

Product Experience and Risk Perceptions in Platform 1 Users: a Cross-Sectional Survey in Japan

**P. Langer, Z. Sponsiello-Wang, L. Prieto,
M. Dobrynina, D. Skiada, N. Camille,
R. Weitkunat, F. Lüdicke**

PMI R&D, Philip Morris Products S. A., Quai
Jeanrenaud 5, CH-2000 Neuchâtel, Switzerland
(Part of Philip Morris International group
of companies)

Background

Philip Morris has been marketing a potential reduced-risk product commercialized under the brand name IQOS in Japan since November 2014. IQOS reached a prevalence of use of 1.2% in the Japanese adult general population by 2017 [1]. In order to define the population health effects of IQOS, it is important to understand how the product is perceived and used under real world conditions. Perceived quality attributes and consumer satisfaction are key determinants for successful switching from cigarettes to an alternative product like IQOS.

Methods

We initiated a series of cross-sectional surveys in representative samples of the Japanese adult general population and, in addition, in samples of registered IQOS users in December 2016. Perceived quality attributes and consumer satisfaction were assessed in the sample of registered IQOS users which were randomly selected from Philip Morris Japan's consumer database. In an internet survey, participants were asked to estimate the risk to smokers of getting 18 different diseases or adverse health conditions because of smoking cigarettes and similarly to estimate the risk to IQOS users because of using IQOS on a five point scale from no to very-high risk. To evaluate the degree to which IQOS users experience the reinforcing effect of using IQOS, participants were asked to confirm 12 statements on how IQOS made them feel today on a seven point scale from not at all to extremely. Eventually, participants were asked to indicate their agreement on aesthetic changes which occurred or not since they started using IQOS on a 5 point scale from strong disagreement to strong agreement.

Table 1. Sample characteristics (n=1,500)

Mean age (years) [95%CI]		38.5 [37.9; 39.0]
Sex (percent)	Male	81.6
	Female	18.4
Highest education (percent)	College/University	55.3
	High School	37.5
	Junior High School	6.6
	Don't know/Not applicable	0.6
Occupation (percent)	Don't know/Not applicable	27.1
	Managing profession	20.3
	Self-employed/Small private business	16.9
	Manual employee	14.3
	Clerical employee	14.0
	Housewife	3.9
	Student	1.8
	Retired/Unemployed	1.2
	Farming/Agriculture/Fishery	0.5
Current tobacco product use (percent)	IQOS	100.0
	Cigarette	26.9
	Ploom	8.1
	E-cigarette	4.5
	Cigars / pipes / Kiseru / shisha	1.2
	Smokeless tobacco (chewing tobacco)	1.1
	Smokeless tobacco pipe	0.9
Nicotine replacement therapy	0.7	
Average number of days of IQOS use in last 30 days [95% CI]		29.2 [29; 29.4]
Average number of HeatSticks used per day [95% CI]		16.1 [15.6; 16.5]

CI = Confidence interval

Results

The survey was completed by 1,500 current IQOS users between March and July 2017 (completion rate = 11.2%). A description of the sample including sociodemographic characteristics, current tobacco product use pattern, frequency and intensity of IQOS consumption are shown in table 1. Results are reported as frequencies and means with 95% confidence interval in square brackets if applicable.

Risk perception

The overall risk score associated with smoking cigarettes ranging from 0 (no perceived risk) to 100 (very high perceived risk) was 63.7 [62.8-64.6]. The overall risk score associated with using IQOS was 44.0 [43.1-44.9] (see figure 1). The overall perception of product use related health risks was higher for smoking cigarettes than for using IQOS (overall score difference of 19.5 (95% confidence interval, 18.5-20.5).

Consumer satisfaction

Results on the reinforcing effect of using IQOS are presented as the average response of domain-related items ranging from 1 (not at all) to 7 (extremely): IQOS use satisfaction: 4.0 [3.9-4.19]; enjoyment of respiratory tract sensation: 3.7 [3.6-3.8]; psychological reward: 3.3 [3.2-3.4]; aversion: 2.1 [2.0-2.2], and craving reduction: 3.9 [3.8-4.0]. Complete results for all items are shown in figure 2. Compared to a historic control of smokers [2] notable differences can be seen in sub-scales «enjoyment of respiratory tract system» (3.7 vs 2.8 for smoking), craving reduction (3.9 vs 5.04 for smoking) and aversion (2.1 vs 1.4 for smoking).

Self-reported changes

A person was considered to confirm a change statement if he/she selected one of the two highest grading options «somewhat agree» or «strongly agree». Changes which were confirmed most were «teeth appears less stained or yellowish» (66%), «my breath smells better» (56.4%) and «sense of smell has improved» (36.6%). Thirty point six percent confirmed that «sense of taste has improved», 22.1% that «it is easier to exercise» and 12.2% that «Face skin appears smoother and firmer». Complete results for all items are shown in figure 3.

Figure 1: The overall risk score associated with smoking cigarettes and using IQOS

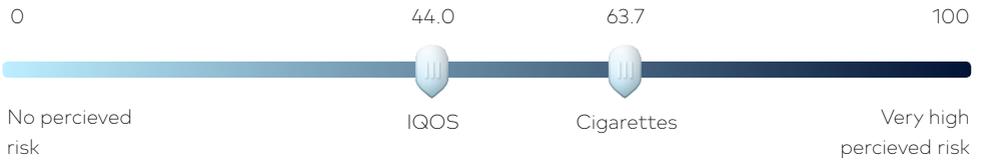


Figure 2: Satisfaction with IQOS

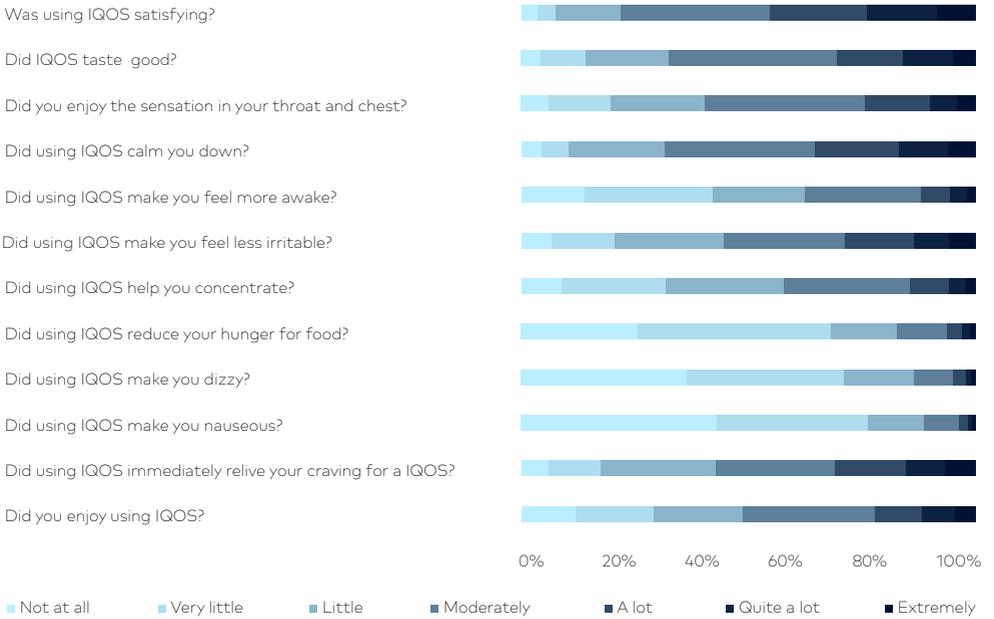
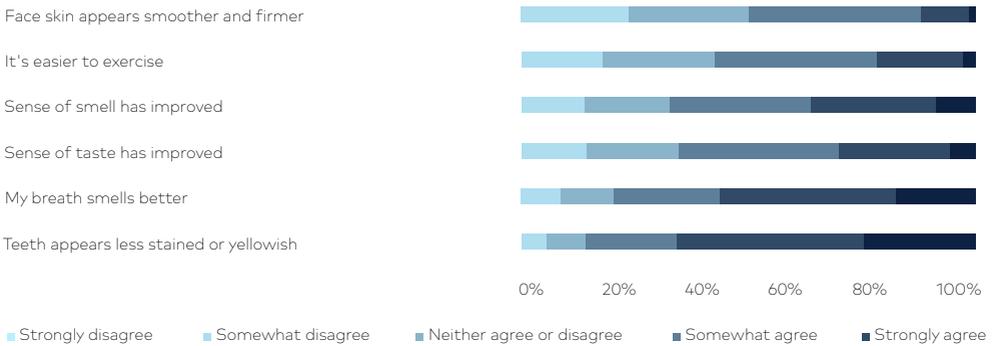


Figure 3: Self-reported changes since using IQOS



Conclusion

IQOS users in Japan showed high awareness of locally communicated product characteristics and perceived using the product as having lower health related risks than cigarette smoking. Furthermore, they are generally satisfied with the product.

References

[1] Van der Plas A, Prieto L, Skiada D, Dobrynina M, Baker G, Lüdicke F. Prevalence and patterns of tobacco use in Japan after the commercialization of a heat-not-burn alternative (IQOS) to cigarettes. 2017; Available from: <https://www.pmiscience.com/library/prevalence-and-patterns-tobacco-use-japan-after-commercialization-heat-not-burn-alternative> (Access on 26 Feb 2018).

[2] Cappelleri J, Bushmakin A, Baker C et al. Confirmatory factor analyses and reliability of the modified cigarette evaluation questionnaire. *Addict Behav.* 2007;32(5):912-23.

Learn more



Follow /PMIScience



Reduced-Risk Products

Reduced-Risk Products («RRPs») is the term we use to refer to products that present, are likely to present, or have the potential to present less risk of harm to smokers who switch to these products versus continued smoking. We have a range of RRP's in various stages of development, scientific assessment and commercialization. Because our RRP's do not burn tobacco, they produce far lower quantities of harmful and potentially harmful compounds than found in cigarette smoke.

Competing financial interest

The research described in this brochure was sponsored by the Philip Morris International group of companies

Global Forum on Nicotine

June 14–16, 2018
Warsaw, Poland