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COVID-19 Research Project

新型コロナウイルス感染症に関する緊急研究課題

新型コロナウイルス感染症（Covid-19）が日本国内観光客の旅行目的・行動に与える影響の評価
Assessing the impact of Covid-19 on the travel intention and behavior of domestic tourists
in Japan

2022年04月14日

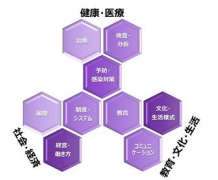
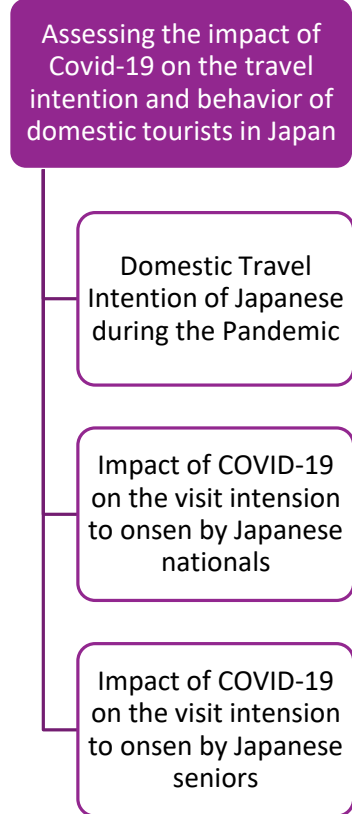
Doshisha Business School • Associate Professor • Isabell Handler

研究概要

This research project had as main focus the impact of the COVID-19 pandemic on travel intention and behavior

This was later sub-divided into three aims:

1. impact of the COVID-19 pandemic on general travel intention and behavior
2. impact of the COVID-19 pandemic on visit intention to onsen by Japanese nationals in general
3. impact of the COVID-19 pandemic on visit intention to onsen by Japanese seniors in particular



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Recent Publications and expected publications

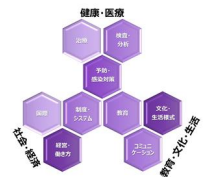
This research resulted in three publications, one per aim of this project, with one submitted in August 2021, one in November 2021, and one in January 2022

Out of the three submitted publications one has been published and two more have been resubmitted with latest status “minor revisions” for each (April 2022) and are expected to get published this year.

This powerpoint slide will report on the published article, namely

Handler, I. (2022). Can Senior Travelers Save Japanese Hot Springs? A Psychographic Segmentation of Visitors and Their Intention to Visit Onsen Establishments during COVID-19. *Sustainability (Switzerland)*, 14(4).

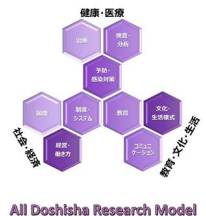
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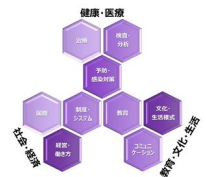
Research background of article #1

- ❖ In recent years, the **senior population** has increased in many developed countries, and Japan is no exception.
 - Of 125 million citizens, 51 million (41%) are aged over 55 years
 - worth considering as an attractive tourist segment because their average income of 5.5 million to 11 million yen is considerably higher than that of their younger cohorts
- ❖ It is therefore important for tourism managers and policymakers to thoroughly understand this customer segment, as it **can contribute significantly to the revenue of tourist attractions and business recovery post-COVID-19**.
- ❖ This study focuses on Japanese hot spring establishments called onsen, which are, according to Japanese law, defined as “hot water of at least 25 degrees springing from either natural or manmade holes”. They play a vital role in Japan’s wellness tourism. They accumulated more than \$12 billion in revenue in 2017, equivalent to 57% of Japan’s overall wellness tourism revenue that year.



Research background of article #1

- ❖ Understanding needs and concerns of attractive customer target groups has become even more vital as the tourism industry, and consequently the **wellness industry, has suffered significantly due to the COVID-19 pandemic.**
- ❖ After the first declaration of the “state of emergency” in April of 2020, the country has experienced a significant decrease in the number of leisure trips internationally and domestically and **more than 40 onsen resorts have filed for bankruptcy since the beginning of the pandemic.**
- ❖ While both international and domestic tourism are relevant to Japan’s tourism industry, it is particularly important to look at the **domestic side as it accounts for 96% of visitors to wellness locations within the country,** and domestic tourism generated more than 80% of the country’s overall tourism revenue in 2018.



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Research background of article #1

- ❖ Hence, the focus of this research is on understanding the feelings of Japanese seniors' towards a visit to onsen during COVID-19, in terms of **fear, motivation, intention to visit, and attitude towards discounts**.
- ❖ The **popular marketing tool of segmentation**, which is used to categorize customers into groups based on the commonality of their actions and needs, and in this case, psychographics, was applied. This approach allows businesses to determine effective strategies that best capture their targeted segments
- ❖ The results will be useful for onsen businesses in strategically managing the senior visitors and considering appropriate on-site safety measures. In addition, the effects of government-initiated campaigns and business-initiated promotions compared to no external stimulation on intention to visit has been assessed.



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Methodology: Survey design for onsen study

Data has been collected for all three articles by the market research company *crossmarketing* with the instruction to survey 1,000 minimum for the general travel intention and 1,000 minimum for the intention to visit onsen project.

The following scales have been used in the survey design for Article #1:

- ❖ **Motivation**: scale by Chen, Prebensen, and Huan (2008).
- ❖ **Attitudes** and **perceptions**: scales developed by Zheng, Luo, and Ritchie (2021), Kock et al. (2020), and Wang, Liu-Lastres, Ritchie, and Mills (2019)
- ❖ **Intention to visit** was adapted from Hsu, Kang, and Lam (2006) to cover the three most realistic conditions measured by three scales each:
 - a) visit intentions without external travel incentives;
 - b) visit intentions with attractive prices, that is, travel packages, which are one of the most favorable ways to travel for locals; and
 - c) visit intentions with discounts offered by a national travel campaign, such as Go To Travel.



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Methodology: Sampling and data collection method for onsen study

Questionnaires were obtained through **stratified random sampling**, a useful method when certain criteria of interest, such as sex, place of residence, or age, of the target population are known. As there are no data available on the demographics of onsen visitors in Japan, the Japanese population census was used as a reference.

Therefore, the market research company was given the following instructions. A minimum of 1,000 questionnaires were requested based on the following criteria: a) gender: a minimum of 520 women and 480 men; b) age groups: a minimum of 120 for the range 20–29 years, 130 for 30–39 years, 180 for 40–49 years, 160 for 50–59 years, and 410 for > 60 years.

The second criterion was that questionnaires should be collected from residents of Tokyo to have a vast diversity of respondents born and raised in places all over Japan.

Using the above strata, a **total sample of 1,042 questionnaires was collected** in February 2021 using an online survey, of which 507 (respondents aged 55+ years were selected for publication #1 which was on senior travelers.

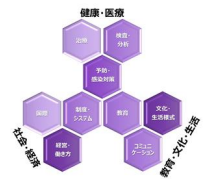


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Methodology: Analysis for article #1

Analysis was performed using **psychographics**. It is a popular tool of **market segmentation**, which is used to categorize customers into groups based on the commonality of their actions and needs.

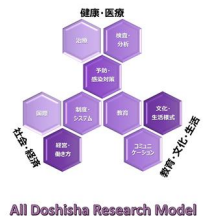
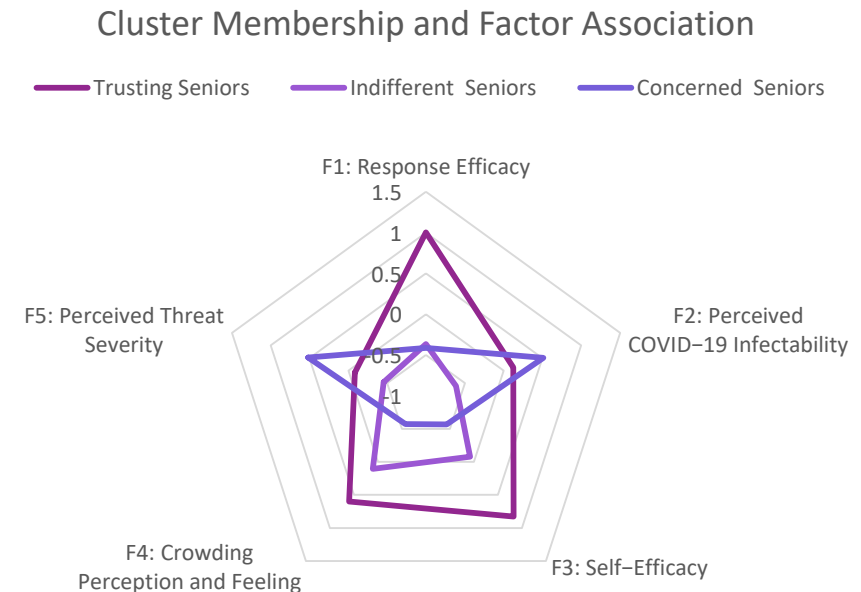
- This approach allows businesses to determine effective strategies that best **capture their targeted segments** and similarly, segmentation studies have the potential to create a basis for targeted campaigns pertaining to tourist concerns and safety.



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Results: Factor and segmentation analysis

- ❖ **Five factors** have emerged in the exploratory factor analysis: Response efficacy, perceived COVID-19 Infectability, Self-Efficacy, Crowding Perception and Feelings and Perceived Threat Severity
- ❖ **Three segments** have emerged:
 1. Trusting Seniors
 2. Indifferent Seniors
 3. Concerned Seniors



Results: One-way ANOVA

❖ To assess whether segments are significantly different among the clustering variables, an ANOVA using the post-hoc difference of means test with Bonferroni method was carried out, which resulted in one item not being significantly different ($p > 0.05$): “Response Efficacy” (CL 2-3: $p=1.000$) and all others being significantly different between clusters with $p < 0.001$ (Table 3)

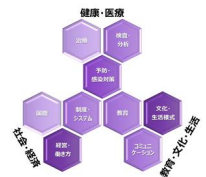
Table 3. Clusters compared to perception and attitude towards COVID-19: One-way ANOVA.

	Trusting seniors	Indifferent seniors	Concerned seniors			
	Mean	Mean	Mean	F-Value	Sig. ^{a)}	Post hoc ^{b)}
<i>F1: Response Efficacy</i>	5.372	2.957	3.062	177.828	0.000	0.000
<i>F2: Perceived COVID-19 Infectability</i>	4.290	3.500	4.650	86.851	0.000	0.000
<i>F3: Self-Efficacy</i>	4.995	4.155	3.755	131.010	0.000	0.000
<i>F4: Crowding Perception and Feeling</i>	5.838	5.430	4.709	104.602	0.000	0.000
<i>F5: Perceived Threat Severity</i>	3.970	3.555	4.615	64.059	0.000	0.000

Note a): Shows the corresponding statistic is significant at $\alpha = 0.001$.

Note b): Bonferroni’s post-hoc test indicates a significant mean difference between clusters.

Note: Mean values are measured on a 7-point Likert-type scale (1 = strongly disagree, 7 = strongly agree).



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Results: Discriminant analysis

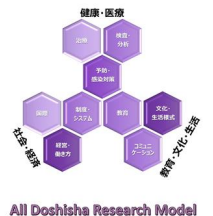
- ❖ Discriminant analysis results are reported in Table 4 and both functions were statistically different with $p < 0.001$.
- ❖ Function 1 explains 70.2% of the variance and has an eigenvalue of 1.300, and Function 2 explains 29.8% of the variance with an eigenvalue of 0.553.
- ❖ The classification results were explored to ascertain whether the functions are valid predictors of group membership: Table 5 shows that there is a high degree of classification accuracy.
 - ❖ The three-group discriminant model achieved a 94.1% overall prediction accuracy, and predicted 90.8% for Cluster 1, 94.0% for Cluster 2, and 96.7% for Cluster 3 correctly.

Table 4. Summary of three-group discriminant analysis results.

Discriminant function	Eigenvalue	% of variance	Cumulative %	Canonical correlation	Wilks Lambda	Chi-square	df	Sig.
1	1.300	70.2	70.2	0.752	0.280	639.245	10	0.000
2	0.553	29.8	100.0	0.597	0.644	221.049	4	0.000

Table 5. Classification results.

Segment	Predicted group membership			Total number of cases
	1	2	3	
<i>Trusting seniors</i>	129 (90.8%)	9 (6.3%)	4 (2.8%)	142
<i>Indifferent seniors</i>	4 (2.2%)	171 (94.0%)	7 (3.8%)	182
<i>Concerned seniors</i>	2 (1.1%)	4 (2.2%)	177 (96.7%)	183



Results: Cluster Profiles – CL1

Using the results of this study, the cluster profiles can be described as follows.

Cluster 1 is titled “*Trusting Seniors*” and contains the smallest number of respondents in this sample: 142. It is characterized by a strong positive association with factors 1, 3, and 4. Respondents seem to have a very high confidence that the *onsen* facilities can enforce sufficient and effective (factor 1) measures against infection. Second, there was a high affinity for factor 3, which represents the ability to protect oneself from becoming infected. Finally, it is characterized by another strong association, factor 4, which represents not believing the scene to be crowded, that people will bump into each other and, in general, feel comfortable when looking at the picture.

- This cluster has an almost equal number of men and women, with only 8.5% of the respondents being unmarried. The majority of respondents had children, but no longer lived in the same household. The mean of worry in this cluster is 4.2, which represents only a slight worry about visiting, which contains the highest number of people (45.1%) with visit intention if there were discounts through a governmental travel campaign or an attractive package price (42.3%), and a significantly reduced intention if there were no incentives (35.9%).

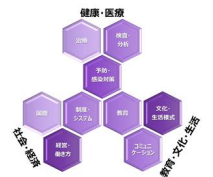


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Results: Cluster Profiles – CL2

Cluster 2 is titled “*Indifferent Seniors*” and contains almost the same number of respondents as Cluster 3 (182). It is characterized by a negative association with all factors except factor 4, with the strongest negative association with factors 1, 2 and 5. The respondents in this cluster did not worry about the risk of COVID-19 infection and did not seem to see the virus as a threat when visiting *onsen*. However, they see difficulties in *onsen* establishments having the skills and equipment to prevent the infection and have slight doubt about their ability to protect themselves. The only positive association is factor 4, which implies that there is no concern for the crowdedness depicted in the *onsen* photograph in the questionnaire.

- Respondents of both sexes were almost equally represented, and most of them were married (85.7%). Similar to Cluster 1, the majority had children, but more of them still lived in the same household compared to those in Cluster 1. Surprisingly, the mean of worry is similar to Cluster 1 (4.13), but both an attractive package price and government campaign would not significantly increase their visit intention.

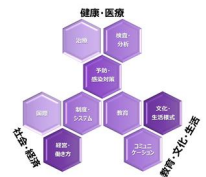


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Results: Cluster Profiles – CL 3

Cluster 3 comprises “*Concerned Seniors*” and respondents in this group showed an equally positive association with factors 2 and 5, which contained items related to perceived COVID-19 infectability and their belief that it will pose a health threat to *onsen* visitors. However, after consulting the factor means in this cluster, it can be said that this concern is not a strong fear and does not deter individuals from visiting *onsen*. In contrast to the other two clusters, they voiced their worry about facing crowds.

- From a socio-demographic point of view, this cluster is as large as Cluster 2, with 183 respondents. It consisted of a higher number of women and the highest number of singles among all clusters. Unsurprisingly, this cluster contained the highest mean of worry (5.48) and a visit intention far below that of the other two clusters, regardless of whether an external incentive was offered.



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Results: Motivation to visit onsen

- ❖ As displayed in Figure 2, the **primary motivation** for visiting was “Relaxation,” followed by “Attractiveness” and “Experiencing nature.”
- ❖ All motivator items were significantly different between clusters with $p < 0.05$
- ❖ In general, the “*Trusting Seniors*” agreed with all motivator items more than respondents in the other two clusters, as well as the sample average.
- ❖ They indicated a stronger intrinsic motivation and passion for *onsen* and many perceived benefits such as attractiveness, experiencing nature, effortlessness and affordability, enhanced quality of life, and recreational aspects

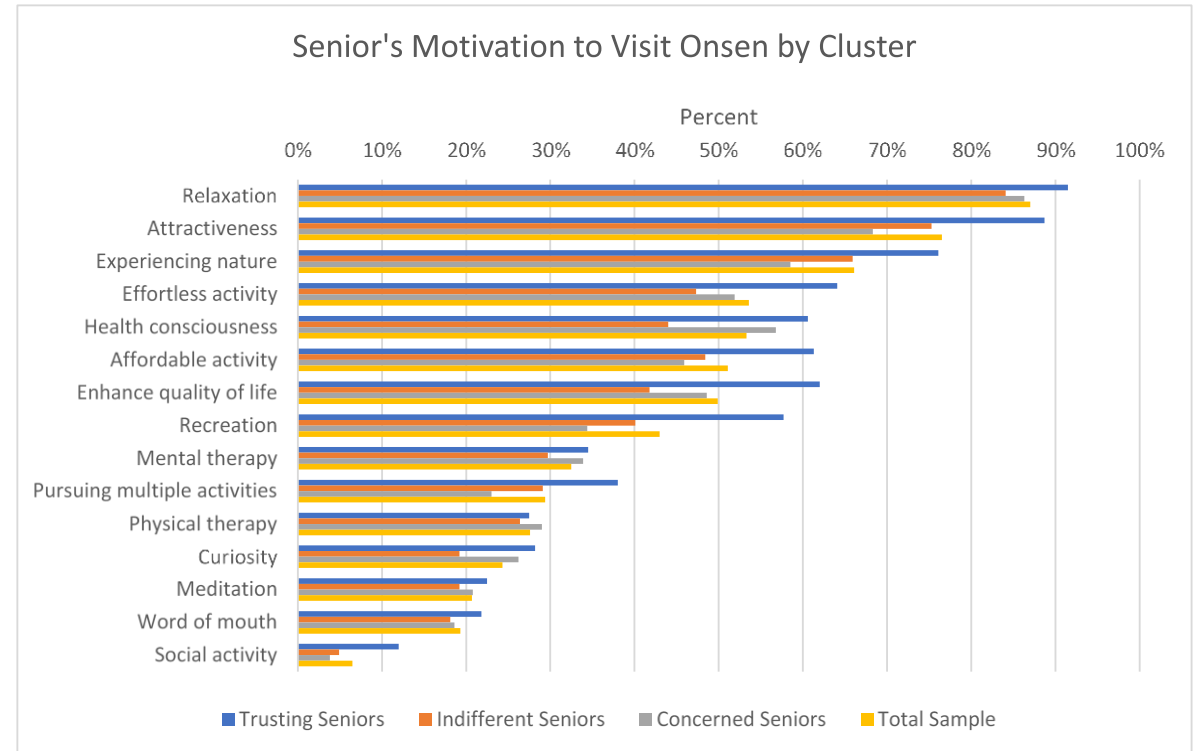


Figure 2. Senior’s motivation to visit onsen per cluster and total sample.



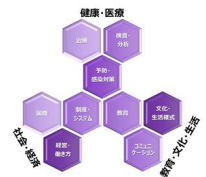
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Discussion and Conclusion

Based on this study, **seniors are a sizable number** who is willing to visit *onsen* despite the pandemic. They therefore have the potential to turn the tables of the future of *onsen* from bleak to hopeful. However, it is strongly recommended to not treat Japanese seniors as a homogenous group but to segment them into smaller groups.

Major findings:

- This study confirms that worry has a significant impact on visit intention, regardless of whether they are being offered an attractive package price or receive discounts by the governmental travel campaign.
- Other influence factors that emerged are intrapersonal and interpersonal constraints, structural travel constraints, and an overall higher perceived financial risk due to the pandemic and worries about the future.
- In line with earlier studies on discounts, the findings of the present study show that an attractive travel package price and discounts of the *Go To Travel* campaign can entice a certain segment of Japanese seniors to increase their visit intention.
- As for sex differences, there was a slightly higher number of women in the segment of “*Concerned Seniors.*” The sex differences such as increased worry among women and different behavior patterns were, however, not significantly reported in the past.

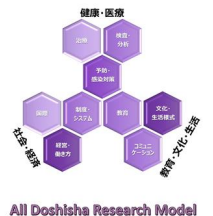


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Discussion and Conclusion

Comparing the **motivational finding** of this study with two previous surveys conducted in magazines and newspapers before the pandemic two aspects can be considered:

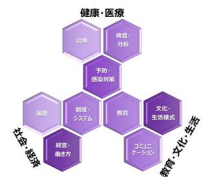
- First, **social activity** ranked at the very bottom among the motivations observed in this study, in contrast to previous findings that mention group activities, going on a date, and spending time with friends as important motivation items. This suggests that there has been a significant change in individuals' behavior and that they no longer plan to visit hot springs with others.
- Second, “**recreation**” has lost significance, which might suggest that the pandemic has shifted recreational activities into other modes, such as outdoor activities.



Discussion and Conclusion

Regarding **designing products and services, campaigns, and strategies for recovery**, several suggestions are being made, including particular distinctions to pre-pandemic marketing customs:

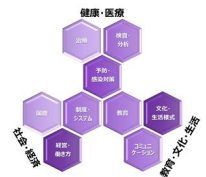
- ❖ The most promising segment of “*Trusting Seniors*”
 - can be enticed to travel using attractive package deals, as they indicated that they are more likely to do so if **external incentives** are offered.
 - They are expected to visit repeatedly and **quantity discounts for enticing repeat visits** should be introduced.
- ❖ The two other clusters, “*Concerned Seniors*” and “*Indifferent Seniors*” will pose a challenge to the involved parties.
 - To increase visitation, *onsen* can implement all **precautionary measures** to ensure the safety of their visitors or provide and suggest health services at their destinations. These aspects can also be considered to be included in promotional materials
 - One very popular feature in advertisements of *onsen* is the use of **photographs depicting the food** provided by the establishments, and in many cases, pictures of their dinner buffet. As lavish dinner buffet pictures might have motivated visits before the pandemic, careful consideration is now necessary on what to include in advertisements. Not only that, *onsen* establishments should consider changing the custom of providing food via buffet or open kitchen to an individual dinner set menu if possible, or at least, offer both simultaneously. *Onsen* who already provided dinner as a set menu (which are usually delivered to the individual hotel rooms) find themselves at a considerable advantage and can emphasize this in their promotional material.



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Discussion and conclusion

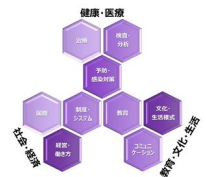
- ❖ In addition, pre-pandemic advertisements have not specifically highlighted whether hotel rooms offer **private onsen pools or tubs**, which should now be changed to being promoted as a main feature of a specific establishment.
- ❖ Additionally, *onsen* and *onsen* towns, which attract fewer visitors due to their **remote location** can now use this point and advertise it to “*Concerned Seniors*,” as lesser numbers of people have the potential to lower concerns within this segment.
- ❖ *Onsen* managers can also consider **limiting the number of visitors per hour or per day**, another strategy that has been not considered before the pandemic. To control the flow of people offering **discounts for off-peak hours** in a day or week can be introduced.
- ❖ The final suggestion for all three segments is that promotional material should reflect the changing trend in motivations for visiting *onsen* and no longer depict **scenes of group activities**, or at least reduce its prominence in the material, and change to centering on the *onsen* facilities or natural environment.



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Appendix: References used for survey design

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