

PEER REVIEW HISTORY

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This paper was submitted to a another journal from BMJ but declined for publication following peer review. The authors addressed the reviewers' comments and submitted the revised paper to BMJ Open. The paper was subsequently accepted for publication at BMJ Open.

ARTICLE DETAILS

TITLE (PROVISIONAL)	Prevalence and perceptions of flavour capsule cigarettes among adults who smoke in Brazil, Japan, Republic of Korea, Malaysia, and Mexico: Findings from the ITC Surveys
AUTHORS	Kyriakos, Christina; Erinoso, Olufemi; Driezen, Pete; Thrasher, James; Katanoda, Kota; Quah, Anne; Tabuchi, Takahiro; PEREZ, CRISTINA; Seo, Hong Gwan; Kim, Su Young; Amer Nordin, Amer Siddiq; Hairi, Farizah; Fong, Geoffrey; Filippidis, Filippos

VERSION 1 – REVIEW

REVIEWER	Brown, Jennifer Johns Hopkins University Bloomberg School of Public Health
REVIEW RETURNED	08-Jan-2024

GENERAL COMMENTS	<p>This study examined prevalence and perceptions of flavor capsule cigarette use in five countries using ITC survey data. Overall, the methods are sound, and the manuscript is well-organized and written. I have a few minor comments.</p> <p>Introduction</p> <p>1. Please add why the five countries included in the analyses were selected as the focus for this study.</p> <p>Methods</p> <p>2. Some readers may not be familiar with the ITC surveys. Please provide more context and spell out ITC before using the acronym.</p> <p>3. Reasons for choosing usual brand - please clarify if for Brazil and Malaysia, participants could only choose one response option or as many options that apply.</p> <p>4. For the covariate "sex", were other response options besides male and female provided?</p> <p>Results</p> <p>5. Table 1 – there is missing data in the 'cigarette smoking prevalence' column.</p> <p>Discussion</p>
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	6. Pg. 23, line 33: I think there may be a typo and “innovative” should replace “innovate”.
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REVIEWER	Vellios, Nicole University of Cape Town, Research Unit on the Economics of Excisable Products
REVIEW RETURNED	11-Jan-2024

GENERAL COMMENTS	<p>Overall comment: Thank you for the opportunity to review this paper. Overall, more information is needed on the sample (e.g., sampling, data collection), and the discussion needs to be tightened. I found several inaccurate sentences in the discussion where the text is not supported by the findings of the paper. I have made many suggestions, which I hope will help the authors to improve the paper for publication.</p> <p>Major comments</p> <p>1. In the “what this paper adds” section, the authors say that “There was no consistent pattern of perceptions of relative harmfulness capsule cigarettes vs. non-capsule cigarettes”. The authors can’t make this statement as respondents were not asked to compare capsule cigarettes to non-capsule cigarettes. The same issue exists throughout the paper and including in the title. Perceived harmfulness of usual brand was examined with the question, “Do you think that the brand you usually/currently smoke, might be a little less harmful, no different, or a little more harmful, compared to; other cigarette brands?”. “Other cigarette brands” could be interpreted in two ways (1) other brands that have a capsule or (2) other brand with no capsules. The authors need to make sure the results are presented to reflect that respondents are comparing their current brand to another brand (not capsule cigs compared to non-capsule cigs). Respondents were not asked specifically about capsule cigarettes versus non-capsule cigarettes – which is how a reader might interpret the results if they are not looking carefully at the details.</p> <p>2. There is excessive repetition in the 9 tables (detailed comments provided below).</p> <p>Minor comments</p> <p>Abstract</p> <p>1. In introduction of abstract (and elsewhere): the authors say: “This study examined prevalence and perceptions of flavour capsule cigarettes across five countries”. The reader expects to read that xx% of the total population use FCC. But this is not the case. The authors estimate prevalence AMONG smokers. This needs to be made explicit everywhere. E.g., in results of abstract: “Results: There were substantial differences in the prevalence of flavour capsule cigarette use AMONG SMOKERS across the five countries....”.</p> <p>2. Write out ITC when it is first used in abstract and in the paper.</p> <p>Introduction</p> <p>3. In the introduction, it would be helpful if the author’s provided smoking prevalence estimates for factory-made cigarettes in each of the 5 countries. There is a “cigarette smoking prevalence” column in Table 1, but there is no data in the column.</p>
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	<p>4. Can the authors provide more info about why they chose these specific countries? The grouping seems quite random. What was the selection criteria? I see ITC has data for 31 countries. Presumably, much of the ITC data is outdated, and perhaps not all the surveys asked questions on FCCs. Page 7 lines 3 to 8: did any of these studies also use ITC data? How did these authors present smoking prevalence of FCCs (i.e., smoking prevalence of FCCs among the entire population, or only among smokers).</p> <p>5. Page 6 line 12. Perhaps use a different word to “important”.</p> <p>6. Page 6. Line 17. I thought that FCC had one or 2 capsules. Can the authors provide more info? This will also help the interpretation of figure 1. This question came up again for me on Page 9 lines 15-24.</p> <p>Methods</p> <p>7. Page 8 line 3-5. Did the ITC only sample smokers? Please add this info in. This will help the reader to understand why overall cigarette smoking prevalence rates from ITC were not reported. The current wording is “The sample included adult...” – it is unclear whether this is the sample the authors chose, or if it was the only option they had.</p> <p>8. Page 8 lines 4-13. I had to read these lines several times to understand what “the latter measure” was referring to. Please reword these sentences to improve clarity.</p> <p>9. Page 8 lines 15 to 19: So the data from Mexico is not nationally representative? Perhaps the authors can make this clearer. In the first sentence of the discussion, the authors say that all samples are representative, but I'm not sure this is true for Mexico.</p> <p>10. Can the authors also be clearer about which surveys were done in person (if any), and which were done on the phone? Table 1 has “web” under survey mode. But this could mean a person sitting at home filling in the questionnaire online, or a survey administered in person on a tablet connected to the internet. Can the authors explain why the response rate was so low in all countries? On page 8 line 29, the authors say “Detailed description of the methods employed for the respective surveys used in this study are available on the ITC website for each country (30–33)”. Can the authors provide one or two paragraphs summarising the methods? The reader doesn't want to have to go sieve through various documents on the ITC website. While I understand this information was not included because of word count issues, it is important, especially for readers who are unfamiliar with the datasets. The discussion can be shortened to save on words.</p> <p>11. Page 11 lines 8-10. Current wording makes it sound like the authors of the current paper constructed the weights. Make it clearer that the weights were done by the ITC team and were provided with the datasets.</p> <p>Results</p> <p>12. Page 12 table 1 and supplementary table 1: there is a lot of overlap in these tables (table 1: column 1, column 4, and last five columns are all repeated in Suppl. Table 1). I suggest that the authors use Supplementary table 1 as the main table in the main text, and pull in the extra info that is in table 1 (e.g., Income level, cig smoking prev, dates of data collection etc). No plans to quit in Brazil in table 1 differ to suppl table 1. Check all numbers. I assume that the author just wanted to present the main descriptive stats in the main paper, but looking at the sample sizes by subgroup is helpful. Also, only putting in % for some categories gives very limited info in Table 1 (low education is presented, but not the</p>
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	<p>other categories). Note that for Brazil, it looks like there is an error in Suppl table 1 which says that 92.8% of smokers are non-daily smokers. Whereas table 1 says 92.8% are daily smokers (more believable). If the authors decide to keep the tables as is, the reverse the columns and rows of table 1. And correct the title – is has 18+, which is not true for Japan and the Republic of Korea. Cig smoking prevalence data missing.</p> <p>13. It seems that the authors started out with 6 countries. This crops up in some table headings.</p> <p>14. Title headings are long. Summarise to improve clarity.</p> <p>15. Page 13 line 8-12: situate the reader after the first sentence by providing, in brackets, which table they can find this info. Same with next sentence as you've now moved to a different table. Apply same principal throughout paper.</p> <p>16. So Table 2 is a summary of supplementary tables 2 and 3? There is too much repetition in these 3 tables and it is frustrating to try and work out where I should be looking. Table 2: why are significance stars on the Cis and not on the coefficients? Suppl table 3 formatting is better – I can see at a glance which coefficients are significant (in bold).</p> <p>17. In the current context, explain what “high sampling variability” means (is it small sample size?), and provide cut-off size ($n < xx$).</p> <p>18. Again, there is repetition in Figure 1 and Suppl table 4. Choose 1. Both aren't necessary.</p> <p>19. Page 16 line 9. I'm not sure what this sentence is saying: “Adults who smoked FCCs were most likely to report that they crushed the capsule of every cigarette”. Most likely compared to ...? in every cigarette or every capsule in a cigarette?. Figure 1: perhaps use different colours to make this more readable. Can the authors write more about the findings? For example, why would 18% of smokers in Brazil buy FCCs and not crush any capsule? Is this a sample size issue? Then the table might be better than the graph as it provides more info. Consider switching rows and tables for suppl table 4. This will make is much easier to read.</p> <p>20. Again, have one table, not table 3 and suppl table 5. Same for table 3 and suppl table 6</p> <p>21. BMJ Open: “we recommend your article does not exceed up to five figures and tables”. To increase the readability of the paper overall, I suggest that the authors delete current tables 1-3, and figure 1 and replace with:</p> <ul style="list-style-type: none"> - Table 1: Suppl Table 1 (adding in the extra info from current table 1) - Table 2: Suppl Table 2 - Table 3 (which looks odd with all the missing cells): Suppl Table 3 (put somewhere in title that these are the logistic regressions) - Table 4: Suppl Table 4 (switching rows and columns) - Table 5: Suppl Table 5 (to make the table shorter, maybe delete the missing numbers and just add a note on them in footnote). <p>And then have only one table in the suppl file (suppl table 6). This will reduce the total amount of table and figures from 10 to 6 and avoid all the repetition. My understanding is that supplementary data should be new additional information, not repetition. Also, as a reader, if I don't read the suppl file, I feel like I've missed out, which would definitely happened in the current setup.</p> <p>22. Did the authors consider running any interactions in their regressions? E.g., sex*age?</p> <p>Discussion</p>
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	<p>23. Page 19 lines 44-46: The authors say “FCC users mostly reported that they crushed every capsule when they smoked a pack of FCCs”. This sentence is not supported by the results, which stated that crushing every capsule in a pack was: Japan (76.6%), Republic of Korea (59.7%), Brazil (52.7%) and Malaysia (45.1%). The authors may want to comment on why these numbers are surprisingly low. The authors need to check that all sentences in results and discussion are accurate.</p> <p>24. This section needs to be tightened (Page 22 first few lines): “Our findings on correlates of FCC use varied across the countries, but are largely consistent with previous studies(13,20–23,25). FCC use was associated with younger age in Japan, South Korea(22), and Malaysia, with a marginally non-significant independent association with younger age in Mexico.” Does the second sentence refer to the findings of the current paper? Or the findings from the existing literature? If the later, then references are needed after each country.</p> <p>25. Page 22 lines 17 to 20 – move the refs to after “Mexico”.</p> <p>26. Page 22 line 19: In Japan, females also had greater odds of FCC use. Again, is this the finding of the current study or another study? I think the current. Maybe start sentence with, “we found that...”. Same comment for the last sentence of this paragraph.</p> <p>27. Page 22 line 29 improve the detail in this sentence “Those with high education, who smoked non-daily, and had plans to quit were more likely to use FCCs in some, but not all countries, in line with other studies(5,13).” The sentence is quite meaningless. Rather say education was significant in Brazil, Japan and Mexico etc.</p> <p>28. Page 22 lines 30-42. This is repetition from the first paragraph of the discussion. See previous comment about this sentence not reflecting findings accurately.</p> <p>29. Page 22 last paragraph: those in Brazil believing their brand was more harmful than other brands – is this for smokers who use FCCs or smokers who use normal cigs?</p> <p>30. Page 23 lines 24-26: The authors say that: “This is further supported by our finding that half of FCC users reported that a reason for choosing their brand is because it is “not as bad for health”. Again, this sentence is not supported by the findings. From supple table 6, only 23.7% of Brazilians answered yes to “not as bad for health” (and 50.3% in Malaysia). Also the way the sentence is written implies that the findings is from 5 countries, which is not the case. The following sentence says the findings is significantly higher – this is also not true for Brazil (at the 5 % level).</p> <p>31. Page 23 line 2 last: but the finding was not significant?</p> <p>32. Page 24 lines 13 to 17: but finding was not significant in Malaysia?</p> <p>33. Discussion/conclusion: Can the authors provide more information on how countries can go about changing their policies? At the moment, only generic statements are made. What are the obstacles to implementing a ban on FCCs? Which countries have done it successfully, and how did they achieve this?</p>
REVIEWER	Phetphum, Chakkrapan Faculty of Public health, Naresuan University
REVIEW RETURNED	17-Jan-2024
GENERAL COMMENTS	This article is on the topic of Flavor Capsule Cigarettes (FCC) which is very interesting. And as the author states, there is limited current research on this topic. The presentation of the results is concise, and the discussion and limitations are well written,

	<p>however additional clarification and major corrections are still necessary.</p> <ol style="list-style-type: none"> 1. The authors use the word ITC survey in the abstract. It is necessary to specify the full word for the first time. And maybe a few mentions of ITC in the appropriate section. 2. The first and second paragraphs of the introduction are interesting. The FCC is a strategy to increase the attractiveness of smoking. However, the authors may explain more about how these flavoring chemicals work in this context and whether there are concerns about other effects. 3. The authors write that FCC is more popular in low- and middle-income countries, so it is necessary to explain why this study was conducted only in high- and middle-income countries. 4. How were these five countries selected? What is the prevalence of smoking in these countries? Is the FCC legal in these countries and what is the policy regarding it? How appropriate are these five country contexts for generalization? 5. How are the findings regarding the frequency of crushing capsules useful for use in tobacco control? Additionally, information regarding access, prices, and popularity of FCC may be explained further if available. 6. The question of measuring the perceived harmfulness of the usual brand is not clear whether it means FCC vs. Non-FCC needs additional explanation. And regarding the quality of the questionnaire, how it was conducted may explain more.
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VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Comments to the Author

This study examined prevalence and perceptions of flavor capsule cigarette use in five countries using ITC survey data. Overall, the methods are sound, and the manuscript is well-organized and written. I have a few minor comments.

We thank the reviewer for their comments and helpful feedback.

Introduction

1. Please add why the five countries included in the analyses were selected as the focus for this study.

Thank you for this suggestion. We have added an explanation for why the five countries were selected in the Methods section, as follows:

“These five countries were selected based on availability of measures on FCCs among the countries participating in the International Tobacco Control Policy Evaluation (ITC) Project. Other requirements for inclusion entailed having sufficient sample size, not having an implemented national ban on flavoured tobacco products, including flavour capsule cigarettes, at the time of the survey, and approval from country survey Principal Investigators. This broad criterion was used given the scarcity of flavour capsule cigarette prevalence data globally.”

Methods

2. Some readers may not be familiar with the ITC surveys. Please provide more context and spell out ITC before using the acronym.

Thank you for catching this. We have now spelled out ITC in full at its first instance in both the abstract and main text, as follows:

Abstract

"Cross-sectional data among adults who smoked cigarettes came from the International Tobacco Control Policy Evaluation (ITC) Project Surveys"

Methods

"Cross-sectional data came from the latest survey wave conducted in each of five countries participating in the International Tobacco Control Policy Evaluation (ITC) Project surveys..."

3. Reasons for choosing usual brand - please clarify if for Brazil and Malaysia, participants could only choose one response option or as many options that apply.

Thank you for this suggestion. We have edited the text to clarify that these were separate questions and therefore respondents could select as many options that apply, as follows:

"To examine reasons for choosing one's usual brand, respondents in Brazil and Malaysia were asked a series of questions with the prompt: "In choosing your usual brand, was part of your decision to smoke this brand based on any of the following..." The following questions were asked to respondents in Brazil: How they taste?; The price?; The tar and nicotine levels for the brand?; They may not be as bad for your health?; The colour of the pack? (yes, no; for each question). In Malaysia, respondents were asked the following questions: How they taste?; They may not be as bad for your health? Your friends smoke this brand?; The design of the pack?" (yes, no; for each question). These questions were not asked among respondents in Japan, Republic of Korea, and Mexico."

4. For the covariate "sex", were other response options besides male and female provided?

Thank you for this question. No other options for sex were provided in the surveys used in this analysis.

Results

5. Table 1 – there is missing data in the 'cigarette smoking prevalence' column.

Thank you for catching this error. We have now added in the data for "cigarette smoking prevalence", specifically the 2021 WHO age-standardised estimated prevalence of smoking among those aged 15 years or more. The data come from the WHO report on the global tobacco epidemic, 2023: protect people from tobacco smoke. Geneva: World Health Organization; 2023. This is included in Supplementary Table 1. In addition, we have added the following text in the methods section:

"Age-standardised cigarette smoking prevalence in 2021 ranged from 11.2% in Brazil to 13.9% in Mexico, 17.9% in Malaysia, 18.9% in Japan, and 19.3% in Republic of Korea.(29)"

Reviewer: 2

Comments to the Author:

Overall comment: Thank you for the opportunity to review this paper. Overall, more information is needed on the sample (e.g., sampling, data collection), and the discussion needs to be tightened. I found several inaccurate sentences in the discussion where the text is not supported by the findings of the paper. I have made many suggestions, which I hope will help the authors to improve the paper for publication.

We thank the reviewer for their comments and helpful feedback.

Major comments

1. In the “what this paper adds” section, the authors say that “There was no consistent pattern of perceptions of relative harmfulness capsule cigarettes vs. non-capsule cigarettes”. The authors can’t make this statement as respondents were not asked to compare capsule cigarettes to non-capsule cigarettes. The same issue exists throughout the paper and including in the title. Perceived harmfulness of usual brand was examined with the question, “Do you think that the brand you usually/currently smoke, might be a little less harmful, no different, or a little more harmful, compared to; other cigarette brands?”. “Other cigarette brands” could be interpreted in two ways (1) other brands that have a capsule or (2) other brand with no capsules. The authors need to make sure the results are presented to reflect that respondents are comparing their current brand to another brand (not capsule cigs compared to non-capsule cigs). Respondents were not asked specifically about capsule cigarettes versus non-capsule cigarettes – which is how a reader might interpret the results if they are not looking carefully at the details.

Thank you for this comment and suggestion for presenting this information more accurately. We have clarified this throughout the paper. In the section “WHAT THIS STUDY ADDS”, we have edited the text as follows:

“There was no consistent pattern of perceptions of relative harmfulness of one’s usual/current brand relative to other brands between those whose usual cigarette brand had a capsule vs no capsule across countries.”

We have also edited text to clarify this in the “analysis” section of the Methods. as follows:

“Chi-square (χ^2) tests were conducted to compare perceptions of harmfulness of one’s usual/current brand relative to other brands and reasons for one’s usual brand choice, respectively, between those whose usual cigarette brand had a capsule vs no capsule, with p-values reported.”

2. There is excessive repetition in the 9 tables (detailed comments provided below).

Thank you for your suggestions regarding the re-organization of tables, which we have generally applied and provide further comment on below. However, please note that the Editorial Office of BMJ Open has informed us that they cannot publish tables more than 9 columns wide within the main typeset article and that tables with more than 9 columns should be uploaded separately as a Supplemental Material file. As such, we have removed columns containing n and p-values (where applicable) from all of the main text tables and have included full tables as Supplementary Tables.

Minor comments

Abstract

3. In introduction of abstract (and elsewhere): the authors say: "This study examined prevalence and perceptions of flavour capsule cigarettes across five countries". The reader expects to read that xx% of the total population use FCC. But this is not the case. The authors estimate prevalence AMONG smokers. This needs to be made explicit everywhere. E.g., in results of abstract": "Results: There were substantial differences in the prevalence of flavour capsule cigarette use AMONG SMOKERS across the five countries....".

Thank you for your comment. We have now more explicitly indicated that these estimates are among adults who smoke, as follows:

Abstract, Introduction:

"This study examined prevalence and perceptions of flavour capsule cigarettes among adults who smoke across five countries."

Abstract, Results:

"There were substantial differences in the prevalence of flavour capsule cigarette use among adults who smoke across the five countries:..."

4. Write out ITC when it is first used in abstract and in the paper.

Thank you for catching this. We have now spelled out ITC in full at its first instance in both the abstract and main text, as follows:

Abstract

"Cross-sectional data among adults who smoked cigarettes came from the International Tobacco Control Policy Evaluation (ITC) Project Surveys"

Methods

"Cross-sectional data came from the latest survey wave conducted in each of five countries participating in the International Tobacco Control Policy Evaluation (ITC) Project surveys..."

Introduction

5. In the introduction, it would be helpful if the author's provided smoking prevalence estimates for factory-made cigarettes in each of the 5 countries. There is a "cigarette smoking prevalence" column in Table 1, but there is no data in the column.

Thank you for catching this error. We have now added in the data for "cigarette smoking prevalence", specifically the 2021 WHO age-standardised estimated prevalence of smoking among those aged 15 years or more. The data come from the WHO report on the global tobacco epidemic, 2023: protect people from tobacco smoke. Geneva: World Health Organization; 2023. This is included in Supplementary Table 1. In addition, we have added the following text in the methods section:

"Age-standardised cigarette smoking prevalence in 2021 ranged from 11.2% in Brazil to 13.9% in Mexico, 17.9% in Malaysia, 18.9% in Japan, and 19.3% in Republic of Korea.(29)"

6. Can the authors provide more info about why they chose these specific countries? The grouping seems quite random. What was the selection criteria? I see ITC has data for 31 countries. Presumably, much of the ITC data is outdated, and perhaps not all the surveys asked questions on FCCs. Page 7 lines 3 to 8: did any of these studies also use ITC data? How did these authors present

smoking prevalence of FCCs (i.e., smoking prevalence of FCCs among the entire population, or only among smokers).

Thank you for your questions and comments. We have added an explanation for why the five countries were selected at the end of the Methods, as follows:

“These five countries were selected based on availability of measures on FCCs among the countries participating in the International Tobacco Control Policy Evaluation (ITC) Project. Other requirements for inclusion entailed having sufficient sample size, not having an implemented national ban on flavoured tobacco products, including flavour capsule cigarettes at the time of the survey, and approval from country survey Principal Investigators. This broad criterion was used given the scarcity of flavour capsule cigarette prevalence data globally.”

Regarding whether any of the other studies used ITC data, we have indicated in the discussion section when referring to previous studies that have used ITC data. For example, a 2016 ITC study in Republic of Korea and a 2022 ITC study in Mexico.

Regarding how these authors presented smoking prevalence of FCC, all of the studies are among people who smoke. We have edited the referenced sentence in the Introduction to clarify this, as follows:

“Prevalence data (current or ever use among people who smoke) exist for only a handful of countries, including Australia(18), Chile(19), Mexico(5,18,20,21), Republic of Korea(22), the United Kingdom(23), and the United States(18,24,25).”

7. Page 6 line 12. Perhaps use a different word to “important”.

Thank you for this suggestion. We have removed the word “important” as we did not feel another word was appropriate. The sentence now reads as follows:

“Among these methods is through the use of flavour capsules.”

8. Page 6. Line 17. I thought that FCC had one or 2 capsules. Can the authors provide more info? This will also help the interpretation of figure 1. This question came up again for me on Page 9 lines 15-24.

Thank you for your comment. We originally used the phrase “one or more capsules” to be more encompassing should there be any products on the market that have more than two capsules. However, we have changed the phrase to “one or two capsules” to provide greater accuracy per your suggestion. Accordingly, we have edited the sentence as follows:

“Flavour capsule cigarettes (FCCs) contain one or two capsules in the cigarette filter which release flavour when the consumer crushes it.(2)”

Methods

9. Page 8 line 3-5. Did the ITC only sample smokers? Please add this info in. This will help the reader to understand why overall cigarette smoking prevalence rates from ITC were not reported. The current wording is “The sample included adult...” – it is unclear whether this is the sample the authors chose, or if it was the only option they had.

Thank you for your questions and suggestions. We added text in the study design section to clarify that while in some cases other sub-groups were also sampled, the analytic sample was restricted to those who smoked cigarettes.

“All surveys sampled adults who smoked cigarettes, however other groups were also sampled in some surveys (e.g., heated tobacco product users, e-cigarette users, non-users). The current analytic sample was restricted to adults (aged ≥ 18 years in Brazil, Malaysia, and Mexico, ≥ 19 in Republic of Korea, and ≥ 20 in Japan) who smoked cigarettes.”

10. Page 8 lines 4-13. I had to read these lines several times to understand what “the latter measure” was referring to. Please reword these sentences to improve clarity.

Thank you for noting this. We have revised the sentence to improve clarity as follows:

“In Mexico, current smoking was only defined as having smoked cigarettes in the last 30 days (yes/no) because of validity concerns around the 100 cigarette screening question.(29)”

11. Page 8 lines 15 to 19: So the data from Mexico is not nationally representative? Perhaps the authors can make this clearer. In the first sentence of the discussion, the authors say that all samples are representative, but I'm not sure this is true for Mexico.

Thank you for your comment. We have now removed the term “nationally representative” in the “Discussion”. The sentence now reads as follows:

“The current study examined the prevalence of FCC use, frequency of crushing capsules, perceived harmfulness of usual brand, and reasons for FCC use among adults who smoke from Brazil, Japan, Republic of Korea, Malaysia, and Mexico.”

12. Can the authors also be clearer about which surveys were done in person (if any), and which were done on the phone? Table 1 has “web” under survey mode. But this could mean a person sitting at home filling in the questionnaire online, or a survey administered in person on a tablet connected to the internet.

Thank you for your comment. We have edited the text to indicate that surveys were not conducted in-person, but were rather conducted remotely, as follows:

“Data were collected remotely using web-based surveys in all countries except Brazil, where data were collected via computer assisted telephone interviewing.”

13. Can the authors explain why the response rate was so low in all countries?

Thank you for your comment. The response rates for the web panel surveys are low because the denominator of the response rates are all potential respondents who were sent invitations to the survey. Many panel members are no longer active, and so the resulting response rates will be artificially lower. The same holds true for the telephone survey in Brazil. The denominator of the response rate is all potential respondents who were phoned. If no one answered after seven tries, then they get counted as a failure. Such failures appear in the denominator. Post-stratification weights adjust for non-response bias.

To provide explanation of how response rates were calculated, which may explain why response rates are low, we have added a footnote in Supplementary Table 1 as follows:

“c The denominator of the response rates for the web panel surveys (all countries except Brazil) is all potential respondents who were sent invitations to the surveys. It should be noted that many panel members are no longer active. For the telephone survey in Brazil, the denominator of the response rate is all potential respondents who were phoned. Those who did not answer after seven tries were considered a non-response. Post-stratification weights adjust for non-response bias.”

14. On page 8 line 29, the authors say “Detailed description of the methods employed for the respective surveys used in this study are available on the ITC website for each country (30–33)”. Can the authors provide one or two paragraphs summarising the methods? The reader doesn’t want to have to go sieve through various documents on the ITC website. While I understand this information was not included because of word count issues, it is important, especially for readers who are unfamiliar with the datasets. The discussion can be shortened to save on words.

Thank you for your comment. We have added more information about the methods to provide more context. We have also added more details to the table presenting survey characteristics, which is now Supplementary Table 1. We have edited the text in the Methods as follows:

“All surveys sampled adults who smoked cigarettes, however other groups were also sampled in some surveys (e.g., heated tobacco product users, e-cigarette users, non-users) (Supplementary Table 1). The current analytic sample was restricted to adults (aged ≥ 18 years in Brazil, Malaysia, and Mexico, ≥ 19 in Republic of Korea, and ≥ 20 in Japan) who smoked cigarettes. Cigarette smoking was defined as those who smoked at least 100 cigarettes in their lifetime and smoked at least monthly at the time of the survey. In Mexico, current smoking was only defined as having smoked cigarettes in the last 30 days (yes/no) because of validity concerns around the 100 cigarette screening question.(30)

Data were collected remotely using web-based surveys in all countries except Brazil, where data were collected via computer assisted telephone interviewing. With the exception of Brazil, in which households were randomly called using systematic sampling, participants were recruited from online consumer panels, with quotas for age, sex, and education groups, as well as type of tobacco and nicotine products use, depending on the country.(32–35) In all countries except Malaysia (which was Wave 1 of the survey), the sample included both re-contact respondents from previous survey wave(s), as well as replenishment respondents who were newly sampled at the current survey wave to compensate for attrition. Response and cooperation rates are also presented alongside country and survey characteristics in Supplementary Table 1.”

15. Page 11 lines 8-10. Current wording makes it sound like the authors of the current paper constructed the weights. Make it clearer that the weights were done by the ITC team and were provided with the datasets.

Thank you for your comment. We have incorporated your suggestion into the text as follows:

“Post-stratification weights were constructed by the ITC team based on the distribution of sex, age, and education in the general population of smokers for each country.(30–33)”

Results

1. Page 12 table 1 and supplementary table 1: there is a lot of overlap in these tables (table 1: column 1, column 4, and last five columns are all repeated in Suppl. Table 1). I suggest that the authors use

Supplementary table 1 as the main table in the main text, and pull in the extra info that is in table 1 (e.g., Income level, cig smoking prev, dates of data collection etc). No plans to quit in Brazil in table 1 differ to suppl table 1. Check all numbers. I assume that the author just wanted to present the main descriptive stats in the main paper, but looking at the sample sizes by sub-group is helpful. Also, only putting in % for some categories gives very limited info in Table 1 (low education is presented, but not the other categories). Note that for Brazil, it looks like there is an error in Suppl table 1 which says that 92.8% of smokers are non-daily smokers. Whereas table 1 says 92.8% are daily smokers (more believable).

Thank you for this suggestion. We have made the previous supplementary table 1 as a main table 1 as per your suggestion. However, we feel that the table becomes too busy to include the additional country and survey characteristics along with the sample characteristics which have fixed headings (n, %, 95%CI). As such, we now present information on country and ITC survey characteristics in Supplementary table 1. Thank you for also catching the errors, which we have now fixed.

2. If the authors decide to keep the tables as is, the reverse the columns and rows of table 1. And correct the title – is has 18+, which is not true for Japan and the Republic of Korea. Cig smoking prevalence data missing.

Thank you for these comments. We have removed “18+” from the title to just refer to “adults”. We have added in the cigarette smoking prevalence data as previously mentioned.

3. It seems that the authors started out with 6 countries. This crops up in some table headings.

Thank you for catching this. We have changed the instances in the table headings where “six” countries were used in the heading, instead of “five”.

4. Title headings are long. Summarise to improve clarity.

Thank you for this comment. We shortened the table title headings accordingly.

5. Page 13 line 8-12: situate the reader after the first sentence by providing, in brackets, which table they can find this info. Same with next sentence as you’ve now moved to a different table. Apply same principal throughout paper.

Thank you for this comment. We have now added the table number. We have applied this principle throughout. However, if the same table is being referred to in subsequent sentences we do not repeat, only if it refers to a new table.

6. So Table 2 is a summary of supplementary tables 2 and 3? There is too much repetition in these 3 tables and it is frustrating to try and work out where I should be looking. Table 2: why are significance stars on the Cis and not on the coefficients? Suppl table 3 formatting is better – I can see at a glance which coefficients are significant (in bold).

Thank you for this suggestion. We have now just used the previous supplementary tables as main tables, which are presented as now Tables 2 and 3. Again, please note however that full tables with n and p-values are provided in supplementary tables to comply with BMJ Open formatting.

7. In the current context, explain what “high sampling variability” means (is it small sample size?), and provide cut-off size (n18.)

Thank you for this comment. We have edited the text to clarify what “high sampling variability” means and to match what has been noted in the footnotes of the tables. Accordingly, we edited the following text as follows:

“First, the small sample size of adults who usually smoke FCCs in Brazil overall, as well as conditional subgroup estimates, along with high sampling variability (relative standard error > 0.3) may increase uncertainty of our estimates.”

8. Again, there is repetition in Figure 1 and Suppl table 4. Choose 1. Both aren't necessary.

Thank you for this suggestion. We have removed Figure 1 and have replaced it with Supplementary Table 4, which is now Table 4. The full table with n is provided in Supplementary Table 5 to comply with BMJ Open formatting.

9. Page 16 line 9. I'm not sure what this sentence is saying: “Adults who smoked FCCs were most likely to report that they crushed the capsule of every cigarette”. Most likely compared to ...? in every cigarette or every capsule in a cigarette?.

Thank you for this comment. We have edited the text to clarify this sentence based on how the question is worded, as follows:

“Adults who smoked FCCs most commonly reported that when they smoke a pack of their usual/current brand they crush every capsule, compared to less frequent response options.”

10. Figure 1: perhaps use different colours to make this more readable. Can the authors write more about the findings? For example, why would 18% of smokers in Brazil buy FCCs and not crush any capsule? Is this a sample size issue? Then the table might be better than the graph as it provides more info. Consider switching rows and tables for suppl table 4. This will make is much easier to read.

Thank you for these suggestions. We have removed Figure 1 and have now used the previous Supplementary Table 4 as a main table- now Table 4. We have also switched the rows and columns. The full table with n is provided in Supplementary Table 5 to comply with BMJ Open formatting.

11. Again, have one table, not table 3 and suppl table 5. Same for table 3 and suppl table 6

Thank you for this suggestion. We have now used the original Supplementary Tables a main tables, however full tables are presented in Supplementary Tables.

12. BMJ Open: “we recommend your article does not exceed up to five figures and tables”. To increase the readability of the paper overall, I suggest that the authors delete current tables 1-3, and figure 1 and replace with:

- a. Table 1: Suppl Table 1 (adding in the extra info from current table 1)
- b. Table 2: Suppl Table 2
- c. Table 3 (which looks odd with all the missing cells): Suppl Table 3 (put somewhere in title that these are the logistic regressions)
- d. Table 4: Suppl Table 4 (switching rows and columns)
- e. Table 5: Suppl Table 5 (to make the table shorter, maybe delete the missing numbers and just add a note on them in footnote).

Thank you for these suggestions. We have made all of the changes as suggested, with one exception. Instead of adding the extra info from the previous table 1 on country and survey characteristics into the current table 1 on overall sample characteristics, we have moved this information into the current Supplementary Table 1. This is because it became too busy to include so many levels of data into one table. We also made the other suggestions, including (1) noting in the title of the now table 3 that these are logistic regression analyses, (2) switching rows and columns of the now table 4, (3) putting missing data numbers into footnotes. Again, please note however that full tables with n and p-values are provided in supplementary tables to comply with BMJ Open formatting.

13. And then have only one table in the suppl file (suppl table 6).

Thank you for this comment. We have kept Supplementary Table 6 as supplementary per your comment, which is now Supplementary Table 7.

14. This will reduce the total amount of table and figures from 10 to 6 and avoid all the repetition. My understanding is that supplementary data should be new additional information, not repetition. Also, as a reader, if I don't read the suppl file, I feel like I've missed out, which would definitely happened in the current setup.

Thank you for these suggestions. We hope that the revisions have made this easier to read.

15. Did the authors consider running any interactions in their regressions? E.g., sex*age?

Thank you for this comment. We did explore this; however, results did not yield added value from the existing logistic regression analyses. We further decided not to include this data given that some countries already have small sample sizes.

Discussion

16. Page 19 lines 44-46: The authors say "FCC users mostly reported that they crushed every capsule when they smoked a pack of FCCs". This sentence is not supported by the results, which stated that crushing every capsule in a pack was: Japan (76.6%), Republic of Korea (59.7%), Brazil (52.7%) and Malaysia (45.1%). The authors may want to comment on why these numbers are surprisingly low. The authors need to check that all sentences in results and discussion are accurate.

Thank you for this comment. As mentioned above we have edited this text to clarify that the option of crushing "every capsule" was the most commonly reported option compared to other less frequent response options. Even though 45.1% in Malaysia is relatively low, it is still the most common response compared to less frequent crushing responses. We have edited this sentence as follows:

"Adults who smoked FCCs most commonly reported that when they smoke a pack of their usual/current brand they crush every capsule, compared to less frequent response options."

To provide explanation as to why some users may not crush every capsule, we have added the following text in the discussion:

"Findings indicate that these products appear to be used as intended by the tobacco industry.(18,19) It is unclear what drives less frequent capsule crushing. However, given that marketing of FCCs is characterised by a focus on the user deciding when and if they release flavour, it is possible that some users enjoy the option of only sometimes smoking flavoured cigarettes.(9) Price differences

between flavour capsule cigarettes and other types of cigarettes may further influence behaviour. In some countries, flavour capsule cigarettes are less expensive than unflavoured cigarettes.(48)”

17. This section needs to be tightened (Page 22 first few lines): “Our findings on correlates of FCC use varied across the countries, but are largely consistent with previous studies(13,20–23,25). FCC use was associated with younger age in Japan, South Korea(22), and Malaysia, with a marginally non-significant independent association with younger age in Mexico.” Does the second sentence refer to the findings of the current paper? Or the findings from the existing literature? If the later, then references are needed after each country.

Thank you for this comment. We have edited these sentences to make it clearer when referring to our study vs other studies. Accordingly, we edited the text as follows:

“We found that FCC use was associated with younger age in Japan, Republic of Korea, and Malaysia, with a marginally non-significant independent association with younger age in Mexico. This also aligns with a previous ITC study in Republic of Korea.(23)”

18. Page 22 lines 17 to 20 – move the refs to after “Mexico”.

Thank you for noting this edit, which we have made as follows:

“Consistent with previous studies in Mexico,(5,19,21,22) we found greater preference for FCCs among females than males.”

19. Page 22 line 19: In Japan, females also had greater odds of FCC use. Again, is this the finding of the current study or another study? I think the current. Maybe start sentence with, “we found that...”. Same comment for the last sentence of this paragraph.

Thank you for this comment. We have made the suggested edit as follows:

“We also found that in Japan, females had greater odds of FCC use.”

20. Page 22 line 29 improve the detail in this sentence “Those with high education, who smoked non-daily, and had plans to quit were more likely to use FCCs in some, but not all countries, in line with other studies(5,13).” The sentence is quite meaningless. Rather say education was significant in Brazil, Japan and Mexico etc.

Thank you for this comment. We have edited this text to improve clarity per your suggestion, as follows:

“Use of FCCs was associated with high education in Brazil, Japan, and Mexico, as has been observed in some studies.(5,18) Smoking frequency was only found to be correlated with FCC use in Republic of Korea, while plans to quit was only significant in Japan and Republic of Korea. Smoking and quitting behaviours have previously been mixed across studies that have examined this.(18)”

21. Page 22 lines 30-42. This is repetition from the first paragraph of the discussion. See previous comment about this sentence not reflecting findings accurately.

Thank you for this comment. We have revised the text to increase accuracy, as follows:

“Our study found that the most common crushing frequency reported by adults who smoke FCCs was crushing every capsule in a pack across the five countries that assessed this.”

22. Page 22 last paragraph: those in Brazil believing their brand was more harmful than other brands – is this for smokers who use FCCs or smokers who use normal cigs?

Thank you for this comment. We have edited the text to clarify that this is referring to those who used FCCs (vs no capsules), as follows:

“We further found no consistent pattern of consumer perceptions of the harmfulness of FCCs, with those using FCCs (vs no capsules) in Malaysia believing that their brand was less harmful, but those in Brazil using FCCs (vs no capsules) believing their brand was more harmful compared to other brands.”

23. Page 23 lines 24-26: The authors say that: “This is further supported by our finding that half of FCC users reported that a reason for choosing their brand is because it is “not as bad for health”. Again, this sentence is not supported by the findings. From supple table 6, only 23.7% of Brazilians answered yes to “not as bad for health” (and 50.3% in Malaysia). Also the way the sentence is written implies that the findings is from 5 countries, which is not the case. The following sentence says the findings is significantly higher – this is also not true for Brazil (at the 5 % level).

Thank you for this comment. We have now specified that the finding is for Malaysia, which is significant. We edited the text as follows:

“This is further supported by our finding that half of FCC users in Malaysia reported that a reason for choosing their brand is because it is “not as bad for health”, significantly higher than non-capsule users.”

24. Page 23 line 2 last: but the finding was not significant?

Thank you for this comment. However, the finding in Brazil that a high proportion of those who used FCCs vs no capsules perceived their brand to be a little more harmful is significant.

25. Page 24 lines 13 to 17: but finding was not significant in Malaysia?

Thank you for this comment. To provide clarity, we have added a sentence as follows:

“Our findings in the two countries that assessed reasons for brand choice, Brazil and Malaysia, suggest that taste is consistently a motivating factor for preference of FCCs, consistent with previous studies.(18) It should be noted that in Brazil, the proportion reporting taste as a reason for usual brand choice was significantly higher among those who used capsules vs no capsules. In Malaysia, however, the proportion was high in both groups, with no significant difference between groups.”

We have also added text in the results section with the percentages who reported taste (and price) as a reason for brand choice in Malaysia as follows:

“No significant differences were observed between those who smoked FCCs vs no capsules in Malaysia for taste (95.9%, 91.6-98.0% vs 93.0%, 89.9-95.2%, $p=0.198$) and price (79.1%, 72.7-84.3%% vs 73.9%, 69.5-77.8%, $p=0.167$).”

26. Discussion/conclusion: Can the authors provide more information on how countries can go about changing their policies? At the moment, only generic statements are made. What are the obstacles to implementing a ban on FCCs? Which countries have done it successfully, and how did they achieve this?

Thank you for this comment. We have tried to address this through adding the following sentence at the end of the conclusion section. We have also included two references here that may provide more context. We hope this will provide more clarity, while also not stepping beyond the scope of the current study. Accordingly, we have added the following text:

"Policy considerations may entail incorporating a ban on flavour capsules through plain/standardised packaging regulations, as well as banning flavours in tobacco products, including specification of flavour capsules,(52) following the lead of an increasing number of countries.(44)"

Reviewer: 3

Comments to the Author:

This article is on the topic of Flavor Capsule Cigarettes (FCC) which is very interesting. And as the author states, there is limited current research on this topic. The presentation of the results is concise, and the discussion and limitations are well written, however additional clarification and major corrections are still necessary.

We thank the reviewer for their comments and helpful feedback.

1. The authors use the word ITC survey in the abstract. It is necessary to specify the full word for the first time. And maybe a few mentions of ITC in the appropriate section.

Thank you catching this. We have now spelled out ITC in full at its first instance in both the abstract and main text, as follows:

Abstract

"Cross-sectional data among adults who smoked cigarettes came from the International Tobacco Control Policy Evaluation (ITC) Project Surveys"

Methods

"Cross-sectional data came from the latest survey wave conducted in each of five countries participating in the International Tobacco Control Policy Evaluation (ITC) Project surveys..."

2. The first and second paragraphs of the introduction are interesting. The FCC is a strategy to increase the attractiveness of smoking. However, the authors may explain more about how these flavoring chemicals work in this context and whether there are concerns about other effects.

Thank you for this comment and suggestion. We have added more text to the introduction section to further describe concerns about other effects of FCCs, including toxicity and addictiveness, as follows:

"In addition to contributing to the appeal of tobacco products through features known to be particularly attractive to young people,(9) research indicates that FCCs contain a myriad of chemical components,

many of which are toxic and possibly carcinogenic.(12,13) Further, components detected in FCCs may increase nicotine delivery and exposure, thereby facilitating addictiveness. (12,13)”

3. The authors write that FCC is more popular in low- and middle-income countries, so it is necessary to explain why this study was conducted only in high- and middle-income countries.

Thank you for highlighting this. We have removed mention of the country income category in the context of the study aims. That sentence now reads as follows:

“In order to fill in research gaps and provide insight into how FCC use may vary across countries with different markets and tobacco control policies, this study aimed to: (1) examine prevalence and correlates of use of FCCs across five countries (Brazil, Japan, Republic of Korea, Malaysia, and Mexico), (2) describe FCC crushing behaviours, and (3) compare perceptions of brand harmfulness and reasons for choosing one’s brand among adults who smoke FCCs vs non-capsule cigarettes.”

However, we have mentioned the income categories of countries in the methods section when providing context of the included countries, as follows:

“Brazil, Malaysia and Mexico are upper-middle-income countries, while Japan and Republic of Korea are high-income countries. (Supplementary Table 1).”

Unfortunately, none of the available data were among low-income countries. We hope this is further clarified in new text that we have added to address your next comment on how these five countries were selected. Please see below.

4. How were these five countries selected? What is the prevalence of smoking in these countries? Is the FCC legal in these countries and what is the policy regarding it? How appropriate are these five country contexts for generalization?

Thank you for this comment and suggestions. We have added an explanation for why these five countries were included, in the methods section as follows:

“These five countries were selected based on availability of measures on FCCs among the countries participating in the ITC Project. Other requirements for inclusion entailed having sufficient sample size, not having an implemented national ban on flavoured tobacco products, including flavour capsule cigarettes at the time of the survey, and approval from country survey Principal Investigators. This broad criterion was used given the scarcity of flavour capsule cigarette prevalence data globally.”

Moreover, we provide more context of countries, including smoking prevalence rates and indication that none of these countries have an implemented ban on FCCs. Accordingly, we have added the following text in the methods section:

“Age-standardised cigarette smoking prevalence in 2021 ranged from 11.2% in Brazil to 13.9% in Mexico, 17.9% in Malaysia, 18.9% in Japan, and 19.3% in Republic of Korea.(29) Brazil, Malaysia and Mexico are upper-middle-income countries, while Japan and Republic of Korea are high-income countries. (Supplementary Table 1).”

5. How are the findings regarding the frequency of crushing capsules useful for use in tobacco control? Additionally, information regarding access, prices, and popularity of FCC may be explained further if available.

Thank you for your comment. Information on the frequency of crush capsules can provide a more nuanced understanding how these products are being used. We have added more text in the discussion to expand on the interpretation of findings regarding the frequency of crushing capsules, including mention of prices.

“Our study found that the majority of adults who smoke FCCs crushed all the capsules in the five countries that assessed this, indicating that these products appear to be used as intended by the tobacco industry(16,17) It is unclear what drives less frequent capsule crushing. However, given that marketing of FCCs is characterised by a focus on the user deciding when and if they release flavour, it is possible that some users enjoy the option of only sometimes smoking flavoured cigarettes.(9) Price differences between flavour capsule cigarettes and other types of cigarettes may further influence behaviour. In some countries, flavour capsule cigarettes are less expensive than unflavoured cigarettes.(48)”

6. The question of measuring the perceived harmfulness of the usual brand is not clear whether it means FCC vs. Non-FCC needs additional explanation. And regarding the quality of the questionnaire, how it was conducted may explain more.

Thank you for this comment. We have added text to clarify this in the “analysis” section of the methods. Accordingly, we have edited this sentence as follows:

“Chi-square (χ^2) tests were conducted to compare perceptions of harmfulness of one’s usual/current brand relative to other brands and reasons for one’s usual brand choice, respectively, between those whose usual cigarette brand had a capsule vs no capsule, with p-values reported.”

We have also added more information on the study design in the methods section, as well as in Supplementary Table 1 to provide more context on how the study was conducted. We added the following text in the methods as follows:

“Data were collected remotely using web-based surveys in all countries except Brazil, where data were collected via computer assisted telephone interviewing. With the exception of Brazil, in which households were randomly called using systematic sampling, participants were recruited from online consumer panels, with quotas for age, sex, and education groups, as well as type of tobacco and nicotine products use, depending on the country.(32–35) In all countries except Malaysia (which was Wave 1 of the survey), the sample included both re-contact respondents from previous survey wave(s), as well as replenishment respondents who were newly sampled at the current survey wave to compensate for attrition. Response and cooperation rates are also presented alongside country and survey characteristics in Supplementary Table 1.”

VERSION 2 – REVIEW

REVIEWER	Vellios, Nicole University of Cape Town, Research Unit on the Economics of Excisable Products
REVIEW RETURNED	19-Mar-2024
GENERAL COMMENTS	Thank you for the changes. The paper is much improved. 3 last comments: 1. “There was no consistent pattern of perceptions of relative harmfulness of one’s usual/current brand relative to other brands between those whose usual cigarette brand had a capsule vs no capsule across countries.” I couldn't make sense of this sentence.

	<p>2. "Policy considerations may entail incorporating a ban on flavour capsules through plain/standardised packaging regulations, as well as banning flavours in tobacco products, including specification of flavour capsules,(52) following the lead of an increasing number of countries.(44)" Why would plain packaging regulation result in a ban on flavour capsules? I think this is factually incorrect. These sentences need attention. Or delete altogether.</p> <p>3. Change "• This study is strengthened by its use of the International Tobacco Control Policy Evaluation (ITC) Project surveys, which are a series of prospective cohort studies, in which measures have been designed to be comparable across countries." to "• This study uses the International Tobacco Control Policy Evaluation (ITC) Project surveys, which are a series of prospective cohort studies designed to be comparable across countries."</p>
REVIEWER	Phetphum, Chakkrapan Faculty of Public health, Naresuan University
REVIEW RETURNED	14-Mar-2024
GENERAL COMMENTS	I considered the second round, the author made complete and satisfactory corrections according to the suggestions.

VERSION 2 – AUTHOR RESPONSE

Response to reviewers

We thank the reviewers and editorial office for their valuable comments and constructive feedback, which we have addressed accordingly, and have provided point-by-point responses.

Reviewer: 2

Comments to the Author:

Thank you for the changes. The paper is much improved.

We thank the reviewer.

3 last comments:

1. "There was no consistent pattern of perceptions of relative harmfulness of one's usual/current brand relative to other brands between those whose usual cigarette brand had a capsule vs no capsule across countries." I couldn't make sense of this sentence.

Thank you for this comment. We have edited the text to improve clarity as follows:

"There was no consistent pattern across countries in consumer perceptions of relative brand harmfulness (one's usual/current brand relative to other brands) between those whose usual cigarette brand had a capsule vs those whose brand had no capsule."

2. "Policy considerations may entail incorporating a ban on flavour capsules through plain/standardised packaging regulations, as well as banning flavours in tobacco products, including specification of flavour capsules,(52) following the lead of an increasing number of countries.(44)" Why would plain packaging regulation result in a ban on flavour capsules? I think this is factually incorrect. These sentences need attention. Or delete altogether.

Thank you for your comment. Plain/standardised packaging regulations can require mandates on the appearance of cigarette sticks, and therefore could include within-filter innovations, such as flavour capsules. We have edited the text to clarify this, as follows:

"Policy considerations may entail incorporating a ban on flavour capsules through plain/standardised packaging regulations (i.e., requirements to standardize the appearance of cigarettes sticks), as well as banning flavours in tobacco products, including specification of flavour capsules,(52) following the lead of an increasing number of countries.(44)"

3. Change "• This study is strengthened by its use of the International Tobacco Control Policy Evaluation (ITC) Project surveys, which are a series of prospective cohort studies, in which measures have been designed to be comparable across countries." to "• This study uses the International Tobacco Control Policy Evaluation (ITC) Project surveys, which are a series of prospective cohort studies designed to be comparable across countries."

Thank you for this suggestion. We have edited the sentence accordingly as follows:

"This study is strengthened by its use of the International Tobacco Control Policy Evaluation (ITC) Project surveys, which are a series of prospective cohort studies designed to be comparable across countries."