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Background

- Pictorial health warning labels (HWLs) function to educate the public about smoking harms; increase quit-related thoughts among smokers; and prevent non-smokers from initiating use
- China's current cigarette HWLs are text only and translate to "Smoking is harmful to your health; please don't smoke in smoke-free places"
- Pictorial HWLs are more effective than text-only HWLs. Measuring indicators of effectiveness (salience of HWLs, thinking about the health risks of smoking, thinking about quitting smoking, avoidance of HWLs, perceived risk of smoking, and likelihood of forgoing next cigarette) can help explain how viewing HWLs impacts effectiveness

Study Objective: To conduct a pre-post analysis of these indicators to evaluate how pictorial HWL textual framing (factual- vs. personal-text) and depictions of harm (self-harm vs. smokers-harming-others) may impact HWL effectiveness in China

Methods

- Cross-sectional randomized experimental survey conducted during 2016 in Beijing, Shanghai, Wuhan, and Kunming
- Sample (n=1612): adult smokers; 50% < 40 years old, 50% ≥ 40 years old; 95% men, 5% women
- Answered questions regarding indicators of effectiveness of the current text-only HWLs in China. Note: Participants were prompted to recall the current HWLs prior to answering the questions. Images of the current text-only HWLs were not viewed by participants during the survey
- Randomized to one of four groups: self-harm & factual text, self-harm & personal text, smokers-harming-others & factual text, and smokers-harming-others & personal text. Each group of HWLs included eight HWLs: four pathology and four individual suffering images
- Answered questions regarding indicators of pictorial HWL effectiveness
- Two-tailed t-tests, $\alpha=0.05$, were conducted to compare differences between text-only (pre-) and pictorial (post-) HWL indicators

Sample of mock cigarette packs with HWLs (English translations), by independent group



Results

Pre-post comparison of indicators of cigarette pictorial HWL effectiveness, irrespective of randomization

Exposure	Salience	Thinking about health risks	Perceived risk	Thinking about quitting	Forgoing next cigarette	Avoidance
Pre-exposure	2.3 [REF]	2.4 [REF]	2.4 [REF]	1.8 [REF]	1.9 [REF]	1.6 [REF]
Post-exposure	3.1*	2.7*	2.9*	2.2*	2.6*	1.7*

Salience (1-5, 5 being most effective); Thinking about health risks (1-5, 5 being most effective); Perceived risk (1-5, 5 being most effective); Thinking about quitting (1-4, 4 being most effective); Forgoing next cigarette (1-5, 5 being most effective); Avoidance (1-2, 2 being not likely to avoid)

Smokers, n=1612

* p<0.0001

Discussion

- All reported indicators of HWL effectiveness increased after viewing pictorial HWLs with the exception of avoidance of factual pictorial HWLs
- Data suggest that both personal and factual pictorial HWLs depicting smoking or secondhand smoke-related harms are effective
- Future studies can use these indicators as tools to identify the most effective and culturally relevant pictorial HWLs for Chinese smokers

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