KNOWLEDGE, ATTITUDE AND PRACTICE (KAP) ON FOOD LABEL AMONG UNIVERSITI TUNKU ABDUL RAHMAN (UTAR) STUDENTS KAMPAR CAMPUS

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INTRODUCTION

- Food label is a communication vehicle between consumers and the producers by giving the important information of a food product. (Wills et al., 2009)
- Nonetheless, the association between KAP and food label use, also any related evidence are insufficient data.
- The **aim** of this study was to determine the **different of KAP level between gender** and investigate the **KAP level and frequency of food label use** among UTAR Kampar students.

METHODOLOGY

- A cross-sectional survey was conducted online to recruit university students in UTAR Kampar campus.
- The period of conducting this study was from October 2020 until October 2021.

FLOW of STUDY

Designing research
↓
Creating questionnaire through Google Form
*Questionnaire adopted from Nurliyana et al. (2011)
↓
Data collection
↓
Data interpretation

DATA ANALYSIS

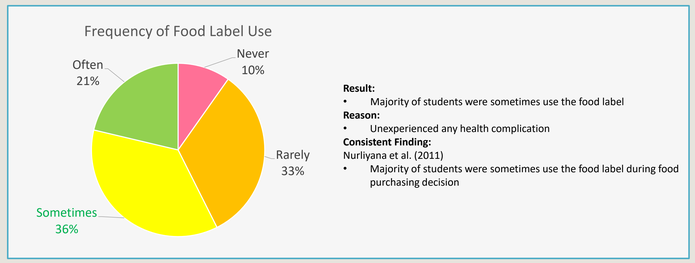
- Pie chart is used to represent the frequency of food label use during decision to buy food among UTAR Kampar students
- Mann-Whitney Test is used to determine **different of KAP level on food label between gender** of UTAR Kampar students
- Fisher's Exact Test is used to determine the **association of KAP and the frequency of food label used**

CONCLUSION

- Nutrition information is important to the consumers in order to have better health status.
- For university students in UTAR Kampar campus, they were sometimes or rarely use food label although majority of them was high knowledge level.
- Generally, females have higher KAP level than males
- For association,
  Knowledge ↑, FLU ↑
  Attitude on nutrient content and ingredient ↑, FLU ↑
  Practices ↑ except serving size, FLU ↑
- Thus, future study is needed to investigate the factor affecting the food label use.

RESULT & DISCUSSION

- ✓ Frequency of food label use
- ✓ Different of KAP level on food label between gender of UTAR Kampar students
- ✓ Association of KAP and the frequency of food label used among UTAR Kampar students



Result:
- Majority of students were sometimes use the food label

Reason:
- Unexperienced any health complication

Consistent Finding:
Nurliyana et al. (2011)
- Majority of students were sometimes use the food label during food purchasing decision

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Different

Knowledge & Gender

	Gender	N	Mean Rank	Rank Sum	U	p-value
Knowledge Level	Male	82	75.2	6166.5	2763.5	0.000
	Female	101	105.64	10669.5		

Result:
- Females have higher knowledge level than males

Reason:
- Improve the eating habits
- Make healthier food choices
- Females were highly concern with their diet, nutrition and body weight (Yahia et al., 2016)

Consistent Finding:
Azila-Gbettor et al. (2013)
Nayga (2000)
- Females have higher level of nutrition knowledge as compared with males

Attitude & Gender

Attitude	Gender	N	Mean Rank	Rank Sum	U	p-value
Price	Male	82	94.77	7771.50	3913.5	0.451
	Female	101	89.75	9064.50		
Taste	Male	82	99.62	8169.00	3516	0.044
	Female	101	85.81	8667.00		
Nutrient content	Male	82	89.34	7325.50	3922.5	0.494
	Female	101	94.16	9510.50		
Ingredient	Male	82	92.87	7615.50	4069.5	0.824
	Female	101	91.29	9220.50		
Packaging	Male	82	96.29	7895.50	3789.5	0.286
	Female	101	88.52	8940.50		
Expiry date	Male	82	92.35	7573.00	4112	0.908
	Female	101	91.71	9263.00		

Result:
- Taste component is more important among females than males

Reason:
- Food preferences of male and female are totally different (Lombardo et al., 2020)
- Females have more taste buds
- Females have more fungiform papillae (Bartoshuk et al., 1994)

Consistent Finding:
Bärebring et al. (2020)
Li (2017)
- Females tend to have more positive attitude than the males

Practice & Gender

Attitude	Gender	N	Mean Rank	Rank Sum	U	p-value
List of Ingredients	Male	82	97.90	8028.00	3657	0.134
	Female	101	87.21	8808.00		
Serving Size	Male	82	86.01	7053.00	3650	0.143
	Female	101	96.86	9783.00		
Health Claim	Male	82	93.60	7675.50	4009.5	0.692
	Female	101	90.70	9160.50		
Calories/ Energy	Male	82	99.02	8120.00	3565	0.088
	Female	101	86.30	8716.00		
Calories from Fat	Male	82	96.38	7903.50	3781.5	0.287
	Female	101	88.44	8932.50		
Total Fat	Male	82	99.34	8146.00	3539	0.076
	Female	101	86.04	8690.00		
Trans Fat	Male	82	100.16	8213.00	3472	0.049
	Female	101	85.38	8623.00		
Saturated Fat	Male	82	97.07	7960.00	3725	0.222
	Female	101	87.88	8876.00		

Result:
- Females are more frequent to use trans fat on food label than males

Reason:
- Females more concern about their body image (Gross et al., 2005)
- Trans fat may lead to weight gain and deposition of abdominal fat (Dhaka et al., 2011)

Attitude	Gender	N	Mean Rank	Rank Sum	U	p-value
Cholesterol	Male	82	97.46	7991.50	3693.5	0.188
	Female	101	87.57	8844.50		
Sodium/ Salt	Male	82	95.61	7840.00	3845	0.380
	Female	101	89.07	8996.00		
Carbohydrate	Male	82	93.59	7674.50	4010.5	0.698
	Female	101	90.71	9161.50		
Protein	Male	82	89.65	7351.50	3948.5	0.569
	Female	101	93.91	9484.50		
Fibre	Male	82	98.52	8079.00	3606	0.115
	Female	101	86.70	8757.00		
Sugar	Male	82	95.21	7807.00	3878	0.435
	Female	101	89.40	9029.00		
Vitamin and Mineral	Male	82	93.02	7627.50	4057.5	0.803
	Female	101	91.17	9208.50		

Consistent Finding:
Rasberry et al. (2007)
Satia et al. (2005)
Su et al. (2015)
- Women were more likely to use nutrition labels than men when purchasing food

(Stran and Knol, 2013)
- Women will check more frequently and read thoroughly the label components when making the decisions about food products

Association

Knowledge & FLU

Knowledge	Use of food labels: Often and Sometimes (%)	Rarely and Never (%)	Total (%)	p-value
High	69 (66.3)	35 (33.7)	104 (56.8)	0.006
Medium	33 (49.3)	34 (50.7)	67 (36.6)	
Low	3 (25.0)	9 (75.0)	12 (6.6)	
Total	105 (57.4)	78 (42.6)	183 (100)	

Result:
- Higher knowledge level, higher frequency of food label use

Reason:
- More understanding of the health-related information
- Had been exposed to those health promotion programmes (Miller and Cassady, 2015)

Consistent Finding:
Miller and Cassady (2015)
- Knowledge level had positive association with the frequency of using nutrition label

Cheah et al. (2015)
- Individual with lower educational level or low-income level were less likely to use the nutrition labels

Attitude & FLU

Attitude	Use of food labels: Often and Sometimes (%)	Rarely and Never (%)	Total (%)	p-value
Price				0.358
Most Important and Important	97 (56.4)	75 (43.6)	172 (94.0)	
Least and Not Important	8 (72.7)	3 (27.3)	11 (6.0)	
Taste				1.000
Most Important and Important	103 (57.5)	76 (42.5)	179 (97.8)	
Least and Not Important	2 (50.0)	2 (50.0)	4 (2.2)	
Nutrient Content				0.015
Most Important and Important	94 (61.4)	59 (38.6)	153 (83.6)	
Least and Not Important	11 (36.7)	19 (63.3)	30 (16.4)	

Attitude	Use of food labels: Often and Sometimes (%)	Rarely and Never (%)	Total (%)	p-value
Ingredient				0.005
Most Important and Important	89 (63.1)	52 (36.9)	141 (77.0)	
Least and Not Important	16 (38.1)	26 (61.9)	42 (23.0)	
Packaging				0.882
Most Important and Important	55 (56.7)	42 (43.4)	97 (53.0)	
Least and Not Important	50 (58.1)	36 (41.9)	86 (47.0)	
Expiry Date				0.576
Most Important and Important	104 (57.8)	76 (42.2)	180 (98.4)	
Least and Not Important	1 (33.3)	2 (66.7)	3 (1.6)	

Result:
- More important the attitude on nutrient content and ingredient, higher frequency of food label use

Reason:
More concern about
- What nutrient they will get when consuming a food
- The ingredients in a food to prevent complications such as allergy

Inconsistent Finding:
Kraus (2015)
Drichoutis et al. (2005)
- Taste was more important than other labels of the food

Practices	Use of food labels: Often and Sometimes (%)	Rarely and Never (%)	Total (%)	p-value
List of Ingredients				0.009
Often and Sometimes	91 (62.3)	55 (37.7)	146 (79.8)	
Rarely and Never	14 (37.8)	23 (62.2)	37 (20.2)	
Serving Size				0.109
Often and Sometimes	77 (61.6)	48 (38.4)	125 (68.3)	
Rarely and Never	28 (48.3)	30 (51.7)	58 (31.7)	
Health Claim				0.015
Often and Sometimes	81 (63.3)	47 (36.7)	128 (69.9)	
Rarely and Never	24 (43.6)	31 (56.4)	55 (30.1)	

Practices	Use of food labels: Often and Sometimes (%)	Rarely and Never (%)	Total (%)	p-value
Calories/ Energy				0.000
Often and Sometimes	85 (68.0)	40 (32.0)	125 (68.3)	
Rarely and Never	20 (34.5)	38 (65.5)	58 (31.7)	
Calories from Fat				0.001
Often and Sometimes	82 (66.1)	42 (33.9)	124 (67.8)	
Rarely and Never	23 (39.0)	36 (61.0)	59 (32.3)	
Total Fat				0.002
Often and Sometimes	78 (66.1)	40 (33.9)	118 (64.5)	
Rarely and Never	27 (41.5)	38 (58.5)	65 (35.5)	

Practices	Use of food labels: Often and Sometimes (%)	Rarely and Never (%)	Total (%)	p-value
Trans Fat				0.000
Often and Sometimes	78 (67.8)	37 (32.3)	115 (62.8)	
Rarely and Never	27 (39.7)	41 (60.3)	68 (37.2)	
Saturated Fat				0.000
Often and Sometimes	77 (68.1)	36 (31.9)	113 (61.7)	
Rarely and Never	28 (40.0)	42 (60.0)	70 (38.3)	
Cholesterol				0.001
Often and Sometimes	79 (66.9)	39 (33.1)	118 (64.5)	
Rarely and Never	26 (40.0)	39 (60.0)	65 (35.5)	

Result:
- Higher the frequency of using/read food label except serving size, higher frequency of food label use

Reason:
Serving Size:
- People who consume a lot of food have the tendency to underestimate their intake (Herman et al., 2003)

Others:
- To get the nutrient information of food
- To improve the nutrient intake (Renee, n.d.)

Consistent Finding:
Talagala and Arambepola (2016)
- The attention paid by the respondents towards serving amount was low