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2025

EFEIA FOUNDATION

EHS Global Census

Survey A: **Multiple Habits & Sensitivities**

Report Date: December 15, 2025
Analysis Period: August - December 2025
Total Participants: 283
Survey Languages: Spanish (86.2%), English (13.8%)

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EHS GLOBAL CENSUS 2025
Survey A: **Multiple Habits & Sensitivities**

Executive Summary

TThis report presents a comprehensive analysis of Survey A: Multiple Habits and Sensitivities, conducted as part of the EFEIA Evaluation Protocol's EHS Global Census. Survey A establishes the daily exposure profile of participants, measuring technology usage patterns, sleep hygiene, environmental habits, nutrition, hydration, and sensory sensitivities.

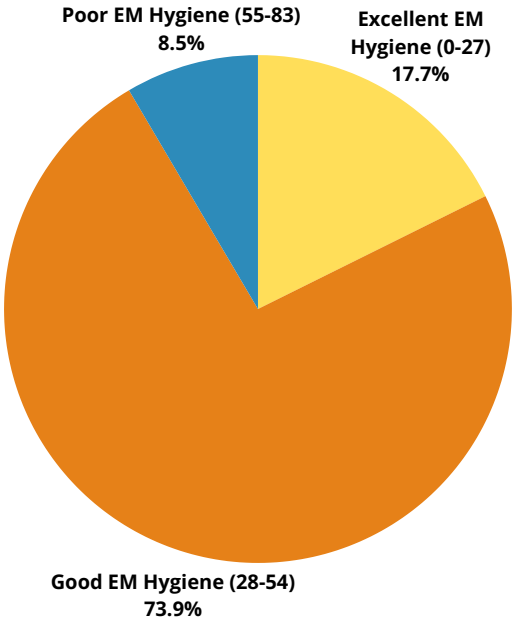
Key Findings

Overall Electromagnetic Hygiene Status

Metric	Value
Average Score	37,64 / 106 (35.5%)
Median Score	37,0
Score Range	11,0 - 70,0
Standard Deviation	11,1

Risk Distribution

Category	n	%
Excellent EM Hygiene (0-27)	50	17,7%
Good EM Hygiene (28-54)	209	73,9%
Poor EM Hygiene (55-83)	24	8,5%
Bad EM Hygiene (84-106)	0,0	0,0%



Critical Observations

1. **73.9% demonstrate "Good" electromagnetic hygiene,** moderate exposure with room for improvement
2. **No participants reached the "Bad" category**, suggesting awareness or self-selection
3. **8.5% are in the "Poor" category**, requiring targeted intervention
4. **54.1% report high noise sensitivity (≥7/10)**, indicating widespread neurological hyperreactivity
5. **37.8% sleep with phone under pillow or very close**, a critical risk factor

1. Purpose and Scope

Survey A: Multiple Habits and Sensitivities serves as the foundational assessment within the EFEIA Protocol, answering the guiding question:

"How does this person live and what factors amplify or mitigate their electromagnetic exposure?"

This survey evaluates:

- Technology usage patterns and proximity to EMF sources
- Sleep hygiene and nighttime device practices
- Screen time and digital exposure load
- Nature exposure and grounding practices
- Hydration and nutrition as resilience factors
- Sensory sensitivities as vulnerability indicators

Scoring System Overview

Maximum Score: 106 points

Survey A uses a weighted scoring system where higher scores indicate:

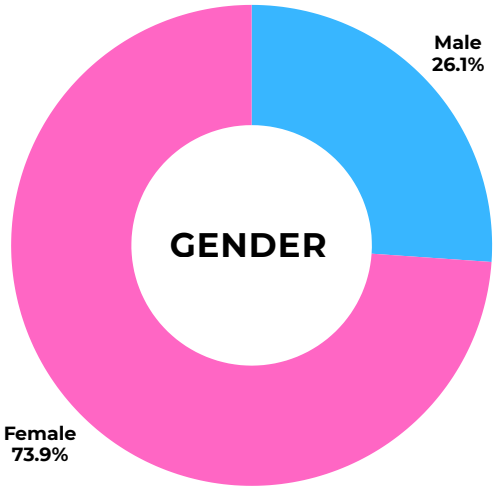
- Greater EMF exposure from technology.
- Poorer sleep hygiene regarding devices.
- Insufficient protective practices (grounding, nature time).
- Higher sensory sensitivities.
- Suboptimal hydration and nutrition patterns.

Scoring System Overview

Score Range	Classification	Interpretation
0-27	**Excellent**	Minimal exposure, strong protective habits
28-54	**Good**	Moderate exposure, minor adjustments recommended
55-83	**Poor**	High exposure, protective measures needed
84-106	**Bad**	Very high exposure, significant intervention required

2. Demographic Profile

2.1 Gender Distribution



73.9% Female (209), 26.1% Male (74)

Clinical Significance: The predominance of female participants (73.9%) aligns with epidemiological data showing women report EHS symptoms more frequently, potentially due to greater autonomic reactivity, hormone-dependent immunological profiles, and enhanced symptom awareness.

2.2 Age Distribution

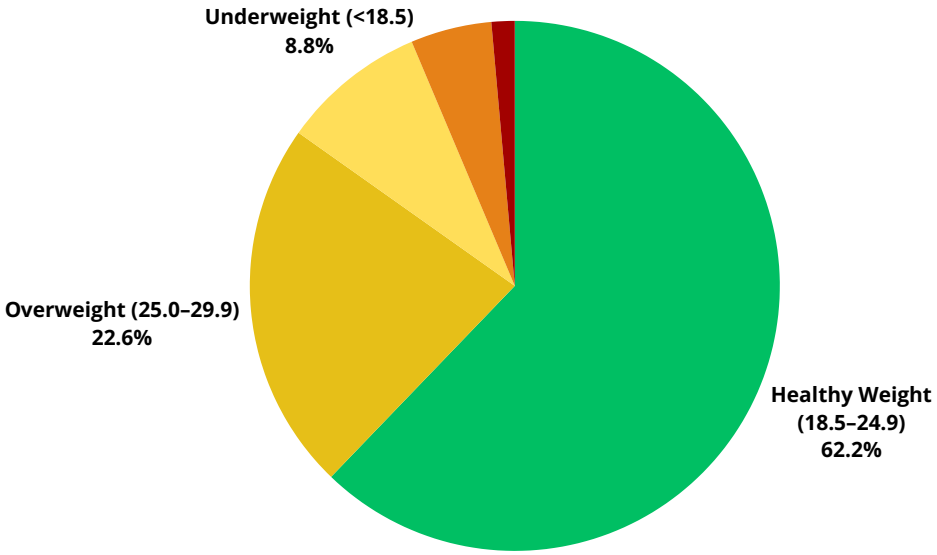
Age Group	n	%	Notes
Under 18	8	2,8%	Developing nervous systems, increased vulnerability
18-29	27	9,6%	Heavy technology users, digital natives
30-39	63	22,3%	Career peak, high exposure period
40-49	94	33,3%	Largest group. Accumulated exposure
50-59	67	23,8%	Physiological changes, reduced resilience
60+	23	8,2%	Comorbidities, cumulative oxidative stress

Mean: 43.8 years, **Median:** 45.0 years, **Std Dev:** 12.1 years, **Range:** 10–78 years

Key Insight:
The peak in the 40-49 age range (33.3%) suggests this demographic has the highest awareness of EMF-related concerns, likely due to accumulated years of exposure, emerging sensitivity symptoms, and greater health consciousness.

2.3 Body Mass Index (BMI)

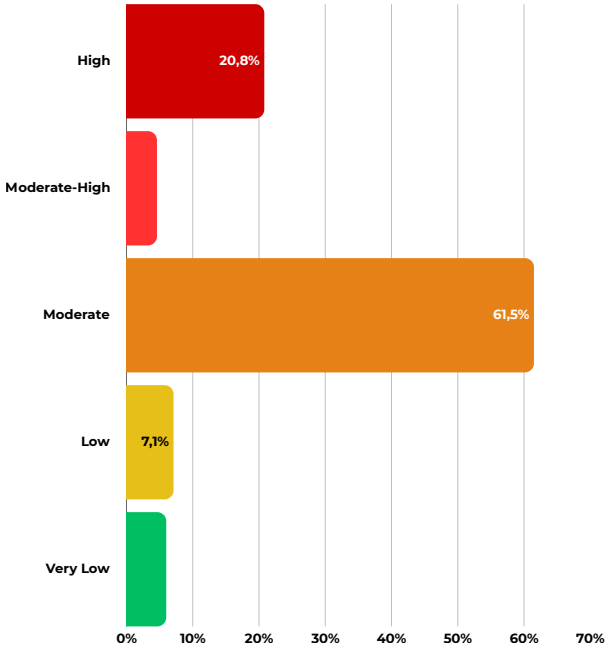
BMI Category	n	%
Healthy Weight (18.5–24.9)	176	62,2%
Overweight (25.0–29.9)	64	22,6%
Underweight (<18.5)	25	8,8%
Obesity (30.0–39.9)	14	4,9%
Class III Obesity (≥40.0)	4	1,4%



3. Technology Use Patterns

3.1 Mobile Phone Usage Intensity

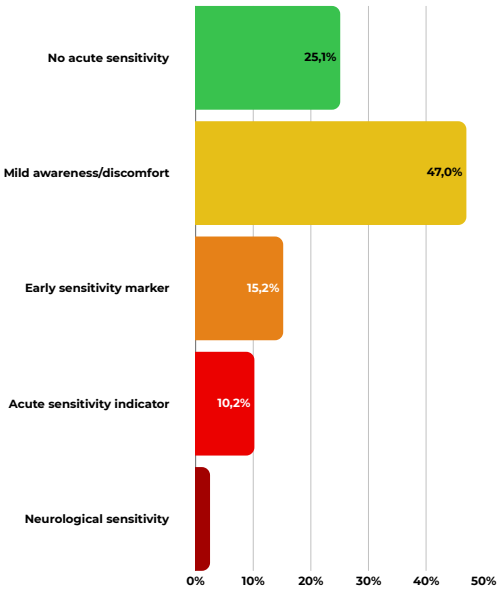
Usage Pattern	n	%	Risk Level
Intensive all day (frequent calls + social media)	59	20,8%	**High**
For work (calls throughout day)	13	4,6%	**Moderate-High**
Moderate (messages, news, some calls)	174	61,5%	**Moderate**
Minimal (emergency only)	20	7,1%	**Low**
Airplane mode (selective activation)	17	6,0%	**Very Low**



Analysis: 86.9% of participants use their phones moderately to intensively, with only 13.1% practicing optimal EMF hygiene through minimal or airplane mode usage. Notably, 20.8% report intensive all-day usage, a higher-risk group requiring targeted intervention.

3.2 Phone Call Sensations

Sensation Reported	n	%	Notes
Feel nothing, enjoy long conversations	71	25,1%	No acute sensitivity
Nothing, but prefer to end quickly	133	47,0%	Mild awareness/discomfort
Slight discomfort in ear	43	15,2%	Early sensitivity marker
Headache	29	10,2%	Acute sensitivity indicator
Dizziness	7	2,5%	Neurological sensitivity

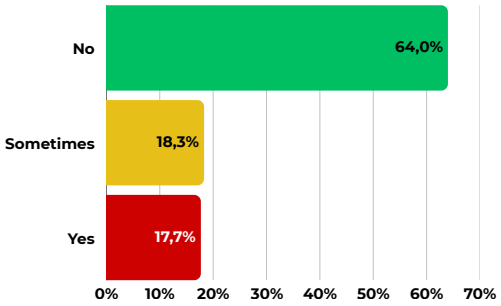


Analysis: 74.9% of participants experience at least mild discomfort or preference to limit call duration, with 27.9% reporting physical symptoms (ear discomfort, headache, or dizziness), a significant finding suggesting widespread subclinical EMF sensitivity.

3.3 Wireless Device Usage

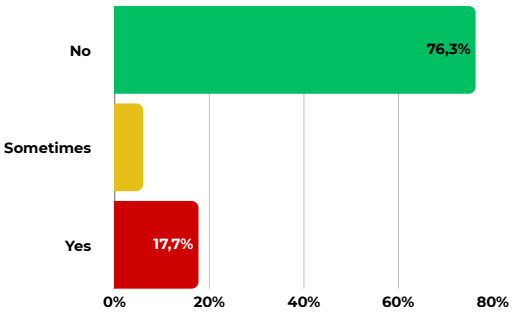
Wireless Headphones/AirPods:

Response	Count	%	Notes
No	181	64,0%	Protective choice
Sometimes	52	18,3%	Intermittent exposure
Yes	50	17,7%	Regular EMF to auditory structures



Smartwatch Usage:

Response	Count	%	Notes
No	216	76,3%	No wrist exposure
Sometimes	17	6,0%	Intermittent
Yes	50	17,7%	Continuous wrist exposure



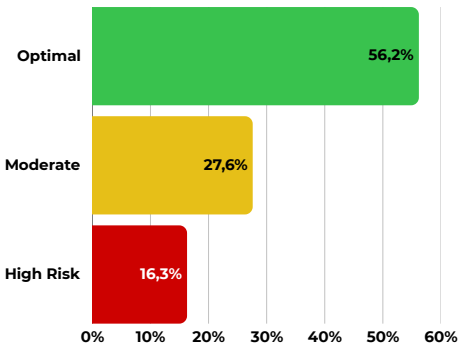
Analysis: While the majority avoid wireless devices (64% no wireless headphones, 76.3% no smartwatch), over a third (36%) use wireless headphones at least sometimes, exposing sensitive auditory and neurological structures to continuous pulsed radiation.

4. Sleep & Technology Habits

4.1 Sleep Behavior Patterns

When going to sleep:

Behavior	n	%	Risk Level
Turn off phone completely	159	56,2%	**Optimal**
Phone nearby for emergencies, sometimes check	78	27,6%	**Moderate**
Check social media/videos to fall asleep	46	16,3%	**High Risk**

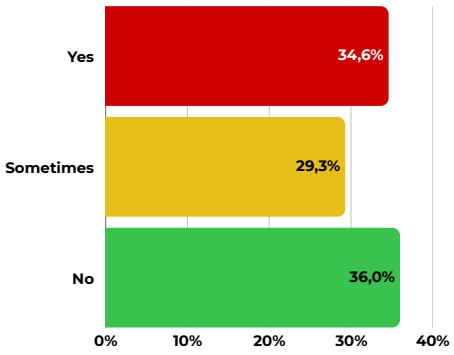


Positive Finding: 56.2% turn off their phones completely at night, which is a higher rate of optimal behavior than expected, though 43.8% still maintain active phone exposure during sleep.

4.2 Nighttime Phone Checking

Do you check phone at night or early morning with lights off?

Response	Count	%	Risk Level
Yes	98	34,6%	**Severe circadian disruption**
Sometimes	83	29,3%	**Moderate disruption**
No	102	36,0%	**Protective**

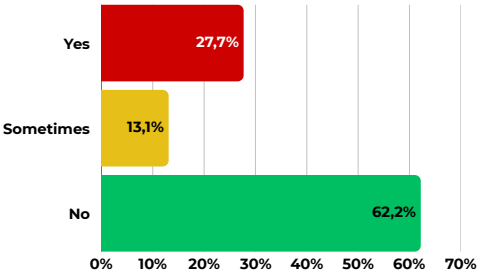


Analysis: 63.9% engage in nighttime phone checking at least sometimes, with severe consequences for circadian rhythm stability, melatonin production, and sleep architecture.

4.3 Phone Charging Location

Do you charge phone next to bed at night?

Response	n	%
Yes	70	27,7%
Sometimes	37	13,1%
No	176	62,2%

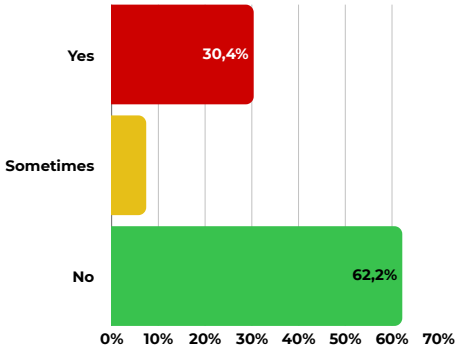


Analysis: 37.8% charge phones at or near bedside at least sometimes, creating electromagnetic field exposure during the body's most vulnerable recovery period.

4.4 Sleeping with Phone

Do you sleep with phone under pillow or very close?

Response	Count	%	Risk Level
Yes	86	30,4%	**Severe**
Sometimes	21	7,4%	**High**
No	176	62,2%	**Low**

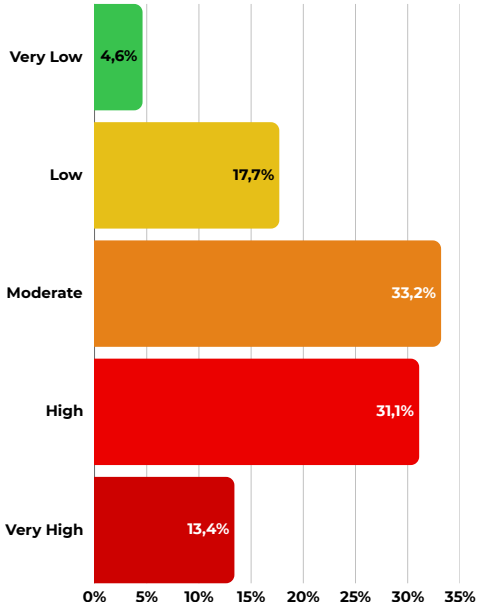


Critical Risk Factor: 37.8% sleep with phones in immediate proximity at least sometimes, resulting in maximum RF exposure to the brain during sleep, a major modifiable risk factor.

5. Screen Time & Digital Exposure

5.1 Weekly Screen Time Distribution

Category	Hours/Week	n	%
Very Low	≤7 (≤1 hr/day)	13	4,6%
Low	7-21 (1-3 hrs/day)	50	17,7%
Moderate	22-35 (3-5 hrs/day)	94	33,2%
High	36-55 (5-8 hrs/day)	88	31,1%
Very High	≥56 (≥8 hrs/day)	38	13,4%

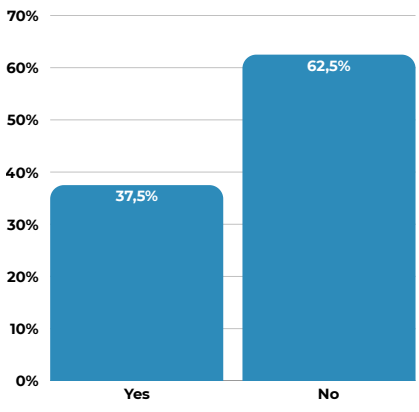


Key Findings:

- 77.7% exceed 3 hours/day of screen time.
- 44.5% are in High or Very High categories (≥5 hours/day).
- Only 22.3% maintain below-average screen exposure.

5.2 Blue Light Protection

Category	n	%
Yes	106	37,5%
No	177	62,5%

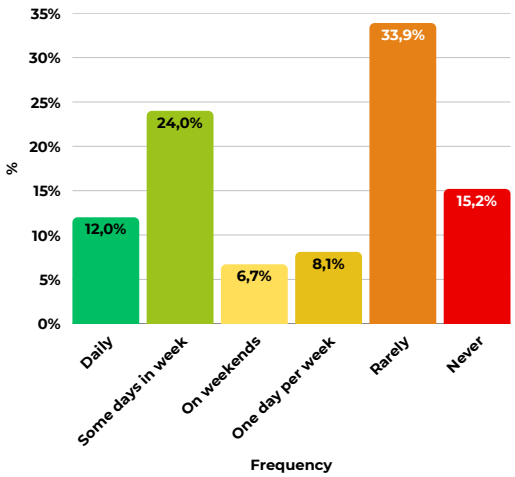


Clinical Note: While 62.5% lack blue light protection despite elevated screen exposure, the clinical recommendation is not universal adoption of blue light blocking. Natural blue light exposure during daytime hours is essential for healthy circadian rhythm regulation, it signals wakefulness and suppresses melatonin appropriately during the day. Permanent daytime use of blue light blocking glasses may paradoxically disrupt circadian regulation by reducing the natural light signals the body needs.

6. Nature Exposure

6.1 Grounding Practice Frequency

Frequency	n	%	Mean
Daily	34	12,0%	30,24
Some days in week	68	24,0%	33,38
On weekends	19	6,7%	36
One day per week	23	8,1%	37,26
Rarely	96	33,9%	40,22
Never	43	15,2%	45,42

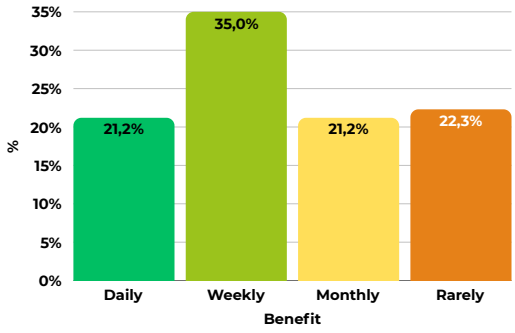


Critical Finding:

- 36.0% practice grounding regularly (daily or some days per week).
- 49.1% rarely or never ground, missing crucial physiological benefits including electrostatic discharge, parasympathetic activation, and improved HRV.

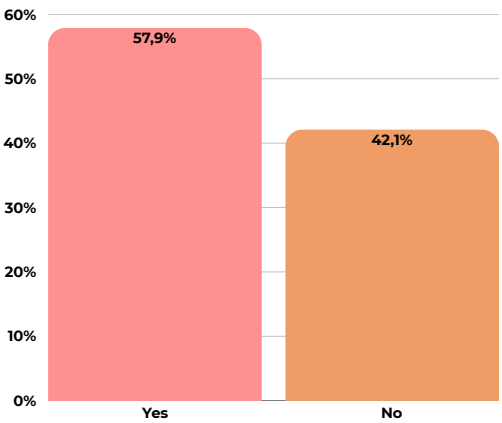
6.2 Time in Natural Environments

Frequency	n	%	Mean
Daily	60	21,2%	32,02
Weekly	99	35,0%	34,89
Monthly	60	21,2%	38,4
Rarely	63	22,3%	46,84



6.3 Outdoor Physical Activities

Response	Count	%	Mean
Yes	164	57,9%	35,02
No	119	42,1%	41,26



6.4 Nature Connection and EMF Hygiene: Strong Associations

Practice	Comparison	Score Difference	p-value	Effect Size
Grounding	Daily vs Never	–15.2 points	p<0.0001	d = –1.40 (very large)
Grounding	Regular vs Insufficient	–9.5 points	p<0.0001	d = –0.92 (large)
Nature exposure	Daily vs Rarely	–14.8 points	p<0.0001	d = –1.57 (very large)
Nature exposure	Regular vs Infrequent	–8.9 points	p<0.0001	d = –0.88 (large)
Outdoor activity	Yes vs No	–6.2 points	p<0.0001	d = –0.58 (medium)

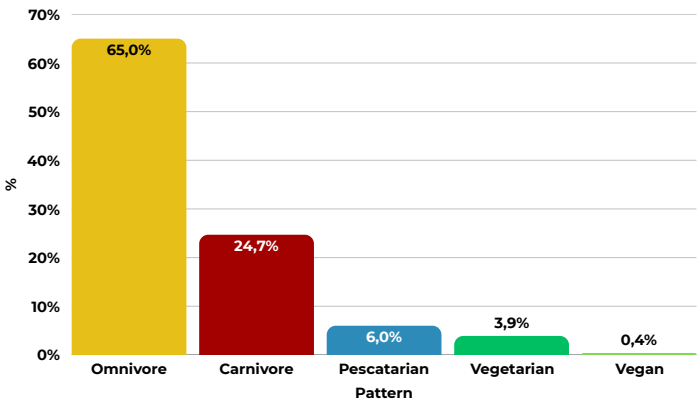
Key Finding: Participants who practice daily grounding score 15 points lower (better) than those who never ground, representing more than one full standard deviation. This is the strongest behavioral predictor of EMF hygiene in the entire survey.

Interpretation: These associations likely reflect bidirectional causality: (1) individuals with better EMF awareness naturally gravitate toward grounding and nature practices, and (2) regular earth contact and nature immersion may directly support physiological resilience through electron transfer, parasympathetic activation, and circadian entrainment.

7. Hydration & Nutrition

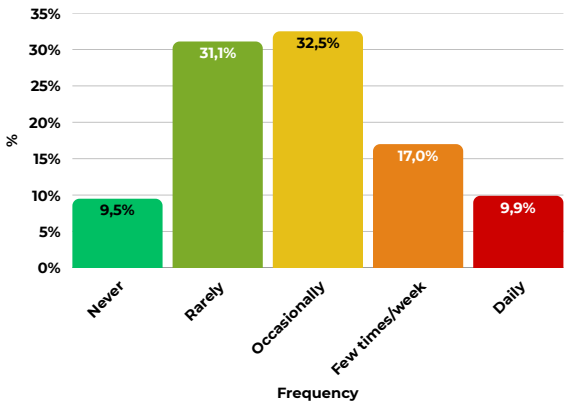
7.1 Eating Patterns

Pattern	n	%
Omnivore	184	65,0%
Carnivore	70	24,7%
Pescatarian	17	6,0%
Vegetarian	11	3,9%
Vegan	1	0,4%



7.2 Processed Food Consumption

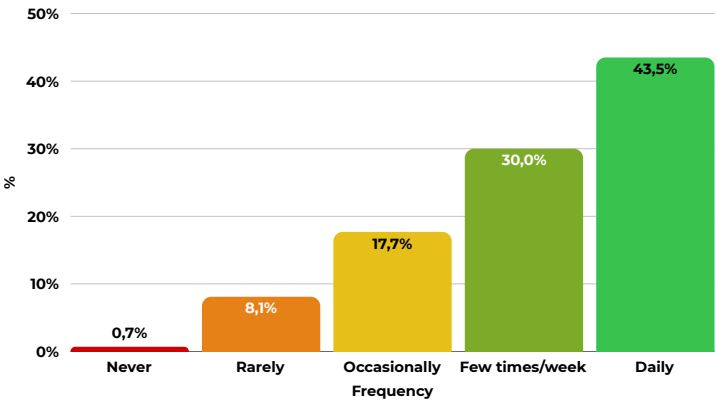
Frequency	n	%	Risk
Never	27	9,5%	Optimal
Rarely	88	31,1%	Good
Occasionally	92	32,5%	Moderate
Few times/week	48	17,0%	Elevated
Daily	28	9,9%	High



Clinical Note: 26.9% consume processed foods frequently (few times/week or daily), increasing exposure to additives, preservatives, and inflammatory compounds that may amplify EMF sensitivity.

7.3 Antioxidant Consumption

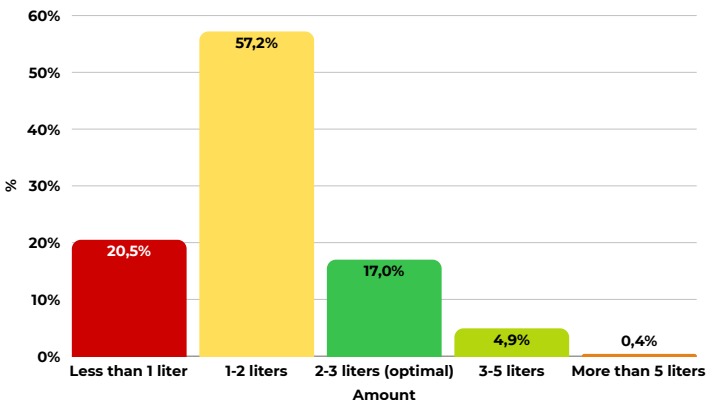
Frequency	n	%
Never	2	0,7%
Rarely	23	8,1%
Occasionally	50	17,7%
Few times/week	85	30,0%
Daily	123	43,5%



Protective Finding: 73.5% consume antioxidant-rich foods at least a few times per week, an important buffer against oxidative stress associated with EMF exposure.

7.4 Daily Water Intake

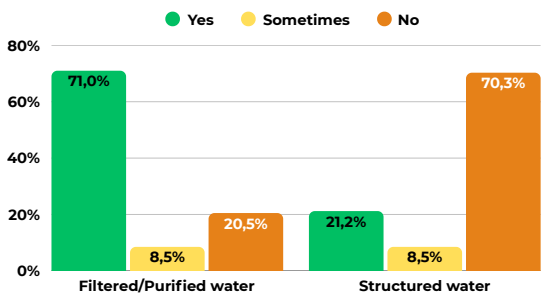
Amount	n	%
Less than 1 liter	58	20,5%
1-2 liters	162	57,2%
2-3 liters (optimal)	48	17,0%
3-5 liters	14	4,9%
More than 5 liters	1	0,4%



Clinical Note: Only 17.0% achieve optimal hydration (2-3 liters/day), while 77.7% are suboptimally hydrated. Excessive intake (>3 liters) may indicate poor water quality. When water lacks proper mineral content or filtration, the body requires more volume to meet its needs.

7.5 Water Quality

Type	Yes	Sometimes	No
Filtered/Purified water	71,0%	8,5%	20,5%
Structured water	21,2%	8,5%	70,3%



7.6 Water Quality and Electromagnetic Hygiene: A Significant Association

Practice	Mean Score	Median	Difference	p-value
Structured water: Yes	33,22	32,5	–6.6 points	p=0.0001
Structured water: No	39,19	38	(reference)	
Filtered water: Yes	35,9	35	-6,0 points	p=0.0003
Filtered water: No	42,48	42	(reference)	

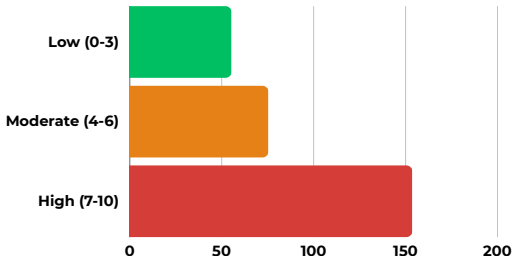
Effect sizes: Structured water (Cohen's d = –0.61, medium), Filtered water (Cohen's d = –0.54, medium)

Interpretation: Participants who drink structured and filtered water have significantly better (lower) scores. This likely reflects a broader pattern of health-conscious behavior, individuals aware of water quality tend to also practice better electromagnetic hygiene. The ~6-point difference represents approximately half a standard deviation, a meaningful effect.

8. Environmental Sensitivities

8.1 Noise Sensitivity

Level	n	%
Low (0-3)	55	19,4%
Moderate (4-6)	75	26,5%
High (7-10)	153	54,1%

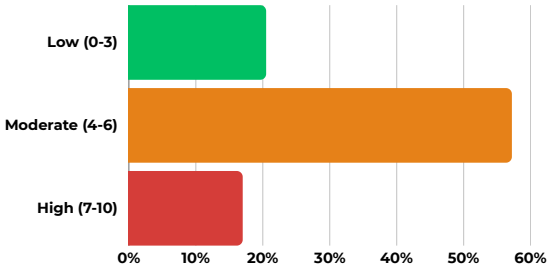


Mean Score: 6.14/10 | **Median:** 7.0

Clinical Significance: Over half (54.1%) report high noise sensitivity, a marker of neurological hyperreactivity and potential central sensitization.

8.2 Light Sensitivity

Level	n	%
Low (0-3)	81	20,5%
Moderate (4-6)	89	57,2%
High (7-10)	113	17,0%

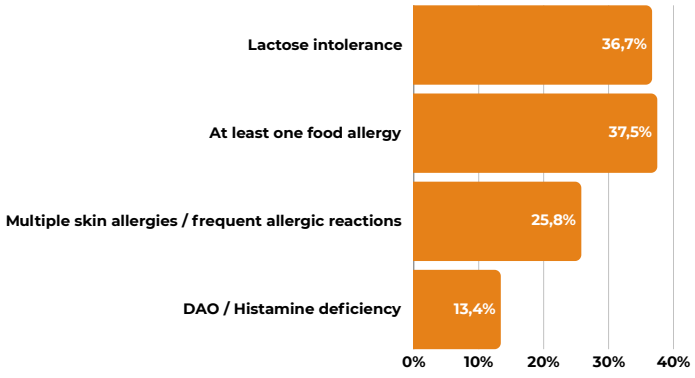


Mean Score: 5.29/10 | **Median:** 6.0

Clinical Significance: 39.9% report high light sensitivity, associated with migraine, autonomic dysfunction, and visual processing concerns.

8.3 Other Sensitivities

Sensitivity	Yes	%
Lactose intolerance	104	36,7%
At least one food allergy	106	37,5%
Multiple skin allergies / frequent allergic	73	25,8%
DAO / Histamine deficiency	38	13,4%



Clinical Significance: Over a third of participants report lactose intolerance (36.7%) and food allergies (37.5%), indicating a population with elevated immune reactivity and potential gut-barrier dysfunction, factors known to amplify environmental sensitivities including EMF.

Discussion

The Health-Conscious Behavior Cluster

The most striking finding from this analysis is the emergence of a coherent health-conscious behavior cluster. Participants with better (lower) EMF hygiene scores consistently demonstrate:

- More frequent grounding practice (d = –1.40)
- Greater time in natural environments (d = –1.57)
- Lower processed food consumption (d = –1.53)
- Higher antioxidant intake (d = –0.99)
- Better water quality practices (d = –0.61)
- More outdoor physical activity (d = –0.58)

These associations represent very large effect sizes that explain substantial variance in EMF hygiene. The consistency across domains suggests that electromagnetic hygiene exists within a broader framework of environmental health awareness.

Bidirectional Causality

The correlations identified likely reflect bidirectional relationships:

- **Direction 1: Awareness → Behavior**

Individuals who become aware of EMF concerns also tend to adopt other health-protective practices. Learning about electromagnetic hygiene often occurs alongside education about nutrition, water quality, and nature connection.

- **Direction 2: Behavior → Resilience**

Protective practices (grounding, antioxidants, hydration) may directly support physiological resilience to EMF exposure through electron transfer, reduced oxidative stress, and improved detoxification capacity.

The Sensitivity Burden

The high prevalence of environmental sensitivities in this population is notable:

- 54.1% high noise sensitivity
- 39.9% high light sensitivity
- 36.7% lactose intolerance
- 37.5% food allergies
- 13.4% DAO/histamine deficiency

This pattern suggests that individuals seeking EMF assessment often have broader environmental vulnerability. The clustering of multiple sensitivities points toward potential central sensitization or mast cell involvement, warranting comprehensive rather than single-factor intervention approaches.

Technology Patterns

The phone brand analysis reveals an unexpected finding: premium smartphone users (Apple, Samsung) show worse EMF hygiene than budget phone users. This counterintuitive result likely reflects:

- Greater integration with technology ecosystems
- More features encouraging constant connectivity
- Higher app engagement and notification frequency
- Socioeconomic factors enabling 24/7 digital lifestyle

This finding challenges the assumption that health-conscious individuals would prefer premium devices and suggests that technology simplicity may correlate with better EMF practices.

Methodological Considerations

Strengths:

- Large sample size (n=283)
- Bilingual data collection expanding geographic reach
- Comprehensive assessment across multiple domains
- Statistical verification against raw data

Limitations:

- Self-selection bias (participants likely already concerned about EMF)
- Self-reported data subject to recall bias
- Cross-sectional design prevents causal inference
- Predominantly Spanish-speaking, female population

Conclusion

Summary of Key Findings

This verified analysis of 283 Survey A participants reveals:

Population Status:

- Mean EMF hygiene score: 37.64/106 (Good category)
- 73.9% in Good category, 8.5% in Poor category
- No participants in Bad category

Strongest Behavioral Predictors of Better EMF Hygiene

Rank	Factor	Effect Size	Score Difference
1	Nature exposure (Daily vs Rarely)	d = –1.57	–14.8 points
2	Processed food (Never vs Daily)	d = –1.53	–15.0 points
3	Grounding (Daily vs Never)	d = –1.40	–15.2 points
4	Antioxidants (Daily vs Rarely)	d = –0.99	–9.9 points
5	Grounding (Regular vs Insufficient)	d = –0.92	–9.5 points

Critical Gaps Identified

- **Suboptimal hydration:** 77.7%
- **Nighttime phone checking:** 63.9%
- **Insufficient grounding:** 49.1%
- **Screen time ≥5 hrs/day:** 44.5%

Clinical Implications

- **For Individual Assessment:** EMF hygiene should not be evaluated in isolation. The strong correlations with nutrition, hydration, and nature connection suggest that comprehensive lifestyle assessment provides better predictive value than technology habits alone.
- **For Intervention Design:** The largest effect sizes are associated with nature-based practices (grounding, outdoor time) and nutrition (processed food avoidance, antioxidants). These may represent higher-leverage intervention targets than technology modification alone.
- **For Risk Stratification:** The 8.5% in the Poor hygiene category, combined with the 54.1% with high noise sensitivity and 37.5% with food allergies, suggests a substantial subpopulation requiring multi-modal intervention addressing both EMF exposure and broader environmental vulnerability.

Recommendations

Priority Interventions (by effect size):

- **Increase nature exposure and grounding practice:** Daily barefoot earth contact and time in natural environments show the strongest associations with Electromagnetic hygiene.
- **Reduce processed food consumption:** Very large effect size suggests this may be as important as technology modifications.
- **Increase antioxidant-rich food intake:** Daily consumption associated with substantially better scores.
- **Optimize water quality:** Filtered and structured water users demonstrate better overall hygiene.
- **Address sleep technology habits:** Remove phones from bedroom, eliminate screen use before sleep.

For Future Research

- Longitudinal studies to establish causality.
- Intervention trials testing nature-based approaches.
- Investigation of the technology ecosystem effect in premium vs budget phone users.
- Exploration of the sensitivity cluster phenomenon.

Report prepared by EFEIA Foundation Research Team. Data verified January 16, 2026. Analysis conducted on raw CSV data files.

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