Understanding Health Literacy and Health Behaviors

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BACKGROUND & AIM

Universal healthcare aims to provide citizens with accessible and affordable health care. While the system is widely appreciated by people in Taiwan, there is concern regarding growing dependence on medical care with increased doctor visits and an overloaded system. To ensure high-quality and sustainable healthcare, it is crucial to identify barriers that might have contributed to or will lead to the ineffectiveness of healthcare services. *This study is thus aimed at investigating the health awareness, literacy, and behavior among adult residents in Taiwan.*

HYPOTHESIS

Awareness of health knowledge plays a vital part in disease prevention and health promotion. *We hypothesize that there is a high level of interest in promoting health, but a low level of health literacy associated with behaviors. We also hypothesize that there is a gender- and age-associated difference in health literacy.* It is anticipated that the results will help raise public health awareness and may lead to the development of a targeted resolution to promote effective healthcare.

METHODS

We surveyed the general Taiwanese adult population to identify their health literacy and behaviors during the Global Health internship. The google forms survey, written in Chinese and using a Likert scale and option choices, was distributed on June 4, 2019 by staff at the Taipei Hospital through social media. A total of 43 participants (33 females, 10 males) returned the surveys by June 14, 2019, when the study concluded. Statistical significance was determined using the Fisher's exact test.

RESULTS

Our study revealed that 78.6% (33/42) of participants took health supplements, and 83.7% (31/37) of participants got their information regarding health supplements from social media instead of personal research. 76.7% (33/43) of participants felt that the barrier to their health is their uncertainty regarding which health information is accurate. However, 57.9% (22/39) of them would not read health brochures if provided by the hospital.

Interestingly, 70% (7/10) of males vs 27.3% (9/33) females never or rarely read the nutrition labels on food (***p=0.024***). In contrast to the 72.7% of 31-50 y.o. who sometimes or often understood the nutrition labels, only 28.6% adults >50 y.o. sometimes understood while 64.3 % never or rarely understood (***p=0.032***). While no one rated eating out as healthy or very healthy, 0% males vs. 36.4% females felt that it is very unhealthy or unhealthy, and 100% males vs. 63.6% females felt neutral (***p=0.04***). Lastly, 100% of 31-50yo vs. 69% of >50 y.o. knew what constitutes a balanced diet (***p=0.014***).

Other data was found to not be statistically significant when analyzing differences amongst groups or genders.
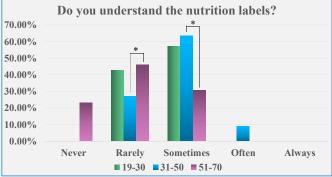
Variables (n (%))	Total	19-30	31-50	51-70	Male	Female
Total participants per group (N)	43	8	22	13	10	33
Do you read the nutrition labels on food?						
Never	3 (6.98%)	0 (0%)	1 (4.55%)	2 (15.38%)	2 (20%)	1 (3.03%) *
Rarely	13 (30.23%)	4 (50%)	5 (22.73%)	4 (30.77%)	5 (50%)	8 (24.24%)
Sometimes	17 (39.53%)	3 (37.5%)	7 (31.82%)	7 (53.85%)	2 (20%)	15 (45.45%)
Often	5 (11.63%)	1 (12.5%)	4 (18.18%)	0 (0%)	1 (10%)	4 (12.12%)
Always	5 (11.63%)	0 (0%)	5 (22.73%)	0 (0%)	0 (0%)	5 (15.15%)
Do you understand the nutrition labels?						
Never	3 (7.14%)	0 (0%)	0 (0%)	3 (23.08%)	3 (30%) *	0 (0%) *
Rarely	15 (35.71%)	3 (42.86%)	6 (27.27%)	6 (46.15%)	4 (40%)	11 (34.38%)
Sometimes	22 (52.38%)	4 (57.14%)	14 (63.64%)	4 (30.77%) *	3 (40%)	19 (59.38%)
Often	2 (4.76%)	0 (0%)	2 (9.09%)	0 (0%)	0 (0%)	2 (6.25%)
Always	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Do you read the labels on medication?						
Never	3 (6.98%)	0 (0%)	1 (4.55%)	2 (15.38%)	3 (30%)	0 (0%)
Rarely	11 (25.58%)	3 (37.5%)	8 (36.36%)	0 (0%)	1 (10%)	10 (30.3%)
Sometimes	18 (41.86%)	4 (50%)	7 (31.82%)	7 (53.83%)	3 (30%)	15 (45.45%)
Often	8 (18.6%)	0 (0%)	4 (18.18%)	4 (30.77%)	3 (30%)	5 (15.15%)
Always	3 (6.98%)	1 (12.5%)	2 (9.09%)	0 (0%)	0 (0%)	3 (9.09%)
What is your opinion on the healthiness of eating out?						
Very unhealthy	2 (4.65%)	0 (0%)	2 (9.09%)	0 (0%)	0 (0%)	2 (6.06%) *
Unhealthy	10 (23.26%)	2 (25%)	7 (31.82%)	1 (7.69%)	0 (0%)	10 (30.3%)
Neutral	31 (72.09%)	6 (75%)	13 (59.09%)	12 (92.31%)	10 (100%)	21 (63.64%)
Healthy	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Very Healthy	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)

	Total	19-30	31-50	51-70	Male	Female
What is most important to you?						
Health	34 (79.07%)	5 (62.5%)	17 (77.27%)	12 (92.31%)	9 (90%)	25 (75.76%)
Happiness	6 (13.95%)	3 (37.5%)	2 (9.09%)	1 (7.69%)	0 (0%)	6 (18.18%)
Wealth	3 (6.98%)	0 (0%)	3 (13.64%)	0 (0%)	1 (10%)	2 (6.06%)
Do you know what constitutes a balanced diet?						
Yes	38 (88.37%)	7 (87.5%)	22 (100%) *	9 (69.23%) *	7 (70%)	31 (93.94%)
No	5 (11.63%)	1 (12.5%)	0 (0%)	4 (30.77%)	3 (30%)	2 (6.06%)
Where do you get your health information?						
Social Media	36 (83.72%)	7 (87.5%)	19 (86.36%)	10 (76.92%)	7 (70%)	29 (87.88%)
Personal Research	7 (16.28%)	1 (12.5%)	3 (13.64%)	3 (23.08%)	3 (30%)	4 (12.12%)
Would you reach health brochures if provided to you?						
Yes	22 (57.89%)	1 (25%)	13 (61.9%)	8 (61.54%)	5 (50%)	17 (60.71%)
No	16 (42.11%)	3 (75%)	8 (38.1%)	5 (38.46%)	5 (50%)	11 (39.29%)
Do you take health supplements?						
Yes	33 (78.57%)	3 (42.86%)	19 (86.36%)	11 (84.62%)	8 (80%)	25 (78.13%)
No	9 (21.43%)	4 (57.14%)	3 (13.64%)	2 (15.38%)	2 (20%)	7 (21.88%)
Where do you get the information regarding your health supplements?						
Social Media	31 (83.78%)	3 (75%)	16 (80%)	12 (92.31%)	8 (80%)	23 (85.19%)
Personal Research	6 (16.22%)	1 (25%)	4 (20%)	1 (7.69%)	2 (20%)	4 (14.81%)
What do you feel is a barrier to your health?						
Easy access to health care services (e.g. see a physician) lack of health education	7 (16.28%)	3 (37.5%)	1 (4.55%)	3 (23.08%)	3 (30%)	4 (12.12%)
	33 (76.74%)	5 (62.5%)	18 (81.82%)	10 (76.92%)	7 (70%)	26 (78.79%)
Not sure which information is accurate						
Unable to get resources	3 (6.98%)	0 (0%)	3 (13.64%)	0 (0%)	0 (0%)	3 (9.09%)

Figure 1: Comparisons were made between groups to identify statistically significant differences (marked by sets of colored asterisks, all results were statistically significant as defined by p<0.05) based on answer choices from an anonymous nutrition survey. Patients were asked questions regarding their health literacy and offered a Likert scale or answer choices in Mandarin translation. Questions were chosen based on translatability and relevance to current health issues in Taiwan.

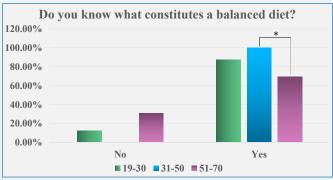# Understanding Health Literacy and Health Behaviors

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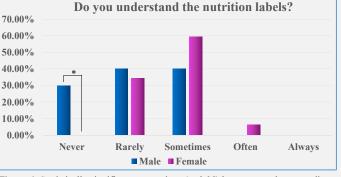
Do you understand the nutrition labels?

Figure 2: Statistically significant comparison (p<0.05) between age groups regarding understanding nutrition labels. The only group that never understood nutrition labels were those age 51+. The only group that often understood nutrition labels was the 31-50 group.

Do you know what constitutes a balanced diet?

Figure 3: Statistically significant comparison (p<0.05) between age groups regarding balanced diet. Adults 51+ were much more likely to not know what constitutes a balanced diet, while all adults in the 31-50 group knew what was in a balanced diet. The younger population (19-30) mostly knew what a balanced diet included but some did not know.

Do you understand the nutrition labels?

Figure 4: Statistically significant comparison (p<0.05) between genders regarding understanding nutrition labels. The only group that never understood nutrition labels were males (30%). The only group that often understood nutrition labels were females, but most of the population only rarely or sometimes understand nutrition labels.
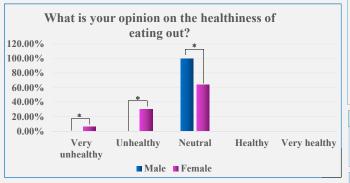
What is your opinion on the healthiness of eating out?

Figure 5: Statistically significant comparison (p<0.05) between genders regarding the healthiness of eating out. Only females stated that they believed eating out was very unhealthy or unhealthy. Majority of the population is neutral regarding the healthiness of eating out.

Do you read the nutrition labels on food?

Figure 6: One of the initial questions we sought to answer involved understanding where the lack of health literacy stemmed from. We wanted to understand if the population was doing basic steps like reading nutrition labels. While not statistically significant groups, we did find that nearly 90% of people rarely or sometimes read nutrition labels, and >40% rarely or never read nutrition labels, indicating a potential lack of health literacy.

DISCUSSION & CONCLUSION

- Pilot study has uncovered specific trends in health literacy and behaviors in Taiwan with particular differences between genders and age groups.
- Older population understand nutrition labels less and know less about what constitutes a balanced diet than other groups, indicating a lack of health literacy and additional health education may be necessary.
- Males were less likely to understand nutrition labels as compared to females, indicating a potential disparity in health literacy between genders.
- Easy access to social media appeared to impact people's health behaviors, yet the health literacy is generally low considering the available resources.
- In summary, we anticipate that increasing awareness regarding this issue will promote health literacy, thus reducing disease burden and increasing healthcare quality.

REFERENCES

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