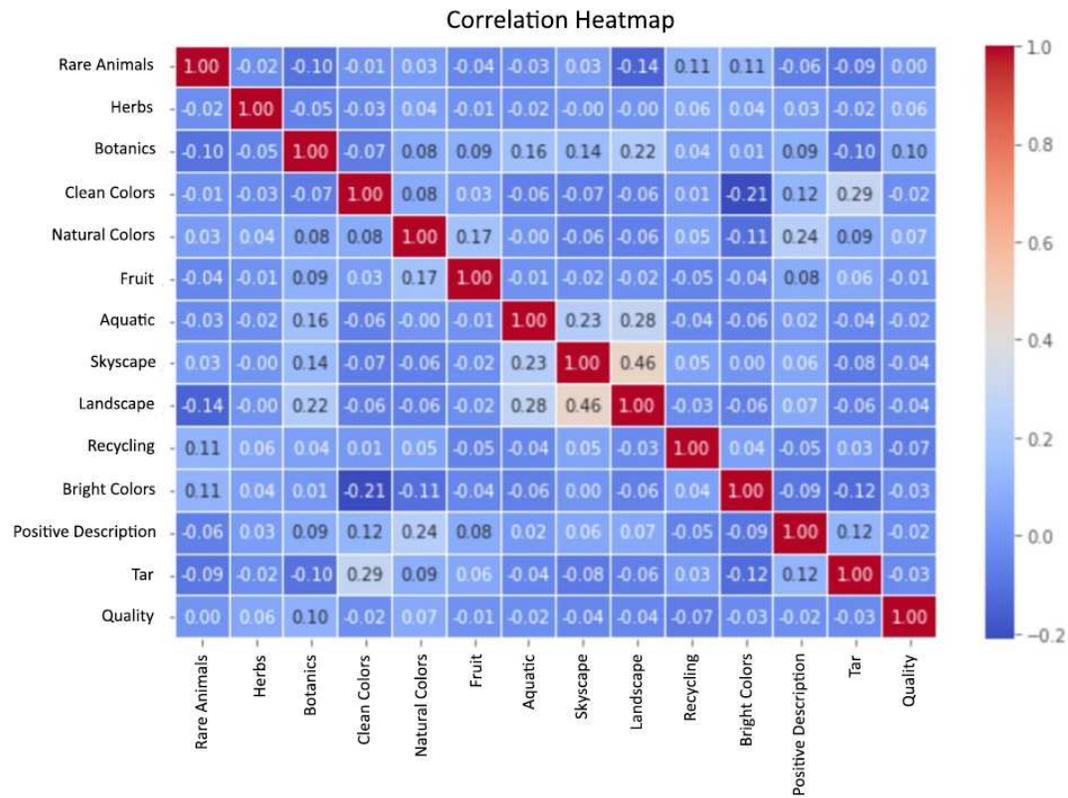


Supplementary Figure 1. Correlation matrix heatmap of coded health appeals present on 1023 cigarette packs purchased in China in 2013 and 2017.



Supplementary Table 1. List of statements^a and sorted categories^b from group concept mapping process with associated ratings^c

Category	Rating Score
Statement	
Chinese Symbolism & Traditional Medicine	4.62
Natural ingredients (e.g. Extract from natural herbs)	5.52
Images of Chinese medical herbs (e.g. Ginseng, cordyceps sinensis)	4.54
Supplements (e.g. Like ginseng as ingredient)	4.39
Images of expensive and rare animals (e.g. Panda, golden monkey)	4.07
Fresh Elements	4.85
Fresh colors	5.19
Natural imagery like landscapes (e.g. Mountains)	5.14
Natural imagery like farming (e.g. Praries)	5.14
Aquatic imagery like oceans, rivers, streams	5.11
Natural colors	5.07
Imagery of sunshine	5.07
Imagery of fruit	5.00
Natural imagery like seascape (e.g. Ocean, coconut tree)	4.93
Clean colors	4.85
Botanical imagery	4.82
Images of pure materials (e.g. Diamonds, ice)	4.82
Natural imagery like skyscapes (e.g. Blue sky,white cloud, sunshine)	4.82
Imagery of vegetables	4.71
Fruit flavor (e.g. Orange flavor or tropical fruit flavor)	4.68
Imagery of flowers	4.68
Imagery of lawn/grass	4.68
Images of farm animals (e.g. Cow, horse)	4.32
Images of gentle/cute/docile animal (e.g. Birds, dogs)	4.21
Familiarity & Youth Lifestyles	4.30
Delicate package designs	4.79
Healthy looking models or characters (eg fitness people, people with muscles)	4.79
A simple and memorable slogan	4.57
Scenes of warm life (e.g. Family, shopping for groceries)	4.54
Imagery of sports	4.46
Old style - 1990s design style	4.43
Cute packaging	4.29
Simple images	4.21
Ethnic styles	4.04
Traditional styles (e.g. Dragon patterns, clothing , traditional building- palaces)	3.89
Place name (e.g. Sansha, beijing)	3.82
Cartoons or comics	3.70
Product Materials & Expensiveness	4.77
Environmentally friendly packaging	5.64
Environmental technology or measures used in the products	5.46
An excellent place of origin	5.39

High-quality packaging	5.07
An environmental protection logo or mark	5.21
Imported products	4.41
Famous artworks	3.79
A high price and short supply	3.18
Energetic	4.46
Energetic	5.11
Imagery of smiles	4.46
Bright colors	4.25
Warm colors	4.04
Health & Marketing Claims	4.58
Warnings about products impact on health	5.39
Tips for good life habits	4.86
It is well-made	4.82
Presence of quit smoking signs or language	4.82
Positive introduction	4.75
Lightweight package	4.70
Safe or good for vulnerable groups like children and pregnant women	4.39
Description or invitation about a trial experience	4.30
Celebrity endorsements	4.00
Absence of quit smoking signs or language	3.71
Quality Certification	5.55
National quality safety signs (e.g. QS certification)	5.89
Perceived healthy standards (e.g. Low tar)	5.79
Product security measures (e.g. Bar code)	5.61
Qualifications from the brand	5.44
That it is recommended by health organizations	5.00

^a Participants generated 160 unique statements in response to the prompt *When I am shopping for a product, something specific on the packaging or advertising that makes me think the product is healthy or good for me is...*

^b Cluster categories are based on the best fit of the sorting data where participants sorted all 61 statements into piles of at least two statements

^c Participants rated each statement based on how strongly they agreed (1=strongly disagree; 7 strongly agree) that the "specific packaging or advertising feature described in the statement suggests a product is healthy or good for you.