chang and Lin (2006), subjects' preference for nutritious and healthy foods was positively related to diet self-efficacy, the degree of certainty of choosing healthy and nutritious food. Moreover, Chiang's study (2008) showed that nutrition self-efficacy was positively related to label attitude. Van't Riet et al. (2013) revealed that self-efficacy influences the effect of nutrition framing and provides evidence for the role of self-efficacy as a potential moderator of the effects of framed

nutrition information in a field setting. Cha et al. (2014) also found self-efficacy to be one of predictors of food label use. Based on the preceding inference, self-efficacy influences consumer attitude towards nutrition labelling and thus food label use. Therefore, hypothesis 2 is proposed:

H2: Nutrition self-efficacy will influence nutrition label attitude.

Nutrition label knowledge and attitude

Marietta et al., (1999) surveyed college students and found that the nutrition knowledge score was positively correlated with attitudes towards nutrition labels. Burton and Creyer (2004) argued that if minimally health-conscious individuals improve their knowledge of nutrition labelling, they will develop a more positive opinion of nutrition labelling. Blitstein and Evans (2006) found that highly educated people are more likely to use food labels. Misra (2007) showed that prior nutrition education and a positive attitude exhibited the strongest (direct) effects on label-reading behaviour. According to Hiew et al. (2010), respondents with at least a diploma exhibited an extensively better level of knowledge of nutrition information than respondents with a primary level education, made better food choices, and had more positive nutrition label attitudes. Acheampong and Haldemana (2013) observed a significant relationship between nutrition knowledge and attitude. Generally, consumers with more product knowledge have better memory, recognition, analysis, and logic abilities than consumers with less product knowledge (Sun et al., 2012). Consumers who think they have more product knowledge tend to rely on intrinsic cues to evaluate a product. In contrast, consumers with less product knowledge are inclined to use extrinsic cues, such as the price or the brand or the label, to evaluate a product because they do not know how to judge it (Rao and Monroe, 1988; Sun et al., 2012). Moreover, Ellison et al. (2013) showed that numeric labels were of little use for consumers who were already more knowledgeable about health and nutrition. It seems that the importance of nutrition labelling for consumers with health consciousness but low knowledge about nutrition labels is higher than for consumers with health consciousness and high nutrition label knowledge. Accordingly, this study infers that the effect of health consciousness on nutritional label attitude depends on the level of the consumer's nutrition label knowledge. Based on the preceding inference, research hypothesis H3 is proposed:

H3: Nutrition label knowledge will moderate the relationship between health consciousness and nutrition label attitude.

Nutrition label attitude and nutrition label use

Shine et al. (1997) indicated that label use is affected by the attitudes of consumers

towards nutritional content. Neuhouser et al. (1999) found that consumers with high health consciousness have positive attitudes towards nutrition labelling and also found a potentially significant association between label attitude and label use. Marietta et al. (1999) thought that the single best predictor of general label use was a positive attitude towards labels. Misra (2007) indicated that nutrition attitude predicted label use and that label users have a positive attitude compared to nonusers. According to Campos (2011), positive attitudes were higher among individuals reporting greater use of labels (Byrd-Bredbenner, 2000; Byrd-Bredbenner and Kiefer, 2001; Marietta et al., 1999, Misra 2007; Reid and Hendricks, 1993). Zeng et al. (2013) argued that attitude towards nutrition knowledge was significantly associated with nutrition label reading. Moreover, many studies have found positive relationships between nutrition label attitude and use behaviour (Cowburn and Stockley, 2005; Chiang, 2008; Lai, 2012). Based on the preceding inference, research hypothesis H4 is proposed:

H4: Nutrition label attitude will influence nutrition label use.

Nutrition label use and ethical evaluation

Consumers expect companies to follow laws and ethical norms (Mohr et al., 2001). This expectation implies that consumers will trust the claims of law-abiding food manufacturers if they perceive this entity as providing accurate information. Nilsson et al. (2004) indicated that the majority of respondents in his study fall short of providing a credible quality assurance scheme on food products. Pelsmacker et al. (2005) considered the credibility of food labels more important than the amount of information supplied on the labels. Consumers acquire nutritional information from the nutrition facts panel, nutrient content claims and health claims on labels, expecting in particular that the latter will be trustworthy (Croft, 2004). However, one reason for consumers' non-use of labels is a lack of trust in the entity supplying the product and, therefore, a lack of trust in the accuracy of the food label information (Cowburn and Stockley, 2005). Chan et al. (2005) thought that the regulations governing nutrition claims on food labels should be changed to enhance their credibility and support their role in assisting consumers to make healthier food choices. Lindley (2007) found that incomplete, unclear or complex information may be regarded as imperfect information upon which to base a decision, which might result in a negative response to the food product and thus negatively affect purchasing behaviour from the perspective of food retailers. Consumers may be unable to confirm or even identify the existence of ethical issues, leading to a process of ethical evaluation that cannot be coherent (Sun et al., 2012). People who evaluate a marketer as less ethical are to some extent more predisposed to engage in disapproving behaviours (Andreasen and Manning, 1990). Michaelidou and Hassan (2008) affirmed that ethical self-identity is

found to predict both attitudes and intention to purchase organic produce, emphasizing that respondents' identification with ethical issues affects their attitude and subsequent consumption choices. Namely, the consumer's ethical evaluation may thereby affect nutrition label use. Therefore, H5 hypothesis is proposed:
H5: Ethical evaluation of a business will influence nutrition label use.

Research methodology

Research framework

This study seeks to discuss the relationship of consumers' health consciousness, nutrition self-efficacy, nutrition label knowledge, business ethical evaluation and nutrition label use. The research framework of this study is shown in Figure 1.

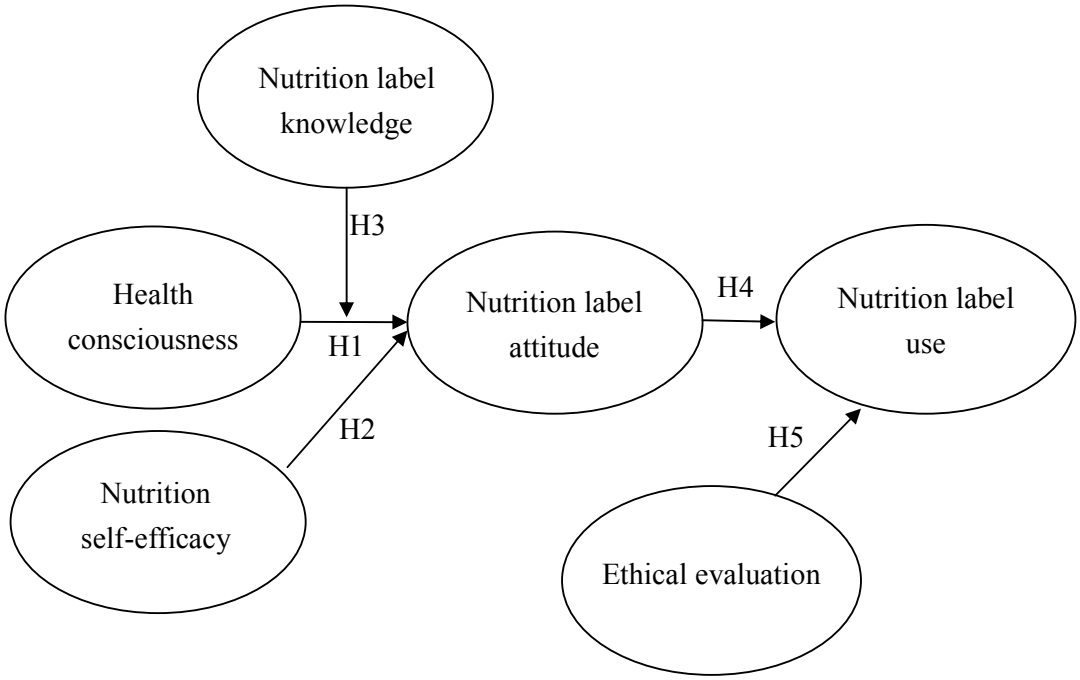

Figure 1 Research framework

Operational definition

We adopted a 5-point Likert scale for measurement of the items listed on the questionnaire, except for using "Correct", "Incorrect", and "Do not know" in the nutrition label objective knowledge scale. We summarize the definition of each construct in Table 1.

Table 1 Definition of construct

Construct	Definition	Reference
Health consciousness	A psychological or inner status of a person, including health alertness, health self-consciousness, health involvement, and self-monitoring of one's health.	Michaelidou et al. (2008)
Nutrition self-efficacy	Personal confidence level in choosing healthy foods.	Acheampong and Haldeman (2013); Bandura (1982)
Nutrition label knowledge	Consumer's ideas about nutrition labelling and specifications; the amount of knowledge (subjective and objective) related to nutrition label use.	Marietta et al., (1999); Lai (2012)
Nutrition label attitude	Consumer's attitude and reactions towards nutrition labelling, including basic view of nutrition labelling and the use of food nutrition labelling with regard to health concerns in daily life.	Chiang (2008); Lai (2012)
Ethical evaluation	Consumer's consideration of the nutrition labelling information and content provided by manufacturers, which is in line with the extent of business fairness, morality, and commitment to society.	Reidenbach et al. (1991); Sun et al. (2012)
Nutrition label use	Consumer's behaviour towards food nutrition labelling in shops including the use of nutritional labelling habits and experience, emphasis on health-conscious behaviour, and reactions to nutrition labelling.	Lai (2012); Nurliyana et al., (2011)

Measurement and data collection

The measures of the research constructs were adopted from the previous literature and modified to suit the research setting. A pretest among 38 consumers was used to test the readability and absence of ambiguity in the questionnaire design. Most of the Cronbach's α values of the pretest were greater than 0.7, except for nutrition label attitude (0.635) and nutrition label use (0.665). To improve the reliability, we adjusted some ambiguous items to form the final questionnaire. The questionnaire was posted on a famous internet web site in Taiwan. To avoid priming effects, the constructs were not shown in the questionnaire, and the items were not presented in order. A total of 312 copies of the questionnaire were distributed, and 306 valid questionnaires were received. Descriptive statistics analyses, including means and standard deviations of variables, are listed in the Appendix.

Data analysis and results

Reliability and validity

Overall, our measurement scales show sufficient reliability and validity. More specifically, for all constructs, the composite reliability exceeds the threshold value of 0.6 (Bagozzi and Yi 1988), and all Cronbach's α values exceed the threshold value of 0.7 recommended by Nunnally (1978), as shown in Table 2. We use the AVE (Average Variance Extracted) to measure convergent validity. Fornell and Larcker (1981) suggested that the AVE should be above 0.5 to indicate that the construct has good reliability and convergent validity. The AVE values of the exogenous variables of this study, shown in Table 3, are in the range of 0.52~0.68, demonstrating that all constructs have good convergent validity. We assessed the discriminant validity of the construct measures on the basis of Fornell and Larcker's (1981) criterion, which indicates that discriminant validity is supported if the average variance extracted exceeds the squared correlations between all pairs of constructs. All constructs fulfilled this requirement, which suggests that the degree of discriminant validity for all our constructs is sufficient.

Table 2 Reliability index

Construct	Cronbach's Alpha	CR (Composite Reliability)
Health consciousness	0.871	0.868
Nutritional self-efficacy	0.922	0.8681
Nutrition label attitude	0.755	0.7677
Nutrition label use	0.921	0.9179
Ethical evaluation	0.903	0.8402

Table 3 Correlation and AVE of constructs

Construct	Health consciousness	Nutritional self-efficacy	Nutrition label attitude	Nutrition label use	Ethical evaluation
Health conscious-ness	**0.52**				
Nutritional self-efficacy	0.469**	**0.68**			
Nutrition label attitude	0.441**	0.620**	**0.53**		
Nutrition label Use	0.531**	0.777**	0.685**	**0.65**	
Ethical evaluation	0.411**	0.534**	0.425**	0.498**	**0.64**

Note: ***p<0.01, **p<0.05

We used AMOS 17.0 to model the structural relationships posited by our conceptual framework. The measures of overall fit mostly satisfy conventional standards, which suggests that our model fits the data well (chi-square/d.f. = 1.742, [RMSEA] = .049, [GFI] = 0.915, [AGFI] = 0.852, [NFI] = 0.962, [TLI] = 0.961, [CFI] = 0.967, [IFI] = 0.967, [PNFI] = 0.781, [PCFI] = 0.815).

Hypothesis testing: main effect

This study found that the consumer's nutrition label attitude is influenced by health consciousness ($\beta = 0.248$, $p = .009$) and nutritional self-efficacy ($\beta = 0.779$, $p < .001$), which supports Hypothesis 1 and Hypothesis 2. Furthermore, the results showed that the consumer's nutrition label use is influenced by nutrition label attitude ($\beta = 0.791$, $p<.001$) and ethical evaluation ($\beta = 0.257$, $p = .002$), which support Hypothesis 4 and Hypothesis 5 (see Table 4).

Table 4 Main effect testing result

Hypo-thesis	Path	β-value	t-value
H1	Health consciousness -> Nutrition label attitude	0.248**	2.119
H2	Nutritional self-efficacy -> Nutrition label attitude	0.779***	7.081
H4	Nutrition label attitude -> Nutrition label use	0.791***	7.53
H5	Ethical evaluation -> Nutrition label use	0.257**	1.96

Note: *p＜0.05, **p＜0.01, ***p＜0.001

Hypothesis testing: moderating effect

The effect of knowledge was tested in reference to both objective and subjective knowledge. Two sub-groups of respondents were defined by the mean score of subjective (objective) knowledge. Above the mean score, the respondents were grouped as consumers with high levels of nutrition label knowledge, and below the mean score, the respondents were grouped as consumers with low levels of nutrition label knowledge. The moderate effect of subjective and objective nutrition label knowledge was tested, and the results are shown in Table 5. For both subjective knowledge and objective knowledge, the $\Delta\chi 2$ is significant, which that means both moderating effects exist. Table 6 indicates that the effect of the consumer's health consciousness on nutrition label attitude is stronger for consumers with low nutrition label knowledge than for consumers with high nutrition label knowledge, whether subjective or objective, although the effect of the consumer's health consciousness on nutrition label attitude is significant for both groups.

Table 5 Moderating effect

Subjective nutrition label knowledge				
Hypothesis	Unconstrained model	Constrained model	$\Delta\chi 2$	Moderating effect
Health consciousness -> Nutrition label attitude	2366.091 (DF = 1310)	2421.498 (DF = 1312)	55.407**	Yes
Objective nutrition label knowledge				
Hypothesis	Unconstrained model	Constrained model	$\Delta\chi 2$	Moderating effect
Health consciousness -> Nutrition label attitude	2408.412 (DF = 1310)	2484.848 (DF = 1312)	76.436**	Yes

**$p < 0.01$

Table 6 Parameter estimates for nutrition label knowledge

Path	Subjective nutrition label knowledge					
	High			Low		
	β	SE	t	β	SE	t
Health consciousness -> Nutrition label attitude	0.420	0.088	4.772	0.554	0.052	10.653
	Objective nutrition label knowledge					
	High			Low		
	β	SE	t	β	SE	t
	0.464	0.070	6.628	0.593	0.060	9.883

Discussion

Overall, empirical findings have indicated that health consciousness, self-efficacy, and nutrition knowledge have different influences on nutrition label use (Chiang, 2008; Kempen, 2012; Michaelidou and Hassan, 2008). This study investigated the relationships of health consciousness, self-efficacy, label attitude and label use and also focused on examining the moderating effect of nutrition knowledge between health consciousness and nutrition label attitude and the impact of ethical evaluation on label use. This study develops insights into nutrition labelling and provides evidence that health consciousness and self-efficacy affect both nutrition label attitudes and the impact of the consumer's nutrition label attitude on label use. Furthermore, our findings underscore the role of

subjective and objective nutrition knowledge as a moderating factor and confirm that ethical evaluation also influences label use. Our research also contributes to existing theories on nutrition labelling and knowledge management.

Regarding the impact of health consciousness on nutrition label attitude, our findings are consistent with Ellison et al. (2013), Kempen (2012), and Misra (2007). Hypothesis 1 is supported. We believe that an individual's level of health consciousness is closely related to the consumer's attitude and reactions towards nutrition labelling. Therefore, health consciousness is important in designing food labels, as it affects the customer's responses to health information and to sources of health information. Our findings indicate that nutrition self-efficacy is also positively related to nutrition label attitude. Thus, Hypothesis 2 is supported. This finding is accordance with the research results found by Chiang (2008); Newsom et al. (2005). Van't et al. (2013) proved that self-efficacy in choosing healthy products influenced the effect of message framing. Cha et al. (2014) also found self-efficacy to be one of the predictors of food label use, positively predicting dietary quality and suggesting that strategies to enhance self-efficacy and food label use should be developed to improve dietary quality and health outcomes. We expect self-efficacy to affect the attitude towards and use of food labels and thus the actions taken by individuals and their results. Based on our findings, self-efficacy could be used to predict the consumer's attitude towards label use and future behaviour.

Our results show moderating effects between health consciousness and nutrition label attitude in terms of both subjective and objective nutrition label knowledge. Hypothesis 3 is supported. Some researchers have the similar results. Marietta et al. (1999) found labelling education efforts are associated with greater knowledge about labels, more favourable attitudes towards labels, and increased label use in making food choices. Liu et al. (2014) also found that subjective nutrition knowledge and understanding play a significant and positive role in Chinese consumers' label use. However, we are among the first to empirically show that both subjective and objective nutrition label knowledge moderate the relationship between health consciousness and nutrition label attitude.

However, the data from our standardized structure of both subjective and objective nutrition label knowledge are slightly different from the results of our literature review. The data from the standardized structure of the low nutrition label knowledge group are slightly greater than the data from the high nutrition label knowledge group. Both the high and low nutrition label knowledge groups consider labelling to be important. That is, persons who consider health consciousness to be important tend to hold positive attitudes towards labelling. However, the higher the knowledge of nutrition labelling, the less the person is affected by health consciousness. Whether based on subjective or objective knowledge, they are able to read the labelling and make their own decisions. The reasons

could include that persons with high nutrition label knowledge might have their own labelling attitude and might be less affected by health consciousness compared to persons with lower nutrition knowledge. In other words, people with lower nutrition knowledge will be more affected by health consciousness in terms of their attitude towards labelling.

The results of this study also showed that the consumer's nutrition label attitude is positively related to nutrition label use. Thus, Hypothesis 4 is supported. This finding is in accordance with the results of Graham and Laska (2013), Satia et al, (2005), and Zeng et al. (2013). Additionally, many studies another have found that nutrition label knowledge, attitude, and use behaviour have positive relationships with one another (Misra, 2007; Cowburn and Stockley, 2005; Chiang, 2008; Lai, 2012). All of the above results are consistent with our findings that nutrition label attitude is an important factor affecting nutrition label use.

This study shows that the consumer's ethical evaluation has a positive impact on nutrition label use. Thus, Hypothesis 5 is supported. This result is consistent with the results found by Cowburn and Stockley (2005), Lindley (2007), and Pelsmacker, et al. (2005). Therefore, the positive impact of the consumer's ethical evaluation on nutrition label use has been repeatedly confirmed. However, consumers may be unable to confirm or even to identify the existence of ethical issues, which may lead to a process of ethical evaluation that cannot be coherent (Sun et al., 2010). To balance the positions of both producers and consumers, producers should be responsible for their integrity towards consumers.

Conclusion and managerial implications

Nutrition labelling is the foundation of conveying food content and information, as well as a basis on which consumers can adjust their dietary intake. Our research findings reveal that the consumer's nutrition label attitude is positively affected by nutritional self-efficacy and health consciousness. Mai and Hoffmann (2012) identified two groups of consumers based on level of health consciousness (taste lovers and nutrition fact seekers). Thus, the government health department should encourage the general public to address their own health and enhance health consciousness to improve their attitude towards nutrition labelling and should emphasize health promotion and advocate the use of labelling to reduce heavy spending on chronic disease. Food marketers and manufacturers can tailor the nutrition label content to develop a healthy food market for health-conscious people, thereby targeting different market segments.

In terms of nutritional self-efficacy, Anderson et al., (2011) found that the success of nutrition interventions may depend on the extent to which they lead users to develop self-efficacy for behavioural change, but perhaps as important, the extent to which these

interventions help users to garner social support for making changes. Thus, the government and promotional companies could provide a platform for people to set goals, plan and provide feedback on targeted behaviour to ensure the success of nutrition interventions and implement policy advocacy, including reading nutrition labels. Moreover, the government and promotional companies could design campaigns to boost the effects of nutrition label use. Our study results should benefit government policy makers in designing social marketing campaigns to reduce the currently enormous health expenditures. There is a strong moderating effect of nutrition label knowledge between health consciousness and nutrition label attitude. The association between nutritional knowledge and the attitude towards food labelling shows that nutritional knowledge influences the consumer's nutrition label attitude. Knowing the status of the consumer's nutritional knowledge allows the government to promote better nutritional information.

What cannot be ignored is that the government must supervise the correctness of the label content provided by firms, urging the more stringent legislation of labelling-related law. In addition, the nutrition labelling information provided by enterprises should be implemented in accordance with ethical considerations. Especially as consumer awareness grows to even greater heights, and in light of the transparent information provided by the media, companies cannot ignore business ethics for long-term survival. Thus, food-related firms that intend to improve business profitability can emphasize the relationship between business ethics and nutrition labelling. Improvements have been suggested, such as involving a more credible enterprise ethic and expanding the responsibility of food producers. Hawley et al. (2013) also noted that it is important for the labelling system to be viewed as credible, which will most likely be achieved through endorsements from national and international agencies, rather than an industry-created system. Sirieix et al., (2013) indicated the importance of trust and fit between combinations of labels as well as in the association of a label with a brand.

Research limitations and directions for future research

Although this study is the first of its kind to indicate that nutrition label knowledge moderates the relationship between consumers' health consciousness and nutrition label attitude and to confirm the relationship between ethical evaluation and nutrition label use, there are important limitations to address. First, most of the samples in this study are young groups familiar with the internet. Older groups and individuals who seldom use computers or the internet are not included in our sample; thus, these results may not generalize to older people. Particularly in an ageing society, older people may more strongly emphasize the importance of nutrition label use. Second, in our study, we explore

the moderating effect of nutrition knowledge between health consciousness and nutrition label attitude. However, Chang and Lin (2006) found a positive correlation between dietary knowledge and dietary self-efficacy. Future research can address the moderating effect of nutrition knowledge between dietary self-efficacy and nutrition label attitude. Third, Ye et al. (2015) demonstrated that the relationship between consumer attitudes towards the disclosure of nutrition information and their subsequent evaluation of the food provider is impacted by CSR (corporate social responsibility)-related initiatives. We suggest that, based on business ethics, researchers can explore the relationship between CSR and nutrition label use in future work.

Appendix: Mean and standard deviation of construct measurements

Variable	Item	Mean	SD
Health consciousness	I think about my health a lot.	4.00	0.73
	I'm alert to changes in my health.	4.06	0.76
	I'm very self-conscious about my health.	4.10	0.73
	I'm usually aware of my health.	4.08	0.75
	I take responsibility for the state of my health.	4.17	0.68
	I'm aware of the state of my health as I go through the day.	3.99	0.80
Nutritional self-efficacy	For me, understanding the nutrition label information on packaged foods when buying food products is	4.06	0.77
	For me, paying attention to the nutrition label information on packaged foods when buying food products is	3.90	0.76
	For me, when buying food products, reading the nutrition label is	3.94	0.75
	For me, when buying food products, reading the nutrition label multiple times is	3.75	0.91
	For me, believing the nutrition label information on packaged foods when buying food products is	3.49	1.02
	For me, calculating the nutrient content based on nutrition label information on packaged foods when buying food products is	3.55	1.06
	For me, comparing the different brands of the same (or similar) food products based on the nutrition label information on packaged foods when buying food products is	3.66	0.94
	For me, when buying food products, choosing different products based on nutrient content according to the nutrition label information is	3.68	0.96
	When I am influenced by media and ads, reading the nutrition label information on packaged foods when buying food products is	3.80	0.82
	When I am in a hurry, reading the nutrition	3.17	1.23

	label information on packaged food is		
	My friends and classmates do not read the nutrition label information on packaged food. However, for me, reading the nutrition label is	3.65	0.89
	My family members do not read the nutrition label information on packaged food. However, for me, reading the nutrition label is	3.75	0.91
	When my mentors or teachers want me to read the nutrition label information on packaged food more, I consider accepting this advice to be	3.91	0.79
	When my parents or family members want me to read the nutrition label information on packaged food more, I consider accepting this advice to be	3.97	0.77
	When my classmates or friends members want me to read the nutrition label information on packaged food more, I consider accepting this advice to be	3.99	0.77
Subjective nutrition label knowledge	I understand the "National Dietary Guidelines" announced by the Department of Health, which suggest that the general public should have a balanced intake of six categories of food.	3.95	0.98
	I understand the calculation of label calories.	3.78	0.89
	I understand that the food additives noted on food nutrition labels may harm our body if we eat too much.	4.08	0.72
	I know all kinds of food certification marks (e.g., CAS and TAP) and the message that the marks are intended to convey.	3.76	0.86
	I know how to use food nutrition labelling to adjust my nutritional intake.	3.78	0.88
	I know "nutrition claims" (such as high calcium, reduced sodium) used to label food and use them to adjust my nutritional intake.	3.80	0.89

Nutrition label attitude	I check nutrition labels before I eat packaged foods.	3.81	0.93
	I adjust my intake amount according to the labelling on the package.	3.73	0.94
	I think food products that make nutrition claims (e.g., high-calcium milk) are more nutritious than similar products without such claims.	3.65	1.05
Nutrition label use	I try to know the function of each nutrient on nutrition labels.	3.54	0.91
	I calculate the content of certain nutrients in foods when I buy food products in shops.	3.33	1.11
	I will compare two identical (or similar) products of different brands in terms of food nutrition labelling and specific nutrient contents when I buy food products in convenience stores.	3.50	1.04
	Corresponding to the above question, after comparing two identical (or similar) food products in terms of nutrient content, I will therefore change my selection.	3.61	1.04
	I will compare the different contents of certain nutrients based on food labelling when I buy food products in convenience stores.	3.54	1.04
	I will adjust my diet based on nutrition labelling, such as controlling my calorie intake and reducing my fat intake, when I buy food products in convenience stores.	3.67	1.07
Ethical evaluation	The nutrition information on food products provided by companies is appropriate.	3.96	0.80
	The nutrition information on food products provided by companies is fair.	3.64	0.82
	The nutrition information on food products provided by companies is ethical.	3.78	0.79
	The nutrition information on food products provided by companies is accepted by my family members.	3.74	0.77

	The nutrition information on food products provided by companies can be accepted in terms of cultural aspects.	3.84	0.74
	The nutrition information on food products provided by companies can be accepted in terms of traditional aspects.	3.85	0.79
	The nutrition information on food products provided by companies is not contrary to the commitment to the community (fair trade, honestly told).	3.84	0.84
	The nutrition information on food products provided by companies is not contrary to the verbal commitment to the community (fair trade, honestly told).	3.76	0.88

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