

Awareness, Knowledge and Attitude towards Kale and Its Health Benefits According to the Socioeconomic Status in Saudi Adults

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Supplementary Table S1: Kale knowledge questionnaire responses.

| | All | Male | Female | P |
|---|------------|------------|------------|------|
| N | 1200 | 476 | 724 | |
| Q1. Is Kale considered a high calorie food? | | | | |
| Yes | 9 (0.8) | 2 (0.4) | 7 (0.9) | 0.15 |
| No | 722 (60.2) | 274 (57.6) | 448 (61.9) | |
| Don't know | 469 (39.1) | 200 (42) | 269 (37.2) | |
| Q2. Is Kale considered a high nutritional value food? | | | | |
| Yes | 761 (63.4) | 285 (59.9) | 476 (65.6) | 0.11 |
| No | 11 (0.9) | 4 (0.8) | 7 (1) | |
| Don't know | 428 (35.7) | 187 (39.3) | 241 (33.3) | |
| Q3. Is Kale considered a food with antioxidant property? | | | | |
| Yes | 358 (29.8) | 128 (26.9) | 230 (31.8) | 0.07 |
| No | 401 (33.4) | 147 (30.9) | 254 (35.1) | |
| Don't know | 441 (36.8) | 201 (42.2) | 240 (33.1) | |
| Q4. Is Kale considered a food with immune boost property? | | | | |
| Yes | 685 (57.1) | 261 (54.8) | 424 (58.6) | 0.31 |
| No | 5 (0.4) | 4 (0.8) | 3 (0.4) | |
| Don't know | 508 (42.3) | 211 (44.3) | 297 (41.0) | |
| Q5. Does excessive eating of Kale cause constipation? | | | | |
| Yes | 138 (11.5) | 63 (13.2) | 75 (10.4) | 0.06 |
| No | 282 (23.5) | 97 (20.4) | 185 (25.5) | |
| Don't know | 780 (65) | 316 (66.4) | 464 (64.1) | |
| Q6. Is Kale considered a food rich in fibers? | | | | |
| Yes | 663 (55.3) | 242 (50.8) | 421 (58.1) | 0.02 |
| No | 17 (1.4) | 5 (1.1) | 12 (1.7) | |
| Don't know | 520 (43.3) | 229 (48.1) | 291 (40.2) | |
| Q7. Is Kale considered a food rich in Vitamin C? | | | | |
| Yes | 374 (31.2) | 138 (29) | 236 (32.6) | 0.37 |
| No | 111 (9.3) | 43 (9) | 68 (9.4) | |
| Don't know | 715 (59.6) | 295 (62) | 420 (58.0) | |
| Q8. Is Kale consumption considered bad for people suffering from digestive problems? | | | | |

| | | | | |
|--|------------|------------|------------|--------|
| Yes | 164 (13.7) | 76 (16) | 88 (12.2) | |
| No | 236 (19.7) | 81 (17) | 155 (21.4) | 0.05 |
| Don't know | 800 (66.7) | 319 (67) | 481 (66.4) | |
| Q9. Is Kale consumption considered a food with anti-carcinogenic properties? | | | | |
| Yes | 206 (17.2) | 80 (16.8) | 126 (17.4) | |
| No | 115 (9.6) | 48 (10.1) | 67 (9.3) | 0.88 |
| Don't know | 879 (73.3) | 348 (73.1) | 531 (73.3) | |
| Q10. Is Kale consumption considered a food with anti-inflammatory properties? | | | | |
| Yes | 228 (19) | 92 (19.3) | 136 (18.8) | |
| No | 90 (7.5) | 37 (7.8) | 53 (7.3) | 0.92 |
| Don't know | 882 (73.5) | 347 (72.9) | 535 (73.9) | |
| Q11. Is Kale consumption considered a food high in fats? | | | | |
| Yes | 22 (1.8) | 5 (1.1) | 17 (2.3) | |
| No | 693 (57.8) | 271 (56.9) | 422 (58.3) | 0.19 |
| Don't know | 485 (40.4) | 200 (42) | 285 (39.4) | |
| Q12. Does Kale play a role in controlling chronic diseases? | | | | |
| Yes | 358 (29.8) | 151 (31.7) | 207 (28.6) | |
| No | 50 (4.2) | 18 (3.8) | 32 (4.4) | 0.47 |
| Don't know | 792 (66) | 307 (64.5) | 485 (67.0) | |
| Q13. Does the nutritional value of Kale increase after cooking? | | | | |
| Yes | 303 (25.3) | 142 (29.8) | 161 (22.2) | |
| No | 193 (16.1) | 55 (11.6) | 138 (19.1) | <0.001 |
| Don't know | 704 (58.7) | 279 (58.6) | 425 (58.7) | |

Note: The data was presented as frequency (%).The difference between males and females was calculated by chi-squared test.

Supplementary Table S2. Average nutritional content of one cup of kale.

| | | Amount in 1 cup | Average RDI | Average RDI satisfied (%) |
|----------------|--------|-----------------|-------------|---------------------------|
| energy | (kcal) | 49 | 2400 | 2.04 |
| Macronutrients | | | | |
| Carbohydrate | (g) | 8.75 | 130 | 6.73 |
| Dietary Fibers | (g) | 3.6 | 28 | 12.86 |
| protein | (g) | 4.28 | 51 | 8.39 |
| Total fats | (g) | 0.93 | 65 | 1.43 |
| Minerals | | | | |
| Ca | (mg) | 150 | 1100 | 13.64 |
| Fe | (mg) | 1.47 | 13 | 11.31 |
| Mg | (mg) | 47 | 370 | 12.7 |
| P | (mg) | 92 | 700 | 13.14 |
| K | (mg) | 491 | 4700 | 10.45 |
| Na | (mg) | 38 | 1400 | 2.71 |
| Zn | (mg) | 0.56 | 9.5 | 5.89 |
| Cu | (mg) | 0.8 | 900 | 0.09 |
| Mn | (mg) | 0.6 | 2.05 | 29.27 |
| Vitamins | | | | |
| Vitamin C | (mg) | 21 | 82.5 | 25.45 |
| thiamin | (mg) | 0.11 | 1.15 | 9.57 |
| riboflavin | (mg) | 0.13 | 1.15 | 11.3 |
| niacin | (mg) | 1 | 15 | 6.67 |
| B-6 | (mg) | 0.271 | 1.5 | 18.07 |
| folate | (mg) | 141 | 400 | 35.25 |
| Vitamin A | (mg) | 172 | 1150 | 14.96 |
| Vitamin E | (mg) | 1.54 | 15 | 10.27 |
| Vitamin K | (mg) | 494 | 150 | 329.33 |

Note: The data was drawn from USDA website available at <https://ndb.nal.usda.gov/ndb>. The nutritional requirements are estimated for an average adult and may vary according to age and sex.