TITLE: Consumer willingness to pay for healthier food products: a systematic review

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Table S1. Search Strategy

Hedge/concept	Search terms
Consumer	consumer* OR customer* OR client* OR purchaser* OR shopper* OR correspondent* OR user* OR "end user*" OR clientele* OR layman OR public OR stakeholder* OR citizen* OR people OR individual OR employee* OR worker* OR attendant* OR staff* OR athlete* OR visitor* OR resident*
Willingness to pay	(("Willingness to pay" OR "WTP" OR "willingness to accept" OR "acceptance to pay" OR "willingness to purchase" OR "willing to pay" OR "willingness to buy" OR "consumer* behavior*" OR "choice experiment" OR "discrete choice experiment*" OR "contingent valuation method*" OR "price premium" OR "preferences" OR "purchase behavior" OR "purchase intention" OR "price acceptance" OR "stated preference" OR "revealed preference" OR "contingent valuation" OR "discrete choice model*" OR "discrete choice conjoint experiment*" OR "part-worth utili?at*" OR "functional measurement" OR "paired comparison*" OR "pairwise choices" OR ((conjoint) N2 (analy* OR studies OR study OR model* OR measurement* OR "choice experiment)))
Healthy food or beverage	((vegetable* OR legume* OR bean* OR fruit OR grain OR cereal OR wholegrain OR "high cereal fibre" OR "high cereal fiber" OR "lean meat" OR poultry OR fish OR eggs OR tofu OR nut* OR seed* OR milk OR yoghurt OR cheese OR health* OR nutrition* OR "low sugar" OR "reduced sugar" OR "no* sugar" OR "no added sugar" OR "sugar free" OR "low carbohydrate" OR "carbohydrate free" OR "no* carbohydrate" OR "reduced carbohydrate" OR "low fat*" OR "fat* free" OR "no* fat*" OR "reduced fat" OR "no* cholesterol" OR "low cholesterol" OR "cholesterol free" OR "reduced cholesterol" OR "low salt" OR "salt free" OR "reduced salt" OR "no* salt" OR "no added salt" OR "low sodium chloride" OR "reduced sodium

chloride" OR "sodium free" OR "no* sodium") n2 (diet OR eat* OR food OR meal*

OR snack OR beverage OR water OR milk OR drink* OR product*))

Table S2: List of subject headings terms used for the database searches

Database	Concept	Subject heading
Medline Complete	1	-
	2	(MH "Consumer Behavior")
	3	(MH "Vegetables+") OR (MH "Vegetable Products+") OR (MH "Fruit+") OR (MH "Whole Grains") OR (MH "Meat+") OR (MH "Poultry+") OR (MH "Eggs+") OR (MH "Nuts") OR (MH "Seeds+") OR (MH "Yogurt") OR (MH "Milk+") OR (MH "Cheese") OR (MH "Diet, Sodium-Restricted") OR (MH "Diet, Carbohydrate-Restricted+") OR (MH "Diet, Fat-Restricted")
Business Source Complete	1	-
	2	DE "CONSUMER behavior" OR DE "DISCRETE choice models" OR DE "CONSUMER attitudes" OR DE "WILLINGNESS to pay" OR DE "CONTINGENT valuation" OR DE "CONSUMER preferences" OR DE "BRAND choice" OR DE "CUSTOMER feedback" OR DE "PREFERENCE heterogeneity"
	3	-
Global Health	1	-
	2	DE "willingness to pay" OR DE "contingent valuation" OR DE "valuation"
	3	DE "low fat milk" OR DE "low fat cheeses" OR DE "low fat products" OR DE "low fat spreads" OR DE "skim milk" OR DE "vegetables" OR DE "bulbous vegetables" OR DE "fruit vegetables" OR DE "leafy vegetables" OR DE "root vegetables" OR DE "stem vegetables" OR DE "legumes" OR

Database	Concept	Subject heading
		DE "fodder legumes" OR DE "grain legumes" OR DE "pasture legumes" OR DE "vegetable legumes" OR DE "fruit" OR DE "canned fruit" OR DE "dried fruit" OR DE "frozen fruit" OR DE "meat" OR DE "beef" OR DE "buffalo meat" OR DE "camel meat" OR DE "crab meat" OR DE "game meat" OR DE "goat meat" OR DE "horse meat" OR DE "pigmeat" OR DE "poultry meat" OR DE "rabbit meat" OR DE "seal meat" OR DE "sheep meat" OR DE "turtle meat" OR DE "variety meats" OR DE "veal" OR DE "whale meat" OR DE "fish" OR DE "eggs" OR DE "poultry" OR DE "broilers" OR DE "capons" OR DE "tofu" OR DE "nuts" OR DE "seeds" OR DE "cotyledons" OR DE "endosperm" OR DE "hard seeds" OR DE "husks" OR DE "kernels" OR DE "monogerm seeds" OR DE "naked grain" OR DE "cheeses" OR DE "Appenzell cheese" OR DE "Asiago cheese" OR DE "bakers' cheese" OR DE "Bel Paese cheese" OR DE "blue cheese" OR DE "Bra cheese" OR DE "Brick cheese" OR DE "Brie cheese" OR DE "Caciocavallo cheese" OR DE "Caerphilly cheese" OR DE "Camembert cheese" OR DE "Cantal cheese" OR DE "Carre de l'Est cheese" OR DE "Cheddar cheese" OR DE "Cheshire cheese" OR DE "Colby cheese" OR DE "Comte cheese" OR DE "cottage cheese" OR DE "Coulommiers cheese" OR DE "cream cheese" OR DE "Crescenza cheese" OR DE "Danbo cheese" OR DE "Domiati cheese" OR DE "Double Gloucester cheese" OR DE "dried cheese" OR DE "Dutch cheese" OR DE "Edam cheese" OR DE "Emmental cheese" OR DE "Feta cheese" OR DE "filled cheese" OR DE "Fontina cheese" OR DE "fresh cheese" OR DE "fromage frais" OR DE "Gammelost cheese" OR DE "Gorgonzola cheese" OR DE "Gouda cheese" OR DE "Grana cheese" OR DE "Grana Padano cheese" OR DE "grated cheese" OR DE "Gruyere cheese" OR DE "Havarti cheese" OR DE "Italian cheese" OR DE

Database	Concept	Subject heading
		"Kachkaval cheese" OR DE "Kareish cheese" OR DE "Kasseri cheese" OR DE "Kefalotyri cheese" OR DE "Lancashire cheese" OR DE "Limburg cheese" OR DE "Liptauer cheese" OR DE "low fat cheeses" OR DE "Manchego cheese" OR DE "Mitzithra cheese" OR DE "Montasio cheese" OR DE "Mozzarella cheese" OR DE "Munster cheese" OR DE "Neufchatel cheese" OR DE "Parmesan cheese" OR DE "Pasta Filata cheese" OR DE "Pecorino cheese" OR DE "pickled cheese" OR DE "Pont-l'Eveque cheese" OR DE "Port du Salut cheese" OR DE "Prato cheese" OR DE "processed cheese" OR DE "Provolone cheese" OR DE "Queso Blanco cheese" OR DE "Reblochon cheese" OR DE "Ricotta cheese" OR DE "Romadur cheese" OR DE "Romano cheese" OR DE "Roquefort cheese" OR DE "Saint Paulin cheese" OR DE "Samso cheese" OR DE "smoked cheese" OR DE "soft cheese" OR DE "Stilton cheese" OR DE "Svecia cheese" OR DE "Swiss cheese" OR DE "Taleggio cheese" OR DE "Teleme cheese" OR DE "Tilsit cheese" OR DE "Trappist cheese" OR DE "Travnik cheese" OR DE "Tvorog" OR DE "Vacherin cheese" OR DE "Wensleydale cheese" OR DE "whey cheese" OR DE "white cheese" OR DE "milk" OR DE "buffalo milk" OR DE "camel milk" OR DE "concentrated milk" OR DE "condensed milk" OR DE "dried milk" OR DE "evaporated milk" OR DE "ewe milk" OR DE "filled milk" OR DE "flavoured milk" OR DE "frozen milk" OR DE "goat milk" OR DE "homogenized milk" OR DE "humanized milk" OR DE "liquid milk" OR DE "low fat milk" OR DE "low lactose milk" OR DE "mare milk" OR DE "pasteurized milk" OR DE "protein enriched milk" OR DE "raw milk" OR DE "residual milk" OR DE "skim milk" OR DE "sterilized milk" OR DE "yoghurt" OR DE "frozen yoghurt" OR
	1	-
Database	**Concept**	**Subject heading**

Database	Concept	Subject heading
CINAHL	2	-
	3	(MH "Restricted Diet+") OR (MH "Fruit+") OR (MH "Fruit Juices+") OR (MH "Citrus+") OR (MH "Vegetables+") OR (MH "Milk+") OR (MH "Cheese") OR (MH "Meat+") OR (MH "Cereals+") OR (MH "Health Food+") OR (MH "Nuts+") OR (MH "Yogurt") OR (MH "Fish") OR (MH "Poultry") OR (MH "Seeds+") OR (MH "Legumes+") OR (MH "Diet, Sodium-Restricted") OR (MH "Diet, Low Carbohydrate") OR (MH "Diet, Fat-Restricted") OR (MH "Dairy Products+")
Health Policy Reference Center	1	-
	2	(DE "VALUATION" OR DE "CONTINGENT valuation") OR (DE "WILLINGNESS to pay")
	3	DE "FRUIT" OR DE "LEGUMES" OR DE "TOFU" OR DE "DRIED tofu" OR DE "GRAIN" OR DE "ALTERNATIVE grains" OR DE "CEREAL grasses" OR DE "CORN" OR DE "FLOUR" OR DE "GREEN Revolution" OR DE "LODGING of grain" OR DE "OATS" OR DE "RICE" OR DE "RYE" OR DE "WHEAT" OR DE "WINTER grain" OR DE "CEREAL products" OR DE "MEAT" OR DE "APE meat" OR DE "BEEF" OR DE "BUFFALO meat" OR DE "CAMEL meat" OR DE "CANNED meat" OR DE "DRIED meat" OR DE "FROZEN meat" OR DE "GOAT meat" OR DE "GROUND meat" OR DE "HORSEMEAT" OR DE "IN vitro meat" OR DE "IRRADIATED meat" OR DE "KANGAROO meat" OR DE "LAMB (Meat)" OR DE "MEAT cuts" OR DE "MEAT emulsions" OR DE "MEAT meal" OR DE "MEAT science" OR DE "MUTTON" OR DE "PASTRAMI (Meat)" OR DE "PORK" OR DE "PORK products" OR DE "PRECOOKED meat" OR DE "RABBIT meat" OR DE "SALTED meat" OR DE "SAUSAGES" OR DE "SMOKED meat" OR DE "TURTLES as food" OR DE "VARIETY meats" OR DE "VENISON" OR DE "WILDLIFE as food" OR DE "POULTRY" OR DE "BROILER chickens" OR

Database	Concept	Subject heading
		DE "CHICKENS" OR DE "DUCKS" OR DE "GEESE" OR DE "GUINEAFOWL" OR DE "TURKEYS" OR DE "FISHES" OR DE "AIR-breathing fishes" OR DE "ANADROMOUS fishes" OR DE "AQUARIUM fishes" OR DE "BAITFISH" OR DE "BRACKISH water fishes " OR DE "FINGERLINGS (Fish)" OR DE "FISH farming" OR DE "FISH fry (Juvenile fish)" OR DE "FISH pests" OR DE "FORAGE fishes" OR DE "FRESHWATER fishes" OR DE "GROUNDFISHES" OR DE "HATCHERY fishes" OR DE "INTRODUCED fishes" OR DE "MARINE fishes" OR DE "MIGRATORY fishes" OR DE "NATIVE fishes" OR DE "ORNAMENTAL fishes" OR DE "TROPICAL fish" OR DE "WARMWATER fishes" OR DE "EGGS" DE "DRIED eggs" OR DE "NUTS" OR DE "AMERICAN chestnut" OR DE "CASHEW nuts" OR DE "CHINESE chestnut" OR DE "COATED nuts (Confectionery)" OR DE "HAZELNUTS" OR DE "MACADAMIA" OR DE "NUT products" OR DE "TROPICAL nuts" OR DE "SEEDS" OR DE "CORN seeds" OR DE "COTTONSEED" OR DE "FIELD crop seeds" OR DE "FLOWER seeds" OR DE "LEGUME seeds" OR DE "LETTUCE seeds" OR DE "OILSEEDS" OR DE "PELLETIZED seeds" OR DE "PEPPER seeds" OR DE "PINE nuts" OR DE "RICE seeds" OR DE "SEED crops" OR DE "TOMATO seeds" OR DE "TRANSGENIC seeds" OR DE "VEGETABLE seeds" OR DE "WEED seeds" OR DE "MILK" OR DE "BREAST milk" OR DE "CAMEL milk" OR DE "CONCENTRATED milk" OR DE "DRIED milk" OR DE "ENRICHED milk" OR DE "GOAT milk" OR DE "HOMOGENIZED milk" OR DE "HORSE milk" OR DE "MILKFAT" OR DE "RAW milk" OR DE "RECONSTITUTED milk" OR DE "SHEEP milk" OR DE "SKIM milk" OR DE "WHEY" OR DE "YOGURT" OR DE "FROZEN yogurt" OR DE "GREEK yogurt" OR DE "YOGURT mixes" OR DE "CHEESE" OR DE "CAMEL cheese" OR DE "CHEESE varieties" OR DE "CHEESEMAKERS" OR DE "CURD cheese" OR DE "GOAT cheese" OR DE

Database	Concept	Subject heading
		"PROCESSED cheese" OR DE "RAW milk cheese" OR DE "LOW-cholesterol diet" OR DE "SALT-free diet" OR DE "LOW-fat diet" OR DE "LOW-cholesterol diet" OR DE "SUGAR-free diet" OR DE "LOW-calorie diet" OR DE "SUGAR-free diet" OR DE "VERY low-calorie diet" OR DE "LOW-carbohydrate diet" OR DE "ATKINS diet" OR DE "PALEO diet" OR DE "SUGAR-free diet"
Embase	1	'consumer'/exp OR 'customer'/exp
	2	'willingness to accept'/exp OR 'Willingness To Pay'/exp OR 'discrete choice experiment'/exp OR 'contingent valuation'/exp OR 'conjoint analysis'/exp
	3	'healthy diet'/de OR 'low fat diet'/de OR 'sodium restriction'/de OR 'low carbohydrate diet'/de OR 'fat free diet'/de OR 'fruit'/exp OR 'vegetable'/exp OR 'meat'/exp OR 'fish'/exp OR 'bean'/exp OR 'cereal'/exp OR 'whole grain'/exp OR 'poultry'/exp OR 'egg'/exp OR 'nut'/exp OR 'plant seed'/de OR 'milk by fat content'/de OR 'reduced fat milk'/de OR 'skim milk'/de OR 'yoghurt'/exp OR 'cheese'/exp
Econlit	1	-
	2	-
	3	-

Table S3: Quality scores of individual studies.

		Akaichi et al. 2020[39]	Bellhouse et al. 2010[49]	Buttorff et al. 2015[48]	Childs & Drake. 2009[43]	De-Magistris & Gracia. 2016[41]	De-Magistris,& Lopez-Galan. 2016[28]	De-Magistris, Lopez-Galan & Caputo V. 2016[40]	Di Vita et al. 2016[50]	Jurado & Gracia. 2017[42]	Leak et al. 2019[44]	Lee CM, Moskowitz HR, Lee SY. 2007[45]	Lee et al. 2015[51]	Lusk & Parker. 2009[46]	Nganje et al. 2008[47]	Van Wezemael et al. 2014[29]	Agregate item score
1.	Was a well- defined research question stated and is conjoint analysis an appropriate method for answering it?																
1.1	Were a well-defined research question and a testable hypothesis articulated?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	15/15
1.2	Was the study perspective described, and was the study placed in a particular decision-making or policy context?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	15/15

1.3	Was the rationale for using conjoint analysis to answer the research question clearly stated?	N	Y	Y	Y	N	Y	Y	N	Y	N	N	Y	N	N	Y	8/15
2.	Was the choice of attributes and levels supported by evidence?																
2.1	Was attributes identification supported by evidence (literature reviews, focus groups, or other scientific methods)?	Y	N	Y	Y	N	N	N	N	N	N	Y	Y	N	N	Y	6/15
2.2	Was attributes selection justified and consistent theory?	Y	N	Y	N	N	Y	Y	N	N	N	N	N	N	N	Y	5/15
2.3	Was level selection for each attribute justified by the evidence and consistent with the	Y	N	Y	N	N	Y	Y	N	Y	N	Y	Y	Y	N	Y	9/15

	study perspective and hypothesis?																
3.	Was the construction of tasks appropriate?																
3.1	Was the number of attributes in each conjoint task justified (that is, full or partial profile)?	Y	N	Y	N	N	N	Y	N	Y	N	N	Y	Y	N	Y	7/15
3.2	Was the number of profiles in each conjoint task justified?	Y	N	Y	N	N	Y	Y	N	Y	N	N	Y	Y	N	Y	8/15
3.3	Was (should) an opt-out or a status-quo alternative (be) included?	Y	N	Y	N	N	Y	Y	N	Y	N	N	Y	Y	N	Y	8/15
4.	Was the choice of experimental design justified and evaluated?																
4.1	Was the choice experiment design justified? Were alternative experimental	Y	N	Y	N	N	Y	N	Y	Y	N	N	Y	Y	N	Y	8/15

	designs considered?																
4.2	Were the properties of the experimental design evaluated?	N	N	N	N	N	N	N	N	N	N	N	Y	Y	N	Y	3/15
4.3	Was the number of conjoint tasks included in the data-collection instrument appropriate?	Y	N	Y	N	N	Y	Y	N	N	N	N	Y	Y	N	Y	7/15
5.	Were preferences elicited appropriately, given the research question?																
5.1	Was there sufficient motivation and explanation of conjoint tasks?	Y	N	N	N	N	N	N	N	Y	N	Y	N	N	N	Y	4/15
5.2	Was an appropriate elicitation format (that is, rating, ranking, or choice) used? Did (should) the elicitation	Y	Y	Y	N	N	Y	Y	N	Y	Y	Y	Y	Y	N	Y	11/15

	format allow for indifference?																
5.3	In addition to preference elicitation, did the conjoint tasks include other qualifying questions (for example, strength of preference, confidence in response, and other methods)?	Y	N	Y	N	N	N	Y	N	Y	N	Y	N	Y	N	Y	7/15
6.	Was the data collection instrument designed appropriately?																
6.1	Was appropriate respondent information collected (such as sociodemographic, attitudinal, healthy history or status, and treatment experience)?	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	13/15

No.	Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Score
6.2	Were the attributes and levels defined, and was any contextual information provided?	Y	N	Y	N	N	Y	Y	N	Y	N	Y	N	N	N	Y	7/15
6.3	Was the level of burden of the data-collection instrument appropriate? Were respondents encouraged and motivated?	Y	Y	Y	N	Y	N	Y	N	Y	N	N	Y	Y	N	Y	9/15
7.	Was the data-collection plan appropriate?																
7.1	Was the sampling strategy justified (for example, sample size, stratification, and recruitment)?		N	N	Y	N	Y	Y	Y	Y	Y	N	Y	Y	Y	N	Y	10/15
7.2	Was the mode of administration justified and	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	14/15

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	appropriate (for example, face-to face, pen, pen and paper, web-based)?																
7.3	Were ethical considerations addressed (for example, recruitment, information and/or consent, compensation)?		N	N	N	N	N	N	N	Y	Y	Y	N	Y	N	Y	5/15
8.	Were statistical analyses and model estimation appropriate?																
8.1	Were respondent characteristics examined and tested?	Y	Y	Y	N	N	Y	N	Y	Y	Y	Y	Y	Y	N	Y	11/15
8.2	Was the quality of the responses examined (for example, rationality, validity, reliability)?	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N	4/15

8.3	Was model estimation conducted appropriately? Were issues of clustering and subgroups handled appropriately?	Y	Y	Y	Y	N	Y	Y	N	Y	N	N	Y	Y	N	Y	10/15
9.	Were the results and conclusion valid?																
9.1	Did study results reflect testable hypothesis and account for statistical uncertainty?	Y	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	13/15
9.2	Were study conclusions supported by the evidence and compared with existing findings in the literature?	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	13/15
9.3	Were study limitations and	Y	N	Y	N	N	Y	Y	Y	Y	Y	N	N	N	N	Y	8/15

generalizability adequately discussed?																
10. Was the study presentation clear, concise and complete?																
10.1 Was the study importance and research context adequately motivated?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	15/15
10.2 Were the study data-collection instrument and methods described?	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	14/15
10.3 Were the study implications clearly stated and understandable to a wide audience?	Y	N	Y	N	N	Y	N	Y	Y	Y	N	N	Y	Y	Y	9/15
Number (percentage) criteria met	26 (87%)	12 (40%)	27 (90%)	9 (30%)	10 (33%)	22 (73%)	22 (73%)	12 (40%)	25 (83%)	13 (43%)	16 (53%)	22 (73%)	23 (77%)	7 (23%)	29 (97%)	