

# Validation of a questionnaire developed to evaluate the eating behavior of mexican travelers

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**Abstract.** *Background and aim:* Tourist travels are an excellent setting to study eating behavior's dimensions. Multiple factors of the food system can affect these dimensions, such as companions, food availability, weather, food environment, and lodging options. The Travelers' Feeding Behavior Change Questionnaire (TFBCQ) validated for Mexican Travelers (MxT) is a multidisciplinary analysis instrument that integrates different study areas: tourism, nutrition, and psychology for behavior analysis. The aim was to validate a virtual instrument to assess eating behavior in Mexican travelers based on theoretical constructs. *Methods:* The scale's content validity reached significant values when evaluated by expert judges, with moderate intensity in Kendall's W congruence (Kendall's  $W = 0.462$ ;  $p = 0.000$ ). Participants were 312 Mexican adults; 63% were women, 36% were men, 3% identified as gender fluid, and another 3% did not give gender information. We performed a factorial analysis (FA) with 53 items grouped into 12 factors, which explained 73% of the accumulated variance. *Results:* Factors in this questionnaire were (1) Consumption behavior before travel, (2) Eating behavior during outbound transfer, (3) Eating behavior during the stay, (4) Eating behavior during the return transfer, (5) Eating behavior back home, (6) consumption schedule, (7) consumption duration, (8) Consumption companion, (9) consumption motivation, (10) Physical Activity, (11) BMI, (12) Future consumption behavior. Cronbach's alpha value was 0.759. *Conclusions:* the TFBCQ questionnaire is an excellent instrument to evaluate changes in eating behavior in a feeding episode due to modification of spaces and temporalities in Mexican travelers.

**Key words:** questionnaire, validation, eating behavior, mexican travelers

## Introduction

The processes taking place in the contemporary consumer environment, such as globalization, economic and demographic changes, changes in lifestyles, and a more comprehensive range of products and services, cause changes in consumption patterns and the

emergence of new consumer behaviors (1). Studying the eating behavior of travelers during tourist activity allows us to study changes in eating behavior(2), which establishes the quality of the diet that can be seen reflected in their health and well-being. In this sense, "eating behavior" is an element of behavior "change" at different times during a tourist's travels. Traditionally,

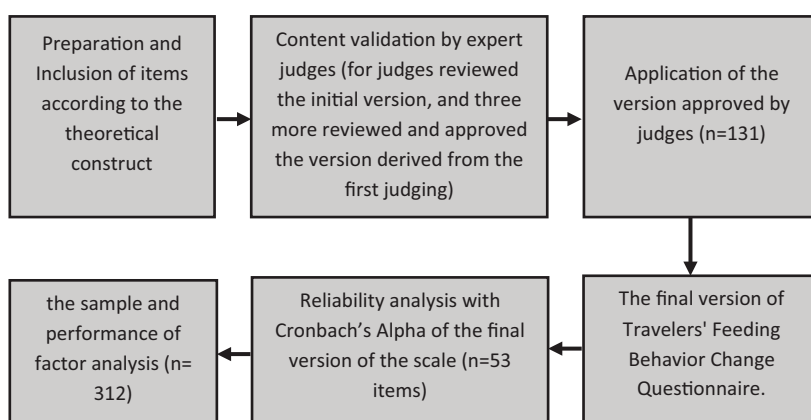
what happens before and after the action is included in the evaluation of behavior. This focuses on the data through valid measurements such as dimensions and attributes (3). This shows the need to include in its evaluation more specific, diverse, and particular conditions under which eating behavior occurs, for example, the elements that interact with the behavior (2). The lack of an instrument that allows identifying behavior change in a tourist context (4), led us to reflect on the need to create one that allows obtaining data that contributes to research on eating behavior and tourism. In this sense, the questionnaire on change in eating behavior in Mexican travelers becomes a multidisciplinary analysis instrument that primarily integrates different study areas: tourism, nutrition, and psychology. This was under the considerations of various authors' approaches; regulations in force in the area of health and tourism; studies, methodologies and instruments that served as the basis for the experts for the construction of this questionnaire (5–17). The purpose of the instrument is to offer the scientific community a validated questionnaire that allows the study of eating behavior in travelers that contributes to relating travel characteristics with the change in eating behaviors and identifying the main factors that influence the change in eating behavior in different spaces and temporalities. Likewise, to evaluate the social food system variables that influence said change.

## Material and method

The process of construction and validation of the scale followed the steps shown in the diagram of Figure 1.

### *Construction of the items of the questionnaire for change in eating behavior in travelers*

The instrument to assess the change in eating behavior in travelers was developed by three experts (psychologist, nutritionist, and tourism). The instrument was made up of 6 sections: The first section of the questionnaire is made up of 1 item, which corresponds to informed consent, based on the considerations of the 2nd World Conference on Research Integrity held in Singapore in 2010 and in accordance with the Declaration of Helsinki (6). The second and third parts are made up of 14 items. On the one hand, regarding the sociodemographic variables, the experts have considered six items that are: age, gender, nationality, place of residence, education, and occupation. On the other hand, the items of the conditions of the travel have been considered eight items related to the place to which the travel was made, the date, duration, means of transportation and type of accommodation that was used, places where it was consumed food, with whom you traveled and reason for the travel. With these data, the social food system of the participants, the profile



**Figure 1.** Diagram of the validation process of travelers' feeding behavior change questionnaire.

of the traveler, and the travel conditions were contextualized. The next part contributes to the analysis of eating behavior during a feeding episode, including the dimensions of eating behavior (14). This section is made up of 5 items, which were: latency (time elapsed, -without food-, for the start of the feeding episode); frequency (number of times the feeding episode was repeated); duration (total time of the feeding episode); magnitude (intensity of the feeding episode) and conditions of the feeding episode. With these data, the dimensions of the eating behavior are identified, and with this, the direction and level of behavior change are determined. In addition, the elements that make up a feeding episode are identified (14) from 5 items, which were quantity (what is eaten during the feeding episode), places (where you ate during the feeding episode); times (what time was the feeding episode); food types (what types of food were consumed during the eating episode) and time (length of the eating episode). Finally, in this instrument, five space and temporal conditions in which a traveler eats were considered. In this section, the items of the behavioral dimensions and the elements of the eating episode were included in 5 different spaces and temporalities (12). These were: place of origin (last episode of eating food in the place where the traveler resides); transit route (first episode of eating food during the transfer from the place of residence to the travel destination); stay at destination (first feeding period of the tourist's food in the place to which he travels) and return home (first feeding period of food when the tourist returns to his place of residence). These data made it possible to identify the spatial and temporal conditions in which a traveler eats, thereby specifying those elements of the social food system that influence the change in a traveler's eating behavior.

#### *Content validation by expert judges*

The content validation method provided an instrument to measure the verdicts of the judges on the items and the stages of the content validation process (18). The experts were selected based on their knowledge and experience: two in conduct, one in nutrition and one in tourism. All are postgraduates in their fields (3 PhDs and one Master's). The 4 expert judges come

from different states in the north, center and south of the country (Baja California Sur, Jalisco and Veracruz). In the first stage, the four judges evaluated each item of the first version of the instrument in terms of its congruence (whether the item has a logical relationship with the dimension or indicator it measures) and clarity (whether the item is easily understood; whether the syntax and semantics are adequate) on a scale of 1 to 4, according to a widely used instrument (18). For the judges' evaluations, the mode and median of each item were obtained, and the agreement between judges was calculated using Kendall's  $W$  to validate the content of the congruence criteria (Kendall's  $W = 0.501$ ,  $X^2 = 318.24$  and  $p = 0.000$ ) and clarity (Kendall's  $W = 0.369$ ,  $X^2 = 194.518$  and  $p = 0.000$ ). Likewise, the judges were asked for comments, observations or suggestions for the correction of each item. Items that obtained a median score equal to or less than 3 were corrected, considering all the judges' observations. In the second stage, two questionnaire tests were carried out. After content validation by experts, the instrument was made up of 87 items. The first test was carried out, which allowed a review of answers and took into account the comments that were expressed by the participants. In this test, 21 items were eliminated, mainly for practicality in answering the section on "consumption" of food. In the second test, 12 items were adapted, this to facilitate the understanding of the questions. In total, 131 questionnaires were applied to Mexican travelers, over 18 years of age. It was an accidental snowball type sample. Finally, the questionnaire was made up of 66 items divided into 6 main sections: informed consent, demographic data, travel conditions, physical activity during the travel, food consumption one day before the travel, transfer to travel location, stay at destination, transfer back home and first day, already at home.

#### *The application and validation of the instrument*

#### PARTICIPANTS

The participants were made up of Mexican adults over 18 years of age and were identified through non-probabilistic and accidental snowball sampling. The dissemination and application were conducted on

social networks between November and December 2021, considering the following inclusion criteria: participants who were on trips in the last two months and completed the questionnaire. In total, 400 participants provided answers through a digital form, but the data of 88 participants who did not meet the inclusion criteria were eliminated.

## MATERIALS AND INSTRUMENTS

Each participant provided their digital informed consent and all responses on demographic data, travel conditions, BMI, physical activity during the travel, food consumption one day before the travel, in one-way transfer, stay at the destination, transfer back home, and first day, already at home.

## DATA ANALYSIS

Skewness and kurtosis values were used to analyze the normality assumption for each item's distribution. Items with high skewness values and kurtosis  $> |1.5|$  were excluded. We confirmed the adequacy of the sampling using the Kaiser-Meyer-Olkin (KMO) measure ( $\geq 0.6$ ), and the factorability of the data was confirmed using the Bartlett test of sphericity ( $p < 0.05$ ). A factor analysis (AF) was performed (19,20), using the extraction method, principal component analysis, and rotation method: Varimax with Kaiser normalization (21). The modeling was performed by eliminating the items with a factorial weight  $< 0.350$  or those with a weight  $> 0.300$  for more than one factor. The modeling was performed by eliminating the items with a factorial weight  $< 0.350$  or those with a weight  $> 0.300$  for more than one factor. For the analysis, IBM SPSS Statistics 29.0 is used.

## Results

### *Participants*

The participants in this study were 312 Mexican travelers with a mean age of 26.83 (0.57). Of these, 61% were women, 34% were men, 0.3% identified as gender fluid. Regarding the educational level of the participants, 54% have a bachelor's degree or equivalent, 27%

with a high school, 12% with a bachelor's degree, 0.3% have a technical high school, the other 0.3% with Elementary school, and 1% with master's or equivalent. Regarding occupation, 5.5% were students; and 62% were professionals or technicians (11) (Table 1).

For the place of residence, travelers from 13 states of the Mexican Republic participated. 81% reside in Jalisco. On the other hand, these participants traveled to 25 states of the Mexican Republic. Forty-five percent traveled within Jalisco. Regarding travel days, 96% traveled from 1 to 5 days, and 4% traveled for more than five days. In terms of travel, 81% traveled for vacations. In lodging, 37% stayed in a hotel, 35% at the home of relatives (Table 1).

### *Factorial analysis*

Factorial analysis (Table 2) was performed under three statistical criteria: principal component analysis, Varimax Rotation method, Kaiser-Meyer-Olkin Sampling Adequacy Test (KMO) (22–25). For factor analysis, a data matrix, the original data matrix, was initially prepared to be transformed into a correlation matrix. The correlation matrix is a double-entry table for the variables, which shows a multivariable list horizontally and the same list vertically with the corresponding correlation coefficient called  $r$  or the relationship between each pair in each cell, expressed as a number ranging from 0 to 1. The model measures and shows the interdependence in associated relationships or between each pair of variables, all at the same time. The determinant of the correlation matrix is that -if it is very low- there are variables with very high inter-correlations, which resulted in the fact that it was feasible to continue with the factorial analysis. However, the determinant must not be equal to zero since, in this case, the data would not be valid (23).

The Kaiser-Meyer-Olkin (KMO) index compares the magnitudes of the general or simple correlation coefficients concerning the magnitudes of the partial correlation coefficients. Suppose the sum of the squared partial correlation coefficients between all pairs of variables is "low" compared to the sum of the squared correlation coefficients (26). In that case, the KMO index will be close to 1, and this is considered positive and indicates that we can continue with the

**Table 1.** Demographic, socioeconomic characteristics and travel status.

Variable	Mean (SD)	Frequency (n)	Percentage (%)
		n = 312	100
<b>Sex</b>			
Female		198	61.49
Male		112	34.78
Gender fluid		1	0.31
Prefer not to say		1	0.31
<b>Education</b>			
Elementary school		1	0.31
Secondary		176	54.66
High school		89	27.64
Bachelor's degree		41	12.73
Master's or equivalent		4	1.24
PhD		1	0.31
<b>Occupation</b>			
Employed		202	62.73
Unemployed		66	20.50
Student		18	5.59
Housewife		11	3.42
Officer, director manager		9	2.80
Retired		6	1.86
<b>Travel days</b>			
1 to 5 days		264	81.99
More than 5 days		48	14.91
<b>Travel location</b>			
National		318	98.76
International		4	1.24
<b>Travel reasons</b>			
Vacation		253	78.57
Religious		33	10.25
Studies		12	3.73
Job		9	2.80
Health		5	1.55
<b>Travel Company</b>			
Family		174	54.04
Friends		75	23.29
Only		57	17.70
Coworkers		6	1.86

Variable	Mean (SD)	Frequency (n)	Percentage (%)
<b>Lodging</b>			
Relatives' house		109	33.85
Hotel		114	36.50
Guesthouse		24	7.45
Cabin		18	5.59
Without lodging		16	4.97
Bungalows		11	3.42
Camp		11	3.42
Villas		6	1.86
Airbnb		2	0.31

**Table 2.** Factorial analysis.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.803
Bartlett's test of sphericity	Aprox. Chi squared	7265.969
	G1	666
	Sig	.000

Note: Kaiser-Meyer-Olkin test of sampling adequacy (KMO).

factor analysis. KMO values between 0.5 and 1 indicate that it is appropriate to apply factor analysis to the data matrix under study (23,27). In the case of the data matrix that was analyzed, a KMO value of 0.803 was obtained, and Bartlett's test of sphericity ( $X^2 = 7265.969$ ,  $df = 666$ ,  $p = 0.000$ ) indicated an adequate sample and a utility of the factorial analysis.

#### Principal component analysis

The main factors (principal components) selection is presented with the Matrix of factors or factor loadings. The loads indicate the degree of correspondence between the variable and the factor (28). That is, high loads indicate that said variable represents said factor (29). For this study, the construct validity was carried out through factorial analysis with the extraction method, the analysis of the main components, and the method of Varimax rotation and Kaiser normalization applied to the Matrix of reagent structures (30). The Varimax rotation method was used to redistribute the variance across all components in the loading

**Table 3.** Rotated component array.

	Component											
	1	2	3	4	5	6	7	8	9	10	11	12
it24	0.967	0.027	-0.019	-0.081	-0.060	-0.053	-0.012	0.038	0.006	-0.043	-0.011	0.006
it29	0.945	0.043	-0.006	-0.070	0.010	-0.031	-0.020	0.024	0.030	-0.012	0.005	0.020
it26	0.934	0.026	0.139	-0.022	-0.058	-0.071	0.003	0.033	-0.002	-0.084	-0.040	-0.006
it25	0.922	0.031	0.007	-0.022	-0.067	-0.052	-0.010	0.016	0.052	-0.046	0.011	-0.015
it27	0.913	0.028	-0.050	-0.089	0.111	-0.026	0.066	0.021	0.038	-0.001	-0.016	0.035
it28	0.887	0.007	-0.072	0.002	0.009	-0.014	0.007	0.015	-0.001	0.006	0.087	0.011
it30	0.863	0.034	-0.001	-0.042	-0.043	0.141	-0.011	-0.093	-0.034	0.068	-0.004	0.030
it12	0.047	0.981	-0.008	-0.039	-0.044	-0.017	0.030	-0.035	0.013	-0.002	0.007	0.003
it13	0.038	0.979	0.001	0.001	-0.057	-0.018	0.039	-0.017	0.016	-0.001	0.011	0.003
it14	0.048	0.973	0.025	-0.012	0.002	-0.021	0.038	-0.023	0.021	-0.016	-0.005	0.003
it15	0.020	0.963	0.004	0.006	-0.033	-0.010	0.029	-0.009	0.011	0.007	-0.003	-0.011
it11	0.026	0.923	-0.013	-0.026	-0.054	-0.029	0.016	-0.012	-0.024	0.014	0.087	0.042
it18	-0.049	0.020	0.878	0.004	0.015	0.051	-0.055	-0.005	0.061	-0.055	-0.037	-0.061
it48	-0.015	-0.008	0.847	0.113	-0.038	0.091	-0.062	0.050	0.039	0.039	0.012	0.047
it33	0.059	-0.010	0.797	0.012	-0.080	-0.037	-0.010	-0.126	-0.133	-0.046	0.003	-0.022
it45	-0.164	0.030	-0.020	0.865	-0.109	0.098	0.006	-0.014	0.066	0.026	-0.018	-0.023
it41	-0.083	0.038	0.327	0.801	-0.071	-0.049	-0.026	0.064	-0.055	-0.040	0.008	0.048
it43	-0.032	-0.068	-0.103	0.791	0.140	-0.004	-0.161	-0.062	0.037	0.086	0.036	-0.023
it44	-0.002	-0.119	0.055	0.456	-0.132	0.072	0.147	0.305	-0.234	-0.062	-0.063	0.143
it34	-0.045	-0.084	-0.095	-0.043	0.804	-0.043	0.094	0.095	0.010	0.078	-0.037	0.040
it42	-0.014	0.033	-0.036	-0.106	0.714	0.052	0.145	-0.179	-0.024	0.014	-0.125	0.159
it6	0.049	0.112	0.027	-0.068	-0.646	-0.017	0.013	-0.090	-0.055	0.135	-0.059	0.193
it35	0.066	0.001	0.150	-0.041	0.463	-0.287	-0.147	0.256	0.003	0.217	0.224	-0.113
it22	-0.054	-0.030	0.083	-0.038	0.029	0.849	-0.055	0.082	0.031	-0.016	0.038	-0.058
it52	0.038	-0.043	-0.024	0.100	-0.005	0.742	-0.188	0.018	0.217	-0.060	-0.035	0.028
it37	-0.087	-0.004	0.086	0.043	-0.111	0.648	0.115	-0.396	-0.218	0.019	-0.007	-0.007
it19	0.075	-0.005	-0.175	-0.111	0.139	0.028	0.780	0.038	-0.051	0.206	-0.068	0.045
it49	-0.007	0.078	-0.058	-0.026	0.073	-0.132	0.764	0.078	0.005	-0.221	0.031	0.055
it50	-0.017	0.135	0.155	0.010	0.017	-0.208	0.423	-0.086	0.175	0.008	0.350	-0.066
it5	-0.121	0.044	0.052	0.054	-0.131	0.055	0.383	-0.330	0.051	-0.320	-0.204	-0.190
it36	0.000	-0.039	-0.071	0.062	0.072	-0.041	0.054	0.832	-0.045	-0.089	-0.073	-0.007
it51	0.055	0.047	-0.023	0.018	0.055	-0.015	-0.034	-0.349	0.716	-0.178	-0.002	-0.103
it21	0.021	-0.014	-0.013	-0.042	-0.010	0.128	0.067	0.182	0.704	0.117	-0.122	0.168
it7	-0.159	0.067	-0.104	0.013	0.048	-0.076	-0.123	-0.163	-0.111	0.732	-0.241	0.074
it8	0.031	-0.098	0.055	0.126	-0.094	-0.002	0.152	0.093	0.213	0.563	0.326	-0.356
it1	0.009	0.066	-0.065	-0.013	-0.031	0.036	-0.031	-0.055	-0.154	-0.070	0.867	0.078
it53	0.054	0.020	-0.023	0.065	-0.039	-0.029	0.041	0.036	0.078	-0.014	0.065	0.883

matrix. The items were grouped into 12 factors in the AF, which explained 73% of the accumulated variance. Table 3 represents a matrix of rotated components, in which 12 main elements were identified: (1) Consumption behavior before travel, (2) Eating behavior during outbound transfer, (3) Eating behavior during the stay, (4) Eating behavior during the return transfer, (5) Eating behavior back home, (6) consumption schedule, (7) consumption duration, (8) Consumption companion, (9) consumption motivation, (10) Physical Activity, (11) BMI, (12) Future consumption behavior.

### *Consistency analysis*

The mean of the scale, if the element is eliminated, indicates the value that the mean would have in the case of eliminating each one of the elements. The corrected item-total correlation is the corrected homogeneity coefficient (31). If it is 0 or negative, the question is eliminated or restated. Cronbach's Alpha, if the item is removed, equals the Alpha value if each item is removed (32). Table 4 shows the total item statistics: scale mean if the item has been suppressed, Scale variance if the item has been suppressed, corrected total item correlation, and Cronbach's Alpha if the item has been suppressed.

The final version with 53 items obtained a Cronbach's alpha value of 0.759. Cronbach's alpha is based on standardized items of 0.715 with 44 items. Through Cronbach's Alpha, a reliability coefficient considered to be high was obtained (33) (Table 5).

## **Discussion**

Tourism is an economic activity that has increased rapidly in many areas of the world in recent years (34). Today, the scientific community and tourism professionals recognize many different aspects or types of tourism, such as gastronomy tourism, and adopt and try to provide means to support the rapid development of tourism worldwide (35). Gastronomy tourism is the area that has the most studied food in the context of travel, and this has been described as one of the most dynamic segments of tourism (36). This is mainly directed toward gastronomy from the perspective of

tourists, including the attraction of food towards tourists (37), factors affecting dining experiences (38–40), food-related travel preferences (39,41) and holiday food consumption patterns (42–44). Significantly few studies are related to the eating behavior of tourists and its effect on the acquisition of new eating habits that can harm their state of health. From psychology, studies have been carried out on motivation in various contexts of gastronomic tourism. For example, tourists' motivation to consume local foods, cultural experiences, interpersonal relationships, enthusiasm, sensory appeal, and health concerns (43,45,46), the behavior of gastronomic tourists or "foodies," their passion for food, food intentions to travel (47) and accessibility to food during the travel (48). However, they all aim to understand food as a tourist attraction from corporate marketing.

Corporate marketing has set itself the main objective of focusing on customer satisfaction, which, through the customer experience, can increase their loyalty and thus contribute to a greater demand for hotel restaurant services and greater profitability (1,49). However, to understand eating behavior during tourist travel, it is essential to study the availability of food, the quantity of consumption and the culinary variety, the company, the schedules, the temporalities, and the duration of the trip, among others, and its effect on the acquisition of new eating habits. Mexican travelers present various psychological episodes; one of them is the behavior of eating all those foods that an organism or individual consumes at mealtime, and this behavior is organized and complex (14). Its organization lies in the fact that it is composed of a sequence of continuous responses. At the same time, its complexity refers to the fact that this sequence is subject to dimensions that can be so diverse and plural that they multiply the possibilities of its measurement (14).

To analyze changes in eating behavior in Mexican travelers, various instruments and tools were reviewed, such as food diaries and food frequency questionnaires, to help understand the relationships between diet components and health, and various indicators, such as the Healthy Diet Quality Index (50,51). The usefulness of dietary questionnaires, which investigate quantitative aspects of the subjects' diet, is well known, where the most frequently used method to determine dietary intake is the Food Frequency Consumption

**Table 4.** Total item statistics.

	<b>Average scale if the element has been suppressed</b>	<b>Scale variance if the element has been suppressed</b>	<b>Total item correlation corrected</b>	<b>Cronbach's Alpha if the item has been deleted</b>
it1	129.30	234.204	0.031	0.761
it3	130.71	235.538	-0.019	0.760
it4	130.35	235.326	-0.008	0.760
it5	127.25	234.853	-0.009	0.763
it6	129.20	232.681	0.055	0.761
it9	129.45	236.184	-0.063	0.761
it10	130.28	227.189	0.541	0.751
it11	126.58	202.301	0.404	0.745
it12	128.65	219.343	0.523	0.745
it13	128.95	213.210	0.497	0.741
it14	127.19	207.819	0.494	0.739
it15	128.75	217.421	0.478	0.744
it16	129.88	235.634	-0.044	0.760
it17	130.87	235.280	0.053	0.759
it18	128.63	228.221	0.128	0.760
it19	130.31	233.181	0.056	0.760
it20	130.47	232.463	0.073	0.760
it21	129.22	232.652	0.017	0.765
it22	122.88	234.166	-0.008	0.765
it23	130.36	224.899	0.686	0.748
it24	129.84	214.886	0.671	0.739
it25	129.60	219.219	0.637	0.743
it26	126.28	183.244	0.625	0.724
it27	129.07	209.215	0.631	0.735
it28	128.82	214.023	0.588	0.740
it29	126.17	185.449	0.624	0.724
it30	126.09	205.953	0.610	0.734
it31	130.84	234.900	0.092	0.759
it32	130.67	235.498	-0.017	0.760
it33	128.40	224.709	0.162	0.759
it34	130.28	237.813	-0.115	0.766
it35	129.66	234.239	0.005	0.763
it37	123.05	234.292	-0.021	0.767
it38	130.28	233.195	0.135	0.758
it39	130.25	233.153	0.130	0.758
it40	130.09	232.669	0.133	0.758
it41	129.08	236.157	-0.061	0.768
it42	129.96	234.491	0.013	0.761
it47	130.75	234.971	0.036	0.759



	Average scale if the element has been suppressed	Scale variance if the element has been suppressed	Total item correlation corrected	Cronbach's Alpha if the item has been deleted
it48	128.61	228.494	0.139	0.759
it49	130.51	233.754	0.070	0.759
it50	130.63	232.006	0.109	0.759
it52	122.73	233.777	0.003	0.764
it53	129.75	231.268	0.075	0.761

Note: Total statistics of elements with the estimation of values.

**Table 5.** Reliability statistics.

Alfa de Cronbach	Cronbach's alpha based on standardized items	Number of elements
0.759	0.715	44

Questionnaire (FCFQ), validated for the Mexican population (13). This is added to the dietary records and the 24-hour dietary recall, which allow for obtaining data on the frequency, magnitude, and latency of eating behaviors. However, the available instruments focus on studying eating behavior during an episode without integrating external factors for their analysis, as is the case of the tourist context.

Thus, the questionnaire for the evaluation of the Eating Behavior in Mexican Travelers contains 12 behavioral dimensions: (1) Consumption behavior before, (2) Eating behavior during the outbound transfer, (3) Eating behavior during the stay (4) Eating behavior during the return travel, (5), Eating behavior on the way home, (6) Consumption hours, (7) Consumption duration, (8) Consumption company, (9) Consumption reasons, (10) Physical Activity, (11) BMI, (12) Future Consumption Behaviors. The factor analysis, as evidence of the validity of the construct (52), yielded a KMO value and a Bartlett sphericity test that indicated that the sample was adequate and of good use of the factor analysis (20). Fifty-three items were grouped into 12 factors in the Factor Analysis, which explained 73% of the accumulated variance, and a Cronbach's alpha value was 0.759 (53). The scale's content validity reached significant values when evaluated by expert judges. Therefore, this questionnaire presents an excellent instrument for evaluating the change in eating behavior in a feeding episode due to modifying spaces and temporalities in Mexican travelers.

## Conclusion

Although this type of questionnaire for collecting information may be tedious for the respondent, it contributes to developing a broader vision focused on evaluating behaviors, which, without a doubt, is one of the central concerns in the fight against chronic non-communicable diseases (54). Although there are many methods to measure the eating environment, this area of research (tourism) is relatively new, so there are few instruments to quantify, compare, and contrast or to report on eating behavior in travelers. In this context, this work is a contribution to the elaboration of new instruments, with evaluations of their factorial structure, internal consistency, and the diagnostic capacity that they can obtain in such a way that they help to objectify the eating behavior, providing information for an understanding of the eating behavior of Mexican travelers.

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