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The social structuring of humanitarian concern: Evidence from Portugal on awareness, emotion and inequality

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Abstract

This study examines how individuals perceive and emotionally engage with major global challenges, including hunger, climate change, war, and poverty. Based on an empirical study conducted in Portugal (N = 218), it analyses how awareness, concern, and emotional resonance vary across social groups, particularly by generation, gender, education and professional background. Using a mixed-methods approach, the research combines quantitative survey analysis with qualitative interpretation of image-word associations to capture both cognitive and affective responses to global crises. The findings show that concern for humanitarian and environmental issues is widely shared but socially differentiated. Differences emerge not only in levels of concern, but also in how individuals emotionally interpret global suffering. Older cohorts prioritize war and poverty, while younger respondents are more attuned to climate change and future-oriented risks. Gender, education and professional background further shape both concern and emotional vocabularies. The study demonstrates that empathy and global concern are socially structured, contributing to interdisciplinary debates on inequality, emotion and public engagement with global crises.

1. Introduction

In the twenty-first century, public responses to humanitarian crises are shaped not only by the scale of global disruption but also by the unequal ways in which suffering is made visible, interpreted and felt. Climate change, poverty, war, food insecurity, displacement and public-health emergencies do not simply coexist; they are experienced as overlapping crises whose meanings are filtered through media, education, social position and historical memory. In 2022, more than 258 million people faced acute food insecurity worldwide, underscoring how environmental instability, armed conflict and economic vulnerability increasingly converge rather than operate as separate domains of risk (United Nations, 2023). Nevertheless, the social perception of these crises is far from uniform: some threats become morally urgent and emotionally resonant, while others recede into abstraction, fatigue, or selective indifference.

This unevenness is central to contemporary humanitarianism. Humanitarian engagement cannot be reduced to information, moral principle or abstract cosmopolitan obligation; rather, it is structured by affect, symbolic frames and the social conditions under which distant suffering becomes legible. As Boltanski (1999) argues, public responses to suffering depend on regimes of representation that enable spectators to identify with distant others. Building on this, Chouliaraki (2013) shows that contemporary humanitarian communication operates within a post-humanitarian condition marked by reflexivity and unstable moral engagement. Related work further highlights how media exposure can both mobilize and desensitize audiences (Moeller, 2002; Höijer, 2004), while emotional responses are shaped by socially patterned repertoires of feeling (Hochschild, 2012; Illouz, 2023). Rather than following a linear model in which exposure generates empathy and action, humanitarian communication is mediated by unequal emotional repertoires, differential proximity to crises and fragmented media ecologies that can simultaneously intensify concern and dilute sustained engagement.

For this reason, the concepts of cultural capital, emotional socialization and emotional repertoires are especially useful for explaining social differentiation in humanitarian concern. Cultural capital does not merely influence what individuals know; it also shapes what they are prepared to recognize as socially significant, morally troubling or worthy of response (Bourdieu, 2019). Exposure to transnational narratives through higher education, professional environments and media consumption may increase familiarity with global inequalities and humanitarian discourse, but it may also privilege certain forms of suffering over others (Norris & Inglehart, 2019; Orgad, 2014). At the same time, emotional socialization establishes "feeling rules" that guide how individuals interpret and respond to distant suffering (Hochschild, 2012; Illouz, 2023). As a result, emotions such as compassion, guilt, indignation, fear and detachment are not merely private reactions, but socially patterned dispositions shaped by cultural norms, institutional contexts and lived experience.

Generational differences further deepen this pattern. Mannheim's classic argument that generations are shaped by shared historical location remains relevant, while contemporary scholarship emphasizes that formative experiences during the "impressionable years" leave durable effects on political attitudes, risk perception and moral outlook (Mannheim, 2013; Sears & Brown, 2023; Twenge, 2017). Beck and Beck-Gernsheim (2002) similarly argue that late-modern generations develop distinct orientations toward uncertainty, risk and individual responsibility. These perspectives matter for the present study because generations are not simply age bands; they are cohorts socialized within specific media environments, crisis narratives and expectations of citizenship. In this context, older respondents may be more inclined to prioritize issues such as war, poverty and hunger, while younger cohorts, socialized in digitally mediated and crisis-saturated environments, may assign greater salience to environmental threats and exhibit different emotional repertoires when responding to representations of distant suffering (Twenge, 2017; Clayton, 2019).

This question is particularly important in Portugal, where media use, trust and issue salience are unevenly distributed. Recent data from OberCom (2023) show that the Portuguese news environment is increasingly hybrid: television remains central overall, but younger users are more strongly embedded in digital and social-media news ecologies, while younger and lower-education groups also tend to report lower trust in news. Research on disinformation and news access further indicates that younger Portuguese audiences rely more heavily on platform-mediated environments, where indirect exposure through social networks is associated with distinct trust profiles and patterns of news avoidance. These dynamics matter because the medium is not neutral: the circulation of crisis imagery through fragmented and often incidental forms of news consumption can reshape both attention and affect. Chouliaraki's (2013) account of post-humanitarian communication is therefore especially relevant here, but it must be situated within specific national media ecologies rather than treated as universally uniform.

A Portugal-specific framing is also necessary because moral proximity to global suffering is historically layered. Portugal's relationship to humanitarian discourse cannot be fully understood without reference to its colonial past, Lusophone geographies and post-imperial connections to Africa and migration.

Historical scholarship shows that Portuguese engagements with international relief and humanitarianism were entangled with colonial legitimacy and decolonization politics (Ferreira, 2022; Oliveira, 2017; Santos, 2002). While colonial memory does not directly determine present-day attitudes, it shapes how crises in Lusophone Africa, migration routes and European border politics are narratively constructed within Portuguese public culture (Cabecinhas & Feijó, 2010; Pereira et al., 2010). For this reason, the Portuguese case offers a distinctive contribution to a literature still largely shaped by Northern European and Anglo-American contexts.

The mismatch between objective crisis environments and subjective salience further reinforces the relevance of this study. The relatively low priority assigned to pandemics and obesity is analytically revealing, suggesting processes of normalization, issue fatigue or the perception of these problems as individualized rather than humanitarian. By contrast, the inclusion of future food reflects how concerns about sustainability, food systems and climate adaptation are increasingly embedded in public imaginaries of crisis. In Portugal, where confidence in climate mitigation remains limited (OCDE, 2023), such issues may acquire particular resonance, especially in urban contexts shaped by debates on sustainability and food security.

These considerations clarify why this study matters beyond the descriptive claim that emotion is "important." If humanitarian concern is socially differentiated, then appeals based on universal empathy may fail where communication most needs to bridge distance. The key question is not simply whether people care, but which publics care about which crises, through what emotional vocabularies, and under what social conditions. This has direct implications for global citizenship and humanitarian communication, both of which must be understood as unevenly distributed and socially mediated rather than universally shared.

It is within this framework that the present study is situated. Focusing on Portugal, it examines how respondents differ in their awareness, concern and emotional resonance regarding ten humanitarian issues. By combining quantitative and qualitative survey components, the study analyses variation across generation, gender, education, profession and region. These patterns demonstrate that humanitarian perception is socially structured rather than uniformly distributed. The article advances three linked arguments: first, that humanitarian concern reflects unequal distributions of cultural and emotional capital; second, that emotional responses are shaped by socialization, media environments and lived experience; and third, that the Portuguese case contributes to extending debates on humanitarianism beyond dominant Northern contexts by foregrounding historically layered and socially differentiated forms of engagement.

2. Methods

2.1 Data collection and sample

A structured online questionnaire was administered via Google Forms between February 23 and July 31, 2023. The instrument was developed within the scope of a Master's thesis project conducted at the Escola Superior de Hotelaria e Turismo do Estoril. The study protocol, including the questionnaire design and data collection procedures, was reviewed and approved by the Master's Program Council of the institution. Data collection was conducted according to a predefined protocol outlining the survey design, administration procedures and ethical considerations (see Appendix A).

The survey targeted adult participants residing in Portugal, who were recruited through a non-probabilistic convenience sampling strategy. The questionnaire was disseminated via institutional mailing lists, social networks and professional contacts. Participation was voluntary, and informed consent was obtained prior to participation through an introductory section of the online questionnaire. No personally identifiable information was collected, and all responses were recorded anonymously in accordance with data protection principles.

A total of 235 responses were collected, of which 218 were retained for analysis after data cleaning. The data cleaning process involved several steps to ensure data quality and reliability. First, incomplete responses (i.e., questionnaires with substantial missing data across key sections) were excluded. Second, responses exhibiting clear patterns of inattentiveness, such as uniform answers across all Likert-scale items or completion times significantly below the expected duration, were removed. Finally, duplicate submissions (identified through timestamp and response pattern checks) were excluded. These procedures resulted in a final valid sample of 218 respondents.

A non-probabilistic convenience sampling strategy was employed. The survey was disseminated through institutional mailing lists, social networks and professional contacts. Participation was voluntary and anonymous. While this approach limits statistical generalization, it enables the exploration of meaningful patterns of association within a socially relevant sample.

The survey comprised 32 questions organized into five thematic blocks (Fig. 1):

1. Respondent characterization
2. Importance of humanitarian issues
3. Ranking of concerns
4. Image–word associations
5. Perspectives on food design interventions

The questionnaire was designed to capture three core dimensions of humanitarian engagement:

- Awareness (frequency of reflection on global issues);
- Concern (perceived importance of humanitarian problems);
- Emotional resonance (affective associations with visual representations).

Awareness was assessed through items asking respondents how frequently they think about specific global issues (e.g., “How often do you think about hunger?”), providing an indication of cognitive engagement and issue salience.

Concern was measured using Likert-scale items evaluating the perceived importance of global challenges (e.g., hunger, poverty, war, climate change). Respondents rated each issue on a five-point scale ranging from “very important” to “not at all important”.

Emotional resonance was explored through an image-word association task, in which respondents selected the word that best described their reaction to visual representations of each issue. This approach allowed the capture of both emotional and interpretive responses within a structured format.

The instrument was developed specifically for this study, drawing on established approaches in survey research, risk perception and visual elicitation. Prior to dissemination, the questionnaire was reviewed for clarity, internal consistency and alignment with the research objectives. Minor adjustments were made to wording and response options to improve comprehension and usability in the online format.

The full questionnaire, including all items, response options, and instructions provided to participants, is available in the supplementary materials to ensure transparency and reproducibility.

Figure 1. The five thematic blocks of the questionnaire.

2.2 Variables and coding

Data were analysed using IBM SPSS Statistics 21.0. The main independent variables included gender, education level, profession, region of residence and age (later grouped into generational cohorts).

All variables used in the analysis are fully documented in a codebook provided in Appendix B. The codebook details variable names, question descriptions, response categories, and coding schemes, thereby ensuring transparency and reproducibility of the analyses.

Generational categories

Age was initially collected as a continuous variable but subsequently grouped into generational cohorts:

- Baby Boomers (1945–1960);
- Generation X (1961–1980);
- Millennials (1981–1995);
- Generation Z (1996–2010).

This categorization was adopted to capture shared socio-historical experiences that shape values, attitudes and emotional repertoires. Generational theory suggests that individuals socialized during similar historical periods develop distinct worldviews and moral frameworks (Twenge, 2017). The “impressionable years” hypothesis further posits that formative experiences during adolescence and

early adulthood have lasting effects on attitudes and emotional orientations (Sears & Brown, 2023). Given the study's focus, generational grouping was considered more analytically meaningful than age as a purely continuous variable.

Education

Educational attainment was coded into two categories:

- Higher education (completed or ongoing);
- Secondary education.

This simplification was necessary due to the concentration of respondents within these categories and to ensure sufficient statistical power.

Profession

Profession was classified into six categories:

- Students;
- Creative professionals (e.g., designers, artists);
- Higher-level professionals (e.g., engineers, doctors, teachers);
- Mid-level professionals;
- Tourism, hospitality, and food-sector workers;
- Other.

This classification reflects differences in educational background, professional specialization, and exposure to global narratives. It was designed to capture variation in cultural capital and forms of engagement with social issues.

Region of residence

Place of residence was categorized as:

- Greater Porto;
- North (Braga and Viana do Castelo);
- Center (Aveiro);
- Greater Lisbon;
- Other regions (including Algarve).

Statistical analyses were conducted using IBM SPSS Statistics 21.0. All procedures are described in the manuscript, with additional methodological details provided in the supplementary materials.

2.3 Analytical strategy

This study adopts a convergent mixed-methods design, in which quantitative and qualitative data are collected and analysed in parallel and then integrated to examine different dimensions of humanitarian engagement (Creswell & Clark, 2017). The quantitative component consists of descriptive statistics and Pearson's Chi-square tests to assess statistically meaningful differences in awareness, concern and prioritisation across demographic groups (generation, gender, education, profession and region). Given that variables were categorical or ordinal, the Chi-square test was considered appropriate for examining associations between sociodemographic characteristics and response patterns.

The qualitative component is embedded in the image-word association task. Although based on predefined response categories, this technique allows for the interpretation of emotional and symbolic framings of humanitarian issues. The analysis focused on identifying dominant descriptors and examining how these varied across social groups. Integration occurred at the interpretive stage, where quantitative patterns (e.g., differences in concern) were analysed alongside qualitative insights (e.g., emotional vocabularies), enabling a more comprehensive understanding of how respondents both evaluate and emotionally interpret humanitarian issues (Creswell & Clark, 2018; Fetters et al., 2013). This approach is consistent with mixed-methods research that emphasizes the integration of data strands to generate meta-inferences that go beyond the results of each method considered separately (Tashakkori & Teddlie, 2021).

2.4 Measurement of humanitarian perceptions

Importance of humanitarian issues

Participants rated the importance of ten global challenges (e.g., hunger, poverty, war, climate change, pandemics) using a five-point Likert scale ranging from "very important" to "not at all important". These items correspond to Questions 7–16 in the questionnaire and were used to assess levels of concern.

Ranking of concerns

Participants were also asked to rank the same issues in order of importance (Question 17), using a scale from 1 (most important) to 10 (least important). This measure provided a comparative perspective on perceived priorities.

Image-word associations

In the fourth section, respondents selected one word (from five options) to describe images representing each humanitarian issue (Fig. 2). This task was designed to capture emotional and cognitive responses to visual stimuli, complementing attitudinal measures and providing insight into affective framing.

Food design and humanitarian communication

The final section explored perceptions of food-related and gastronomic experiences as potential tools for raising awareness about global issues. These questions aimed to connect humanitarian engagement with sensory and cultural practices. In addition, this component informed the design of a gastronomic

experience intended to translate humanitarian themes into embodied and affective forms of engagement. The resulting intervention is discussed in a related study (Simões & Bonacho, 2026a). The complete questionnaire is provided in Appendix C.

3. Results

3.1 Sample characteristics

Of the 218 valid respondents, 121 (56.0%) identified as female, 96 (44.0%) as male, and one respondent chose not to disclose gender. In generational terms, 16.5% were Baby Boomers, 45.9% Generation X, 16.4% Millennials, and 21.1% Generation Z. Most respondents (84.0%) had completed or were pursuing higher education, while the remaining participants had secondary education.

Regarding profession, 55.5% were higher-level professionals, 13.5% worked in creative fields, 14.2% were students, 6.0% worked in tourism, hospitality, or the food sector, 7.8% were mid-level professionals, and 2.7% were classified as other. By region, respondents were distributed across Greater Porto (48.0%), North (6.0%), Centre (16.0%), Greater Lisbon (22.0%), and other regions (9.0%).

To assess statistically meaningful differences by generation, gender, education, profession, and region in awareness, concern, and emotional resonance, Pearson's chi-square tests were used. For statistically significant chi-square results, adjusted standardized residuals were examined to identify which specific groups contributed most strongly to the association (Agresti, 2013; Field, 2024).

When asked, *"How concerned are you about the problems facing humanity and the planet (e.g., hunger, poverty, war, food, pollution, climate change, obesity, violence, security, and pandemics)?"*, the percentage selecting "very important" (1) was 72% among Baby Boomers, 69% among Generation X, 64% among Millennials, and 41% among Generation Z, with an overall average of 63%.

3.2 Awareness of humanitarian issues

Awareness was operationalized as the reported frequency with which respondents thought about specific global issues, as measured in the questionnaire items addressing cognitive salience (e.g., "How often do you think about hunger?"). These items captured the degree to which humanitarian problems were present in participants' everyday reflections.

Across the sample, awareness was not evenly distributed, suggesting that cognitive engagement with humanitarian issues varies according to respondents' social position and life experience. In general, older generations reported greater issue salience than younger respondents, especially for poverty, war and hunger, while younger respondents appeared relatively more attentive to climate-related issues. These differences are consistent with the study's theoretical expectation that generational location influences moral priorities and risk perception.

3.3 Concern about humanitarian issues

Concern was measured through respondents' ratings of the importance of major humanitarian challenges, including hunger, poverty, war, future food, pollution, climate change, obesity, violence, security, and pandemics. Questions 7–16 asked respondents to rate each issue on a five-point scale ranging from very important to not at all important.

3.3.1 Overall concern

Overall, respondents expressed high levels of concern regarding global humanitarian issues. When asked about "the problems facing humanity and the planet," the proportion selecting the highest level of concern was 72.0% among Baby Boomers, 69.0% among Generation X, 64.0% among Millennials, and 41.0% among Generation Z, with an overall mean of 63.0%. Despite these descriptive differences, the association between generation and overall concern was not statistically significant, $\chi^2 = 19.939$, $p = 0.068$. This suggests that while older respondents tended to report stronger concern descriptively, these differences did not reach conventional levels of statistical significance for the general item.

A more differentiated pattern emerges when examining specific issues. As shown in Table 1, war (M = 2.10, SD = 0.98), climate change (M = 2.13, SD = 1.03), poverty (M = 2.13, SD = 0.94), and pollution (M = 2.11, SD = 0.99) were among the highest-rated concerns. In contrast, pandemics (M = 2.90, SD = 1.00) and obesity (M = 2.70, SD = 1.14) received comparatively lower importance ratings. These results indicate that respondents attribute greater salience to structural and global issues, while assigning lower priority to issues perceived as episodic or individualised.

Table 1
Mean importance ratings and standard deviations.

Issue	Mean (M)	Mean standard deviation (SD)
Hunger	2.46	1.02
Poverty	2.13	0.94
War	2.10	0.98
Future food	2.35	1.08
Pollution	2.11	0.99
Climate change	2.13	1.03
Obesity	2.70	1.14
Violence	2.24	1.05
Security	2.29	0.98
Pandemics	2.90	1.00

These findings are consistent with the ranking results obtained in Question 17 (see Section 3.4).

A more detailed view of generational variation is presented in Table 2, which reports the percentage distribution of responses for each issue across the five-point scale. Overall, poverty, war, climate change and pollution consistently emerge as high-salience issues across all generations. However, important differences can be observed in how strongly these concerns are expressed and how responses are distributed along the scale.

Table 2
Survey results (percentages) for specific humanitarian issues (Questions 7–16).

Hunger	**Baby Boomers**	**X generation**	**Millennials**	**Z generation**	**Scale**
	34	**20**	**14**	**7**	**1**
	33	**36**	**29**	**35**	**2**
	27	**31**	**34**	**35**	**3**
	3	**9**	**20**	**21**	**4**
	3	**4**	**3**	**2**	**5**
Poverty	24	24	26	33	1
	47	45	43	42	2
	23	18	31	21	3
	3	10	0	2	4
	3	3	0	2	5
War	17	33	29	40	1
	50	39	31	35	2
	23	16	31	19	3
	10	10	6	6	4
	0	2	3	0	5
Future Food	23	27	17	25	1
	30	31	54	29	2
	30	27	23	19	3
	10	10	0	13	4
	7	5	6	4	5
Pollution	27	34	26	23	1
	40	45	49	44	2
	20	14	11	21	3
	10	4	14	8	4
	3	3	0	4	5
Climate Change	26	34	29	25	1
	30	39	49	43	2
	30	19	11	17	3

Hunger	Baby Boomers	X generation	Millennials	Z generation	Scale
	34	**20**	**14**	**7**	**1**
	33	**36**	**29**	**35**	**2**
	27	**31**	**34**	**35**	**3**
	3	**9**	**20**	**21**	**4**
	3	**4**	**3**	**2**	**5**
	7	5	11	13	4
	7	3	0	2	5
Obesity	13	20	17	19	1
	27	23	29	23	2
	33	30	34	33	3
	20	23	11	21	4
	7	4	9	4	5
Violence	17	32	26	27	1
	37	34	45	33	2
	33	20	23	21	3
	10	12	6	17	4
	3	2	0	2	5
Security	18	24	17	23	1
	33	42	49	41	2
	33	21	31	19	3
	13	11	3	15	4
	3	2	0	2	5
Pandemics	10	8	6	10	1
	13	28	31	27	2
	47	34	40	38	3
	23	26	20	17	4
	7	4	3	8	5

For poverty, Baby Boomers and Generation X show a clear concentration in the highest importance categories (levels 1 and 2), with particularly high values in category 2 (47% and 45%, respectively). Millennials also display strong concern but with a more balanced distribution across categories 2 and 3. In contrast, Generation Z shows a relative shift toward mid-scale responses, with a higher proportion selecting categories 2 and 3 and fewer respondents choosing the highest intensity category. A similar pattern is observed for war: older cohorts again concentrate more strongly in the highest importance categories, whereas younger respondents exhibit greater dispersion, suggesting a less polarized perception of urgency.

For environmental issues, the pattern is partially reversed. Climate change is highly salient across all groups, but Millennials and Generation Z display a more consistent distribution across the top categories, indicating sustained concern. Generation X shows particularly strong concentration in category 2 (39%), while younger respondents maintain relatively high levels across both categories 1 and 2. Pollution follows a similar pattern, although with slightly less differentiation between cohorts, suggesting that it is perceived as a broadly shared issue, albeit with varying intensity.

Future food presents a more heterogeneous distribution across generations. While Generation X and Millennials show higher concentrations in the upper categories (particularly category 2), Generation Z exhibits a more dispersed pattern, with responses spread across mid-level categories. This may indicate uncertainty or ambivalence among younger respondents regarding emerging food systems, rather than clearly defined positions of concern or acceptance.

For issues such as violence and security, generational differences are less pronounced, with all cohorts showing relatively similar distributions concentrated in categories 2 and 3. However, Generation X tends to report slightly higher levels of concern, particularly for violence, where it records the highest proportion in category 1.

Pandemics and obesity show comparatively lower salience across all generations, with responses more evenly distributed and fewer selections in the highest importance categories. In the case of pandemics, a substantial proportion of responses falls within mid-scale categories (particularly category 3), suggesting a perception of these issues as less urgent or more normalized despite recent global events.

Taken together, these patterns indicate that generational differences are not simply a matter of higher or lower concern, but also of how concern is distributed and expressed. Older cohorts tend to concentrate their responses in the highest importance categories, reflecting a more categorical perception of urgency, particularly for traditional humanitarian issues such as poverty and war. Younger cohorts, especially Generation Z, display more differentiated response patterns, with greater use of mid-scale categories, suggesting more nuanced or less polarized evaluations.

These findings support the interpretation that humanitarian concern is structured by generational experience. Older respondents appear more strongly oriented toward classic humanitarian narratives,

while younger respondents show relatively greater sensitivity to environmental and future-oriented issues, as well as a tendency toward more graduated and less categorical forms of evaluation.

Table 3 presents the statistically significant associations identified using the Pearson's Chi-square test, indicating that perceptions of key global issues vary across socio-demographic groups. Specifically, generational differences were significantly associated with concerns about poverty and war, suggesting that age influences how these issues are perceived. Gender was significantly related to multiple concerns, including hunger, pollution, violence, security, and climate change, highlighting notable differences in how these challenges are experienced or prioritized.

Table 3
Statistically significant Pearson Chi-square test results.

Variable	Issue	χ^2 value	p-value
Generation (Age)	Poverty	22.755	0.030
	War	22.442	0.033
Gender	Hunger	38.080	0.000
	Pollution	20.074	0.010
	Violence	21.079	0.007
	Security	15.897	0.044
	Climate Change	18.699	0.017
Education Level	Obesity	15.034	0.005
Profession	Hunger	32.320	0.040
	Poverty	32.123	0.033
	War	32.086	0.042
	Pollution	31.552	0.048
	Security	34.340	0.024
Place of Residence	Future Food	34.000	0.005

3.3.3 Differences by gender

Gender was significantly associated with several issues, including hunger, pollution, violence, security and climate change (Table 3). Female respondents were more likely than male respondents to assign higher importance to these issues, indicating a consistent pattern of stronger concern across domains related to care, vulnerability and collective risk. These findings suggest that humanitarian and environmental concern is gendered, aligning with broader evidence that women tend to report higher risk perception and social concern.

3.3.4 Differences by education

Education level showed a statistically significant association only for obesity (Table 3), indicating limited variation across most humanitarian issues. This may be partly explained by the concentration of respondents with higher education in the sample, which reduces variability. Nevertheless, the result suggests that issues related to health, lifestyle and individual responsibility may be interpreted differently depending on educational background.

3.3.5 Differences by profession

Professional background was significantly associated with concern for hunger, poverty, war, pollution, and security (Table 3). Higher-level professionals and creative professionals tended to report stronger concern for these issues. This pattern suggests that occupational position may shape both exposure to global narratives and levels of civic engagement. In this sense, professional background can be interpreted as a proxy for cultural capital, influencing how respondents prioritize and interpret humanitarian challenges.

3.3.6 Differences by region

Region of residence was significantly associated only with concern about future food (Table 3), with respondents from Greater Porto and Greater Lisbon reporting higher levels of concern. This pattern may reflect greater exposure in urban contexts to debates surrounding food security, sustainability and innovation, as well as increased visibility of emerging food-related risks.

Overall, these findings suggest that perceptions of global challenges are not homogeneous but are shaped by socio-demographic factors, reinforcing the importance of considering these differences in policy-making and future-oriented research.

3.4 Ranking of concerns

The ranking question asked respondents to order the same set of humanitarian issues from 1 (most important) to 10 (least important) (Table 4). This measure complements the five-point concern scale by capturing respondents' relative prioritization across competing crises. While the Likert scale assesses the intensity of concern for each issue individually, the ranking task reveals how respondents organize these issues in relation to one another. Only 119 (54%) of the 218 respondents were included in this question due to non-conformity with the question.

Overall, hunger (M = 3.5), poverty (M = 3.4), war (M = 4.3), and climate change (M = 4.9) emerged as the highest-priority issues. By contrast, obesity (M = 7.6) and pandemics (M = 8.0) were consistently ranked as less urgent. These results indicate that respondents differentiate between issues perceived as structurally urgent and those viewed as either less immediate, more individualized, or more episodic in nature.

Table 4
Percentages of survey respondents rating each type of humanitarian issue as very important (1) and not important (10) and means and standard deviations of 1–10 importance ratings for humanitarian issues.

Issue	Very important (1)	Not important (10)	Mean (SD)
Hunger	25%	4%	3.5 (2.5)
Poverty	18%	2%	3.4 (2.2)
War	15%	4%	4.3 (2.7)
Future Food	7%	11%	6.1 (2.8)
Pollution	1%	2%	5.3 (2.0)
Climate Change	18%	6%	4.9 (2.7)
Obesity	2%	28%	7.6 (2.5)
Violence	6%	2%	5.5 (2.2)
Security	3%	4%	6.3 (2.3)
Pandemics	5%	39%	8.0 (2.6)

Generational patterns were again evident in the ranking data. Baby Boomers placed greater emphasis on hunger, poverty and war, while Generation X also prioritized hunger as a central concern. Millennials showed a stronger focus on poverty, whereas Generation Z attributed relatively greater importance to climate change. These differences, although not always statistically significant, indicate that generational location shapes how humanitarian issues are hierarchized, even when overall concern is broadly shared.

Importantly, the ranking results reinforce and refine the patterns observed in the Likert-scale analysis. While most respondents rated multiple issues as highly important, the ranking task reveals that these concerns are not equivalent. Instead, respondents construct implicit hierarchies of urgency, distinguishing between issues that demand immediate attention and those perceived as secondary.

Because this variable is ordinal and comparative, it provides a more discriminating measure of humanitarian prioritization. It shows that concern is not simply a matter of intensity, but also of relative positioning within a broader moral landscape of global crises. These hierarchies vary across generations and, to a lesser extent, across other sociodemographic groups, supporting the broader argument that humanitarian engagement is socially structured rather than uniformly distributed.

3.5 Emotional resonance: image–word associations

The image-word association task was used as a measure of emotional resonance, capturing how respondents emotionally and cognitively interpreted visual representations of humanitarian issues. For each image, participants selected one word from five options, allowing the analysis of both emotional

valence and interpretive framing. Across the full sample, several clear patterns emerged (see Table 5). The image representing hunger was most frequently associated with “non-human” (54%), followed by “shocking” and “distressing”. Poverty was most commonly described as “incomprehensible” (41%) and “unfair” (29%), while war was associated primarily with “incomprehensible” (36%) and “avoidable” (24%).

Future food elicited “repugnant” most often (33%), indicating a strong affective response to novel or unfamiliar food sources. Pollution, climate change, security and pandemics were predominantly associated with “worrying”, suggesting a shared perception of risk and uncertainty across these issues. Violence, in turn, was interpreted through emotionally charged terms such as “brutality”, “terror” and “cruelty”. These results indicate that humanitarian issues are not only evaluated in terms of importance but are also interpreted through distinct emotional and moral vocabularies.

Table 5
Survey results (percentages) for questions 18–27.

Issue	Percentages	Image–Word	Issue	Percentages	Image–Word
Hunger	54	Non-human	Poverty	41	Incomprehensible
	18	Shocking		29	Unfair
	17	Distressing		16	Shocking
	8	Unfair		7	Impactful
	3	Impactful		7	Traumatizing
War	36	Incomprehensible	Future Food	33	Repugnant
	24	Avoidable		21	Interesting
	18	Pain		20	Avoidable
	14	Loss		14	Edible
	8	Traumatizing		12	Nutritious
Pollution	49	Irresponsible	Climate Change	59	Worrying
	43	Worrying		17	Misgovernment
	5	Incomprehensible		16	Future
	2	Carbon Monoxide		5	Jeopardize
	1	Ozone		3	Incomprehensible
Obesity	34	Loss of control	Violence	24	Brutality
	32	Worrying		24	Terror
	27	Excessive		22	Disorder
	5	Incomprehensible		20	Cruelty
	2	Hypertension		10	Assault
Security	45	Worrying	Pandemics	32	Disturbing
	34	Privacy		23	Infection
	12	Integrity		18	Virus
	7	Confidentiality		17	Illness
	1	Use of Data		10	Epidemic

Gender was significantly associated only with the image representing future food ($\chi^2 = 15.723$, $p = 0.042$). Female respondents selected “repugnant” more frequently (41%) than male respondents (24%), reinforcing the broader pattern observed in Table 5, where “repugnant” is the dominant response to this

image (33%). This suggests that affective resistance to novel or unfamiliar food sources may be more pronounced among women, potentially reflecting heightened sensitivity to perceived risks, bodily integrity or food-related uncertainty.

Education level was significantly associated only with responses to the poverty image ($\chi^2 = 13.475$, $p = 0.009$). Respondents with higher education were substantially more likely to select “incomprehensible” (66%) compared to those with secondary education (25%). As shown in Table 5, “incomprehensible” is the most frequent overall descriptor for poverty (41%), indicating that higher education may reinforce a moral framing of poverty as unjustifiable or socially unacceptable rather than merely unfortunate.

Professional background further shaped emotional resonance across several issues. For the poverty image ($\chi^2 = 34.846$, $p = 0.021$), “incomprehensible” was most frequently selected by higher-level professionals (46%) and students (43%), aligning with the dominant framing identified in Table 5. For future food ($\chi^2 = 34.450$, $p = 0.018$), “repugnant” was especially prevalent among students (52%), compared to higher-level professionals (30%) and was almost absent among respondents working in hospitality, tourism and the food sector. This contrast suggests that familiarity with food systems may reduce affective rejection of alternative food sources.

Differences also emerged for pollution ($\chi^2 = 36.274$, $p = 0.014$), where “irresponsible”, the most frequent descriptor overall (49% in Table 5), was more commonly selected by higher-level professionals (56%), while students more often chose “worrying” (55%). This indicates variation in interpretive framing, with some groups emphasizing accountability and others emphasizing risk. For violence ($\chi^2 = 35.702$, $p = 0.017$), higher-level professionals more frequently selected “brutality”, whereas students showed a stronger tendency toward “cruelty”, suggesting subtle differences in emotional intensity and moral categorization.

Regional differences were observed for both poverty and war. For the poverty image ($\chi^2 = 28.974$, $p = 0.024$), “incomprehensible” was selected more frequently by respondents from Greater Porto (47%) than from Greater Lisbon (32%), again reflecting the dominant framing shown in Table 5. For the war image ($\chi^2 = 35.968$, $p = 0.002$), “avoidable”, the second most frequent descriptor overall (24%), was chosen by nearly half of respondents in the North and Centre, compared to lower proportions in Greater Porto (36%) and Greater Lisbon (26%).

Taken together, these results indicate that emotional responses to humanitarian images are not only shaped by the content of the issue but also by respondents’ social position. While Table 5 reveals dominant emotional framings across the sample, subgroup analyses demonstrate that these framings are unevenly distributed, reflecting differences in cultural capital, experience and contextual exposure.

4. Discussion

This study examined how respondents in Portugal perceive major humanitarian and environmental issues and how these perceptions vary across generation, gender, education, profession and region.

Taken together, the findings show that humanitarian engagement is widely shared but not evenly distributed. Rather than reflecting a uniform moral response to global crises, awareness, concern, prioritisation and emotional resonance are socially differentiated, supporting the view that humanitarian perception is shaped by cultural capital, emotional socialization, media exposure and lived experience.

At the broadest level, most respondents considered humanitarian issues highly important. Although Baby Boomers and Generation X expressed the highest overall concern, the association between generation and the generic question on “the problems facing humanity and the planet” was not statistically significant. This is an important finding. It suggests that humanitarian concern exists across the sample as a general disposition, but that differences become more visible when specific issues and emotional framings are examined. In other words, the key divide is less about whether people care at all than about which issues they prioritise, how strongly they react to them, and through which emotional vocabularies they interpret them.

When specific issues were considered, clearer patterns emerged. Hunger, poverty, war and climate change consistently ranked among the most important concerns, while pandemics and obesity occupied lower positions. This ordering suggests that respondents distinguish between crises perceived as structural, global, and morally urgent, and those understood as either episodic, normalized or individualized. The relatively low salience of pandemics, despite the recent experience of COVID-19, may indicate issue fatigue or a tendency to perceive pandemics as temporary emergencies rather than enduring humanitarian conditions (Funk, 2020; Funk & Tyson, 2020; Slovic, 2000). Likewise, obesity may be interpreted less as a collective humanitarian issue than as a matter of personal health or individual responsibility (Robinson et al., 2016; Ogden et al., 2020).

A central contribution of the study lies in showing that these hierarchies of concern are patterned by generation. Baby Boomers and Generation X were especially concerned with war, hunger and poverty, while younger respondents, particularly Generation Z, gave relatively greater priority to climate change and future-oriented risks. Millennials occupied an intermediate position, with particular sensitivity to poverty and inequality. These results are consistent with the argument that generations are shaped by distinct historical and media environments (Beck & Beck-Gernsheim, 2002; Mannheim, 2013; Twenge, 2020). Older cohorts came of age in contexts marked by post-war reconstruction, Cold War tensions, colonial conflict and more centralized media systems, all of which may have reinforced concern with war, hunger and poverty as classic humanitarian issues (Putnam, 2015; Shearer, 2021). In Portugal, this interpretation is especially plausible given the historical significance of the colonial wars and the role of broadcast media in shaping earlier generations’ understanding of international crises (Oliveira, 2017; Ferreira, 2022; OberCom, 2023).

At the same time, younger generations have been socialized in a highly digital and crisis-saturated environment, where climate change, sustainability, social justice and precarious futures occupy a more visible place in public discourse. Their stronger emphasis on climate and environmental risks aligns with scholarship describing younger cohorts as particularly responsive to ecological vulnerability and long-

term planetary uncertainty (Clayton & Manning, 2018; Tyson et al., 2023; Wike et al., 2025). Importantly, lower concern among Generation Z for some traditional humanitarian issues should not be interpreted as weaker empathy. Rather, it may reflect a shift in the moral architecture of concern: away from older narratives centred on war, hunger, and aid, and toward more systemic concerns involving climate, inequality, and the future.

This generational reading also helps explain the more mixed patterns found for pollution, future food, security and violence. Pollution, for instance, peaked among Generation X rather than among the youngest respondents, suggesting that not all environmental issues are interpreted in the same way. Pollution may remain tied to the public-health and industrial-modernization frames that were especially salient in the 1980s and 1990s (Giddens, 2009; APA, 2024; EEA, 2023), whereas climate change carries a more existential and future-oriented meaning for younger cohorts. Similarly, concern about future food was unevenly distributed across generations, indicating that food futures are interpreted not only through sustainability concerns but also through technological, bodily and cultural frames (IPCC, 2023; Sousa, 2022; Truninger et al., 2022; Simões & Bonacho, 2026b). Violence and security also showed generational variation, likely reflecting differences in media exposure, life stage, and perceptions of risk (Anderson & Jiang, 2018; Rosenfeld & Messner, 2013; SSI, 2024). Together, these findings suggest that generations do not simply rank issues differently; they inhabit different emotional and interpretive worlds.

Gender differences were also significant and substantively meaningful. Women expressed stronger concern than men regarding hunger, pollution, violence, security and climate change, a pattern consistent with prior research showing that women often report higher perceptions of social and environmental risk and stronger orientations toward care, vulnerability, and collective wellbeing (Davidson & Freudenburg, 1996; McCright, 2010). These differences should not be reduced to essentialized gender traits; they are better understood as socially patterned dispositions shaped by gendered expectations, experiences of insecurity and differential exposure to the ethics of care. By contrast, men showed somewhat greater emphasis on war, which may reflect more traditional associations between masculinity, geopolitical conflict and security framing (Eagly, 2009).

Education and professional background further shaped how respondents interpreted humanitarian issues. While education was not associated with broad differences across all issue priorities, it significantly influenced the emotional framing of poverty: respondents with higher education were much more likely to describe poverty as “incomprehensible.” This is a notable result because it suggests that education does not simply provide information; it also shapes the moral language through which suffering is processed. To perceive poverty as

“incomprehensible” is not merely to recognize it as unfortunate, but to frame it as unjustifiable in contemporary society. This supports the broader argument that cultural capital influences humanitarian perception not only at the cognitive level but also at the level of affective and moral interpretation (Bourdieu, 2019; European Commission, 2023).

Professional differences reinforce this point. Higher-level professionals and creative professionals were generally more likely to rank humanitarian issues as highly important, suggesting greater exposure to global narratives, civic discourse, and symbolic forms of mediation (European Commission, 2023; Inglehart, 2018). Students, in turn, often displayed stronger emotional responses in the image-word association task, particularly regarding future food, pollution and violence. This suggests that younger respondents, while not always assigning the highest abstract importance to traditional humanitarian issues, may respond more viscerally to visual cues and symbolic framings. Such a pattern is important for humanitarian communication, since emotional engagement does not necessarily align neatly with cognitive prioritisation (Petrescu-Mag et al., 2024).

The image-word association task provided some of the richest findings in the study because it revealed how respondents translated crisis imagery into emotional and interpretive language. Terms such as “incomprehensible”, “avoidable”, “worrying”, “brutality” and “repugnant” demonstrate that responses to humanitarian issues are not merely scalar judgments of importance. They also involve moral categorisation, affective intensity and symbolic framing. Generation was significantly associated with emotional responses to images of poverty, war, violence and security, indicating that different cohorts do not simply care differently; they also feel differently and name differently what they see. This supports the idea that emotional repertoires are socially learned and historically situated (Hochschild, 2012; Illouz, 2023).

One of the most distinctive findings concerns future food. The image associated with future food elicited the descriptor “repugnant” more often than any other term, and women selected it nearly twice as often as men. Respondents working in food and hospitality, by contrast, were far less likely to choose this word, suggesting that practical familiarity with food systems may reduce affective aversion to novel food forms. This is especially significant because it highlights the symbolic and semiotic dimensions of food perception. Reactions to future food are not shaped only by nutritional or environmental reasoning; they are also mediated by notions of edibility, bodily integrity, disgust and cultural familiarity (Jiotsa et al., 2021; Truninger et al., 2022). In this sense, the finding can be understood through a gastro-semiotic lens: foods are not only consumed materially but interpreted symbolically, and novel foods may provoke rejection when they appear to violate established classifications of what counts as proper, safe or culturally intelligible food.

This has direct implications for intervention design. If sustainable food innovation is framed only in terms of efficiency, climate mitigation or technological necessity, public resistance may persist where symbolic and affective barriers remain unaddressed. The study therefore supports the argument that food-related and gastronomic experiences can function as meaningful mediators of humanitarian awareness, but only if they engage the emotional and cultural dimensions of eating. In particular, design-led gastronomic interventions that incorporate narrative, sensory engagement and participatory elements, such as those explored in the “future food” moment of immersive food experiences, can help reframe unfamiliar or initially rejected food sources by embedding them within culturally intelligible and affectively engaging contexts (Simões & Bonacho, 2026a). Future research could test whether

acceptance of novel food becomes stronger when such foods are presented through sensory familiarity, culinary aesthetics, local identity or participatory tasting rather than through abstract sustainability messaging alone (WHO, 2022; Burki, 2022).

Regional differences, though fewer, were also suggestive. Respondents from Greater Porto and Greater Lisbon expressed stronger concern about future food, while participants from northern and central Portugal were more likely to describe the war image as “avoidable.” These results should be interpreted cautiously, but they point to the relevance of spatial context in shaping perceptions of vulnerability, food insecurity and moral responsibility. Urban settings may intensify awareness of food-system fragility, sustainability debates and innovation discourse, while non-metropolitan contexts may produce different framings of conflict and responsibility.

More broadly, the findings support a view of humanitarian engagement as structured by both social differentiation and media mediation. Different groups are exposed to crises through different information ecologies, and these ecologies help shape what becomes salient, urgent or emotionally compelling. Older respondents may continue to rely more heavily on traditional news formats that privilege war, poverty and humanitarian aid, while younger respondents encounter crises in more fragmented, visual and platform-driven environments (Auxier & Anderson, 2021; OberCom, 2023; Twenge, 2020). This may help explain why some issues generate strong emotional resonance without necessarily translating into stable rankings of importance, and why environmental concerns appear particularly salient among younger cohorts.

The study also has implications for theories of global citizenship. If solidarity is socially differentiated, then humanitarian communication cannot assume a universal public responding uniformly to appeals to compassion. Instead, global citizenship must be understood as an unevenly cultivated disposition, shaped by education, profession, generation, gender and media experience. The challenge for humanitarian communication is therefore not only to inform but to build bridges across differentiated emotional repertoires. Messages aimed at younger publics may be more effective when connecting climate, food systems and social justice; communication targeting older cohorts may resonate more strongly when framed around war, hunger, and poverty.

Several limitations should be acknowledged. The sample was highly educated and concentrated in urban areas, particularly among higher-level professionals and creative workers. This likely increased the visibility of respondents already more exposed to global discourses and may limit the generalizability of the findings to the broader Portuguese population. The online survey format may also have privileged respondents more comfortable with digital participation. In addition, while the image-word association task generated valuable insights into emotional resonance, it relied on predefined word options rather than open-ended language, which necessarily constrained the range of possible responses.

Despite these limitations, the study contributes important evidence to debates on emotion, humanitarianism and social differentiation. It shows that concern for global crises is widespread but not homogeneous, and that the meaning of concern depends on the issue, the social location of the

respondent, and the emotional language through which crises are apprehended. In the Portuguese context, this offers a useful corrective to more generalized accounts of humanitarian communication by showing how empathy, indifference, anxiety and moral judgement are patterned across generations, professions, educational backgrounds, and places.

Ultimately, the results suggest that humanitarian communication and design-based interventions should move beyond universal assumptions about “the public.” What matters is not only which crises are shown, but how they are framed, who is addressed, and which emotional and symbolic repertoires are activated. Effective engagement with humanitarian and planetary crises depends not simply on visibility, but on the social conditions under which suffering becomes interpretable, proximate, and actionable.

5. Conclusion

This study highlights how concerns about future food are unevenly distributed across generations, reflecting diverse ways of interpreting food futures. These interpretations extend beyond sustainability alone, encompassing technological, bodily, and cultural dimensions. The findings underscore the importance of considering these multiple frames when addressing food-related challenges and designing future-oriented interventions. Overall, this research contributes to a more nuanced understanding of how individuals engage with food futures, offering insights for both policy and interdisciplinary research.

Abbreviations

APA
Agência Portuguesa do Ambiente (Portuguese Environment Agency)
COVID
19-Coronavirus Disease 2019
EEA
European Environment Agency
IBM
International Business Machines Corporation
IPCC
Intergovernmental Panel on Climate Change
OCDE
*Organização para a Cooperação e Desenvolvimento Económico (*Organisation for Economic Co-operation and Development-OECD*)*
SPSS
International Business Machines Statistical Package for the Social Sciences Statistics
SSI
Sistema de Segurança Interna (Internal Security System)
WHO

World Health Organization

Declarations

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Data availability statement

The datasets and materials supporting the findings of this study are available in the supplementary materials associated with this article. These include the survey questionnaire, a codebook with variable definitions and coding schemes, and documentation of the statistical analysis procedures.

The dataset contains anonymised responses collected in accordance with the European Union's General Data Protection Regulation (GDPR). No personally identifiable information is included. Data are made available for the purposes of peer review and academic research. Additional data may be obtained from the corresponding author upon reasonable request.

Ethics statement and consent of publication

Ethical approval for this study was waived by the Ethics Committee of the Escola Superior de Hotelaria e Turismo do Estoril (CE-ESHTE), as the research did not involve human participants, personal data, or sensitive information requiring formal ethical review.

The study was conducted in accordance with the institutional ethical framework and the regulations established by the Ethics Committee of ESHTE, ensuring compliance with principles of research integrity and responsible conduct. Further information on the Ethics Committee is available at: https://www.eshte.pt/pt/artigos/orgaos-da-eshte/comissao-de-etica

Furthermore, all procedures complied with applicable European regulations, namely the European Union's General Data Protection Regulation (GDPR)*, ensuring that no personal or identifiable data were collected, processed, or stored.

The exemption from ethical approval is in accordance with institutional policies stating that studies not involving human subjects, personal data, or experimental interventions do not require formal ethical committee review.

*European Union (2016). General Data Protection Regulation (GDPR). Available at: https://eur-lex.europa.eu/eli/reg/2016/679/oj

Declaration of Interest Statement

The authors declare that they have no conflicts of interest related to the authorship or publication of this article. No financial or personal relationships have influenced the research presented here.

Declaration of generative AI and AI-assisted technologies in the manuscript preparation process

During the preparation of this work, the authors used Grammarly to improve grammar and readability. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the published article.

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Figures

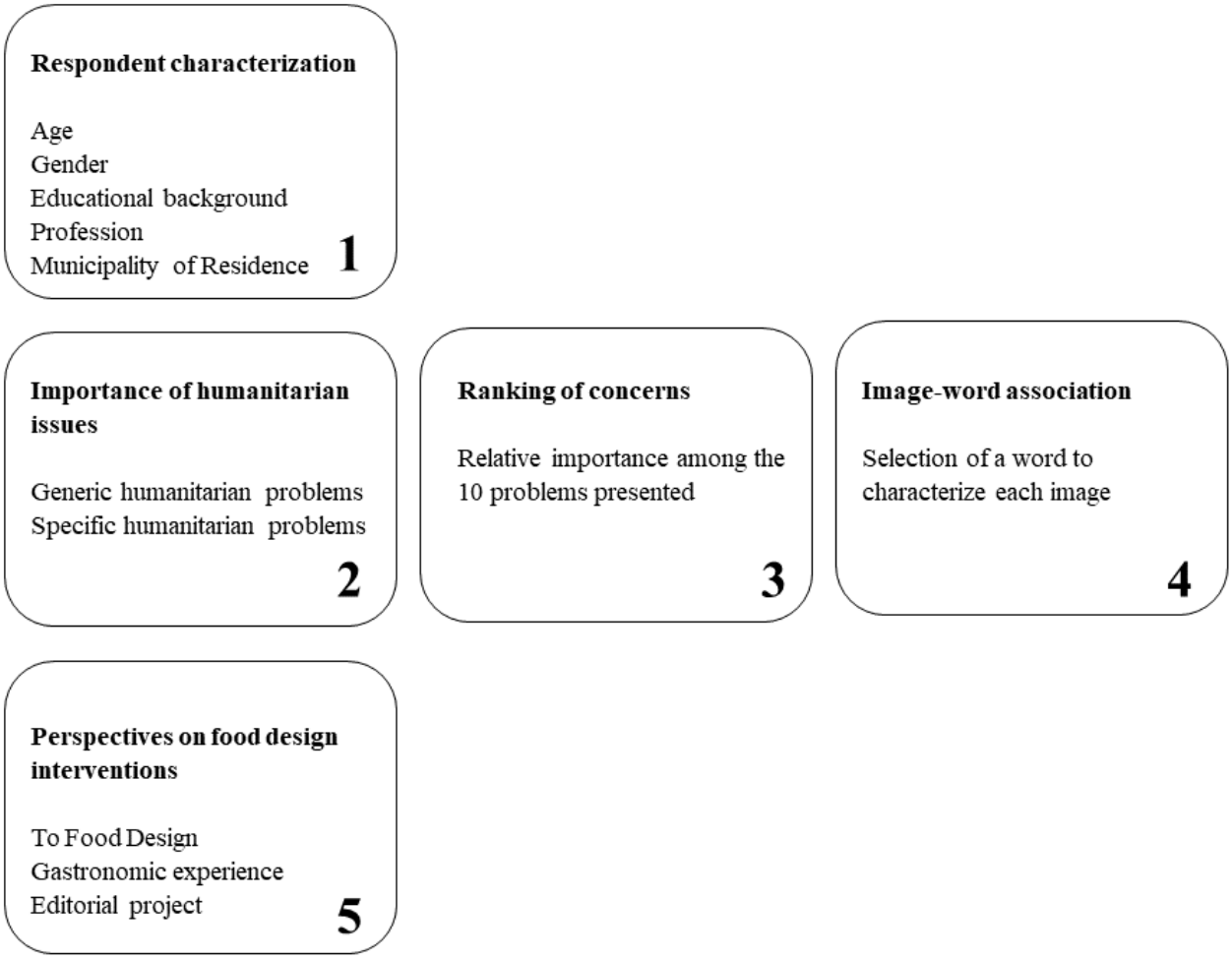


Figure 1

The five thematic blocks of the questionnaire.



Figure 2

Images presented in the survey (left to right, top to bottom: hunger, poverty, violence, climate change, war, future food, pollution, obesity, security, and pandemics). Sources: retrieved from various online databases.

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- GoogleForms.pdf
- dataset.csv
- dataset.sav
- DataPaperEN.xlsx
- AppendixAC.docx