School Case Study of EHS Related Symptoms in 15 Students

Preliminary assessment using the EFEIA Foundation questionnaire and environmental field measurements

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The study sample comprises 15 scored questionnaires. A supplementary compilation contains 16 family narratives that are not assumed to map one to one to the questionnaire sample. The title describes reported symptoms, not confirmed EHS diagnoses.

Field campaign June 17–27, 2022
Retrospective technical synthesis October 2026

Abstract

This case study arose from parental concerns about symptoms reported by students and possible exposure from a nearby cellular base station. Access to the school was unavailable, so the investigation examined five points in publicly accessible surroundings. The records describe a mixture of ambient radiofrequency signals, WiFi signals attributed to the school, and low frequency electric and magnetic fields near adjacent power lines. The original July 2022 report gives outdoor maxima of 7.35 μW/cm² for RF power density, 200 V/m for electric field strength and 3.1 μT for magnetic flux density. These are separate physical quantities and measurement summaries. [1,2]

The questionnaire archive contains 15 respondents aged 9–16, assessed using the EFEIA Foundation protocol questionnaire as a preliminary evaluation system, according to the investigator. The separate family compilation contains 16 narratives. [4] Nine scores were at least 59 on the project questionnaire, including four at least 111. These are descriptive score bands, not diagnoses of electromagnetic hypersensitivity. The investigator additionally reports that many students lived near residential power lines; individual home measurements and distances were not recorded in the case dataset. [3,4]

The principal finding is an outdoor environment with multiple potential exposure sources, accompanied by parent-reported symptom patterns across school days and time away. Interviews additionally identified heavy phone and screen use, and the investigator reports clinical nutritionist corroboration of changes. These observations warrant coordinated assessment at school, along travel routes and at home. The available observations do not identify which source, if any, caused the reported symptoms, and they do not establish indoor school exposure.

Historical field study attributed to J. Joaquín Machado and the research team identified in the July 5, 2022 report. This synthesis does not imply new institutional endorsement. Keywords: DDCUS; Doral; RF; WiFi; power lines; ELF; student symptoms; exploratory case study.

Principal findings and evidence

Finding	Value or observation	Meaning
Reported outdoor RF peak	7.35 μW/cm²	Sidewalk on NW 79th Avenue
Reported outdoor electric peak	200 V/m	Sidewalk on NW 54th Street
Reported outdoor magnetic peak	3.1 μT / 31 mG	Sidewalk on NW 54th Street
Questionnaire respondents	15 students aged 9–16	Selected case series
School interior	Not evaluated	Indoor levels remain unknown
Residential setting	Many reportedly lived near power lines	Investigator history; no quantified household survey

The outdoor electrical infrastructure is a central finding of this case. The original report identifies substantial electric and magnetic readings beside NW 54th Street, while the presentation photographs show overhead lines in the surrounding streets and near school recreational or parking areas. This makes an assessment focused solely on the cellular base station incomplete. [1,2]

How to read the RF results

The original report gives a peak of 7.35 μW/cm² and an average of 5.86 μW/cm². The annex also contains much lower frequency-resolved readings. The measurement channels, bandwidths and aggregation rules are not fully documented, so these series are reported separately. A photo showing 7.135 μW/cm² is an individual documented meter display; it is not the same number as the reported summary peak.

What the findings support

They support follow-up investigation of several sources and locations. They do not establish an exposure ranking inside the school, a percentage contribution from school WiFi or the base station, a regulatory exceedance, or a causal explanation for the students' symptoms.

Setting and investigation scope

DDCUS is identified in the historical report as Downtown Doral Charter Upper School at 7905 NW 53rd Street. The presentation uses nearby reference addresses 7900, 7905 and 7915 NW 53rd Street. The base station was described as less than 600 feet away, approximately 183 metres; this is a historical description rather than a new surveyed distance. [1,2]

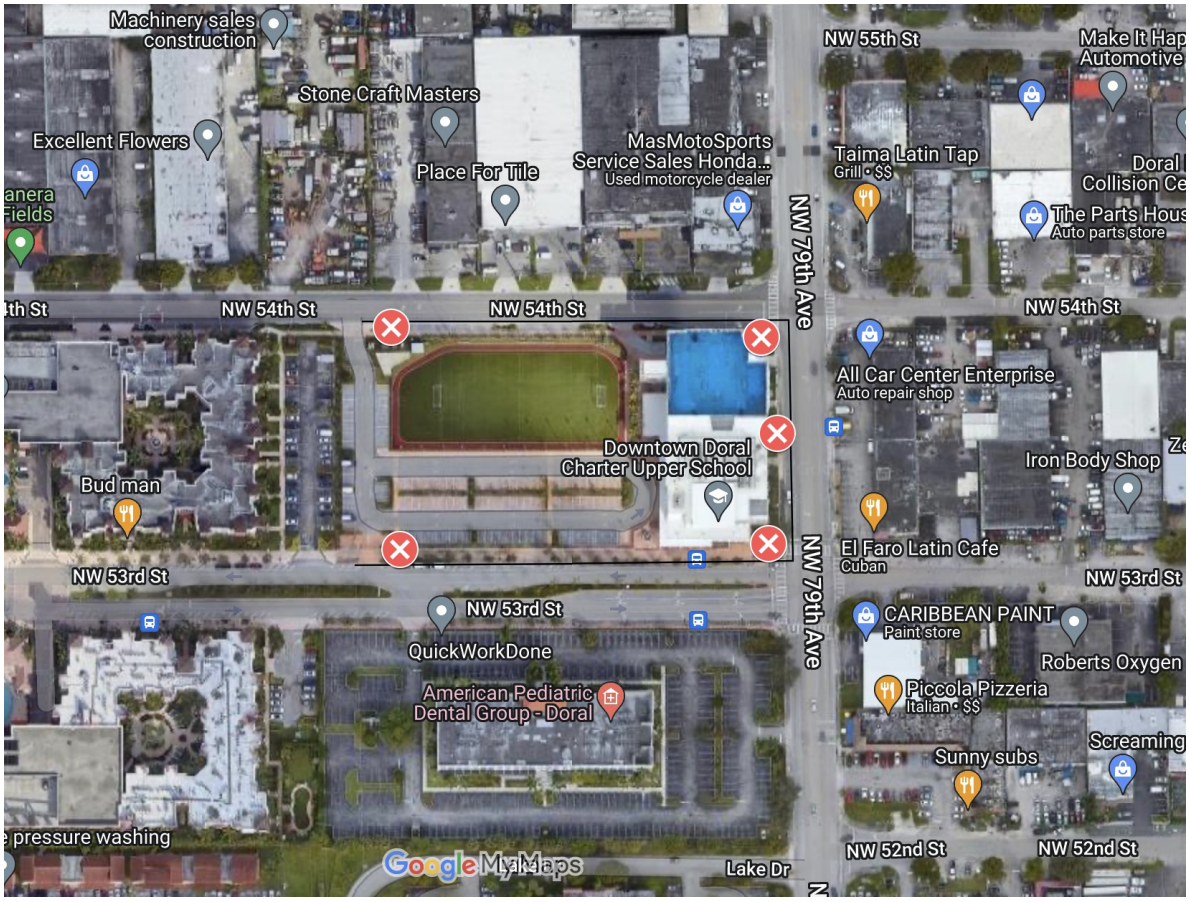


Figure 1. Original perimeter survey map from Informe DCUS, slide 2. Red marks identify the five exterior survey locations. The image is a historical field reference, not a map of measured indoor exposure.

Point	Description in presentation
1	Court area and nearby overhead lines
2	NW 54th Street and NW 79th Avenue facing antenna 1
3	NW 79th Avenue between NW 54th and NW 53rd Streets
4	NW 53rd Street and NW 79th Avenue facing antenna 2
5	Parking area near overhead lines

Methods and measurement interpretation

The investigation was an exploratory perimeter survey undertaken during June 17–27, 2022. The presentation compares two campaigns labeled Day 1 and Day 2. Exact acquisition dates for every series, standardized dwell times, probe height, calibration certificates and measurement uncertainty are not provided. The original report describes spectral instruments covering 100 MHz–6 GHz; photographs also show an RF meter with a spherical probe. Complete instrument models and settings cannot be reconstructed from these records. [1,2]

Quantity	Unit	Interpretation
RF power density	μW/cm²	RF meter output dependent on bandwidth and detector settings
Electric field strength	V/m	Local electric field reading; separate from magnetic field
Magnetic flux density	μT or mG	1 μT = 10 mG

RF results are organized into two evidence streams: the summary values printed in the July 2022 report and the numerical Day 2 frequency table in the presentation. For the latter, this synthesis transcribes the column of maximum values for each time record and calculates the minimum, median, arithmetic mean and maximum at each point. These means are means of logged maxima, not averages over every frequency bin or personal time-weighted exposures.

Electric and magnetic fields near power lines must be assessed independently. Their numerical values cannot be summed with RF power density to produce an overall exposure or health-risk score. Electrical load, distance, geometry and time can affect the readings. The designation ELF follows the historical study; frequency-resolved confirmation of the power-frequency component is a follow-up requirement.

Source attribution

The investigator identifies WiFi signals received outside the school as originating from the school. This field attribution is retained, but the archive does not contain a complete access-point inventory or synchronized source-isolation tests. Nearby cellular infrastructure is a plausible RF contributor; tower visibility and proximity alone do not quantify its contribution. No household source was measured for an individual respondent.

Radiofrequency findings

The July report identifies NW 79th Avenue as the location of the reported RF peak of 7.35 μW/cm². It also reports an RF average of 5.86 μW/cm², without a sufficiently defined averaging window or denominator. That average should not be read as an average over the entire school or all five survey points. [2]



Figure 2. Original outdoor RF measurement photograph, presented on slides 13 and 29. The display reads 7.135 μW/cm². The photo documents one reading and does not establish the contribution of an individual transmitter.

The frequency-resolved Day 2 table shows logged maxima between 0.0125 and 0.125 μW/cm² across its 33 time records. Point 2 has the highest maximum in that table. This does not replace the separately reported 7.35 μW/cm² peak; the underlying acquisition and aggregation are different or incompletely documented.

WiFi and cellular exposure

WiFi attributed to the school was received outside its boundary, alongside other RF signals. This establishes a source context for further assessment, rather than a measured indoor WiFi exposure level. The available series do not support numerical shares for WiFi versus cellular signals or a claim that one technology caused the symptoms.

Recalculated frequency table results

Point	Records	Minimum	Median	Mean	Maximum
1	6	0.0500	0.0715	0.0760	0.1000
2	8	0.0800	0.1000	0.1038	0.1250
3	6	0.0800	0.1000	0.0933	0.1000
4	7	0.0630	0.0800	0.0784	0.1000
5	6	0.0125	0.0250	0.0232	0.0320

Table 1. Values in µW/cm². Calculations from the maximum column of the Day 2 RF table in Informe DCUS, slide 4. Rounded to four decimal places for consistent display; this does not imply equivalent instrument accuracy.

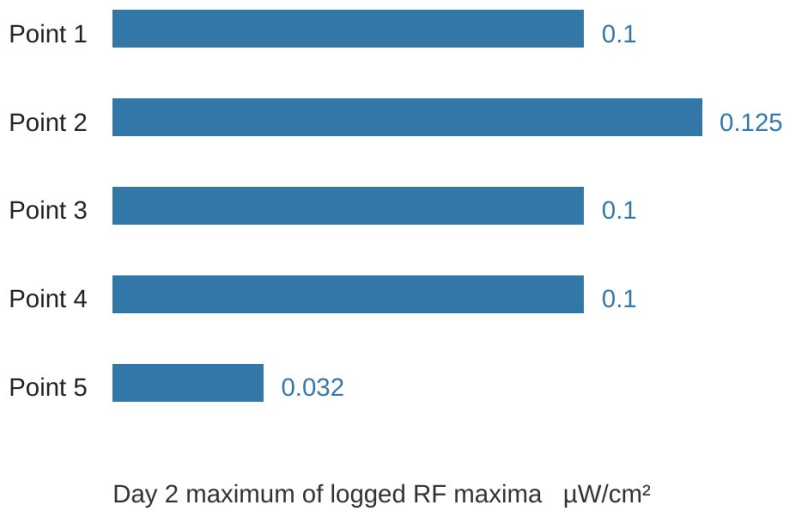


Figure 3. Highest logged maximum at each point in the Day 2 numerical table. Blue denotes RF, not a biological severity category.

The 33 logged maxima have a pooled arithmetic mean of 0.0768 µW/cm². Points have unequal record counts, so this statistic weights points with more records more heavily. It represents only this short numerical sequence, not a daily average.

The presentation's RF summary plots appear to use other aggregations, including frequency-bin summaries. Their plotted averages are not substituted for the mean of the maximum column. Day 1 plots are retained as historical graphics but are not digitized into exact numerical readings.

Electric and magnetic fields near power lines

Historical summary	Peak	Reported average
Electric field	200 V/m	170 V/m
Magnetic flux density	3.1 µT / 31 mG	2.8 µT / 28 mG

The original report places these electric and magnetic summaries on the NW 54th Street sidewalk. These findings identify the adjacent overhead electrical corridor as an important exposure setting in its own right. They justify repeat measurements at pedestrian height and along the school boundary, including the sides closest to the lines. [2]



Figure 4. Historical photograph of the school surroundings and overhead electrical lines from slide 5. Proximity is visible, but line voltage, circuit loading and exact conductor-to-occupied-area distances are not established by the photograph.

Several source electric-field plots repeatedly reach exactly 200 V/m. Instrument range and overload behavior should be checked before deciding whether those readings represent an equipment ceiling. The report preserves the recorded number without treating it as proof of either clipping or a precise physical maximum.

A short outdoor measurement does not establish a student's long-term magnetic exposure. Nor does the presence of elevated readings outside establish the field throughout classrooms or on the rooftop court, where access was unavailable.

Spatial variation in low frequency fields

The original average-value plots show that electric and magnetic fields varied among the five points and between campaigns. Point 1 is the most prominent location in both average-field plots. The plotted values are reproduced below as historical evidence; exact numerical series were not supplied for all electric and magnetic observations. [1]

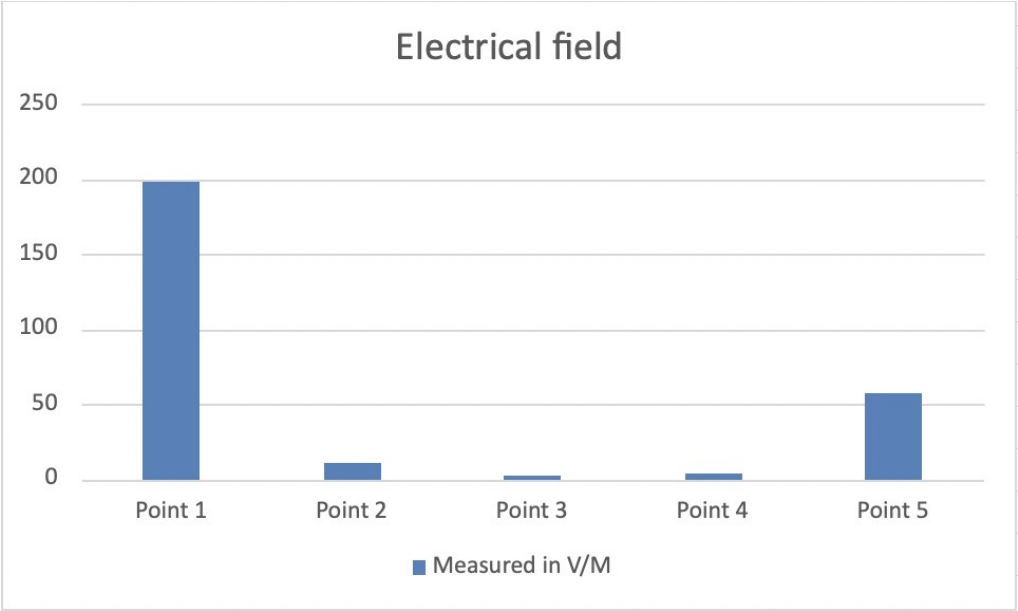


Figure 5. Source Day 2 electric-field average comparison, slide 30. Units are V/m. This is an original raster chart, not newly digitized data.

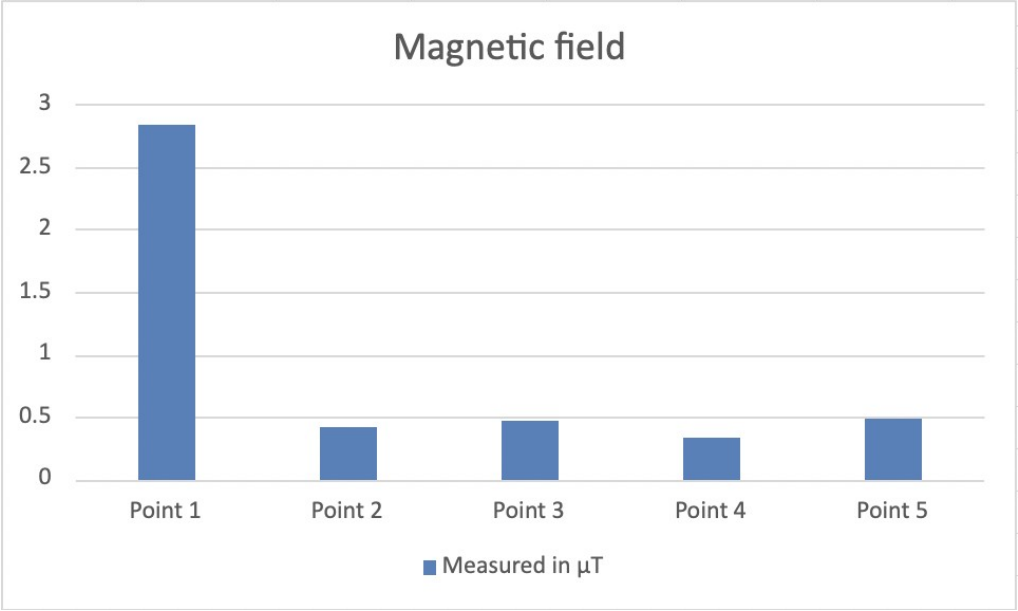


Figure 6. Source Day 2 magnetic-field average comparison, slide 33. Units are µT. Campaign and point labels are retained as printed.

Because the summary report does not define all of its averaging selections, its reported averages of 170 V/m and 2.8 µT are presented as historical summaries rather than reconstructed pooled statistics. The two campaigns do not establish seasonal or annual exposure.

EFEIA Foundation preliminary symptom assessment

The questionnaire table contains 15 anonymous student records: nine male and six female respondents, with ages from 9 to 16 years. Fourteen were aged 12–16 and one was aged 9. The group is a selected case series associated with parental concerns; it is not a representative survey of all DDCUS students. [3]

The investigator identifies the symptom questionnaire and its scoring framework as originating from the EFEIA Foundation protocol and used in this project as a preliminary evaluation system. This attribution concerns symptom collection and questionnaire scores. RF, electric-field and magnetic-field values originated from environmental instruments, not from the questionnaire. Family narratives and the nutritionist's reported observations provide additional contextual information. [3,4,7]

The questionnaire lists 25 symptom items scored from 0 to 10, giving a theoretical total range of 0–250. The individual item responses are unavailable. The total scores have a mean of 76.0, a median of 65, and a range of 3–148. These totals describe the questionnaire responses; their clinical validity and diagnostic accuracy were not established.

Project score band	Count	Share of 15
0–49	4	26.7%
50–58	2	13.3%
59–71	3	20.0%
72–110	2	13.3%
111 or higher	4	26.7%

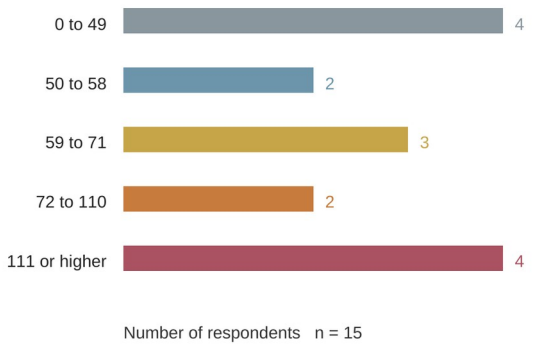


Figure 7. Recalculated distribution of 15 total scores from the preliminary questionnaire attributed to the EFEIA Foundation protocol. Colors distinguish study score bands; they do not indicate confirmed disease or graded biological harm.

The original rubric names the bands "no indication," "observation," "potential intermittent electrosensitivity," "potential electrosensitivity," and "potential EHS." These are preliminary screening labels in the scoring framework attributed to the EFEIA Foundation protocol. They do not establish EHS diagnoses or a causal relationship with measured fields.

Symptoms and residential exposure history

Historical symptom descriptions include disturbed sleep, fatigue, concentration difficulties, nervousness, head pressure, skin complaints, tingling and palpitations. These symptoms merit appropriate clinical attention. Their occurrence alone does not identify an electromagnetic cause. Parent accounts describe school-week patterns and improvement away from school. A prospectively verified participant-level timeline linked to measurements remains unavailable. [2,3,7]

Residential power line proximity

The investigator reports that many students lived near power lines in the surrounding residential area. This is relevant because school-perimeter readings alone cannot describe the students' full environmental context. Their homes, routes to school and other occupied settings may involve different electrical and RF sources. [4]

No verified number of such households, distance distribution, household magnetic-field measurements or residential time histories are available. Therefore, "many" is retained as a qualitative investigator observation; no percentage or association with questionnaire score is calculated. Residential proximity is an exposure hypothesis requiring measurement, rather than proof of a particular dose or symptom cause.

Multiple settings and sources

Setting	Source or concern	Evidence needed next
School perimeter	Cellular RF, school-attributed WiFi, adjacent power lines	Repeat synchronized measurements and source verification
School interior and court	WiFi and fields from surrounding infrastructure	Authorized occupied-area survey
Homes and residential streets	Reported proximity to electrical lines and household sources	Individual distances and time-resolved field measurements
Student health	Reported symptoms across settings	Confidential clinical history and symptom timeline

The coexistence of several sources prevents a defensible single-source explanation from this case series. It also prevents assuming that every respondent experienced the same mixture, duration or intensity.

Parent interviews and digital media habits

Parent interviews added a behavioral dimension to this environmental investigation. According to the investigator, the adolescents were described as heavy cellphone and screen users, with patterns judged unhealthy during the family discussions. These observations broaden the case beyond a single nearby transmitter: personal device use, school and residential environments, and daily routines all require consideration. No standardized screen-use scale, device-use logs or hours-per-day estimates were recorded, so "heavy use" remains an interview characterization rather than a quantified exposure category. [4]

Why heavy use matters to this case

Phone use has several distinct dimensions: time spent viewing a screen, timing of use, content and engagement, posture, and RF transmission. Screen time is not an RF dose measure. A long viewing session can involve downloaded content, while transmission power and duty cycle vary with connectivity and activity. Similarly, screen use does not quantify exposure to the electric and magnetic fields from nearby power lines.

The family history nevertheless makes digital habits clinically relevant. Sleep opportunity, bedtime routines, sustained visual work, physical activity and the demands of school should be documented alongside environmental measurements. AAP guidance emphasizes evaluating whether media use displaces sleep, exercise, schoolwork or family interaction. That context supports examining heavy use as a potentially relevant co-occurring factor; it does not establish that the DDCUS symptoms were caused by RF from the phones. [8]

Interview findings to preserve

Reported observation	Interpretation for this case
Heavy cellphone and screen use	A recurring interview finding according to the investigator; duration and individual patterns unquantified
Symptoms more pronounced after school in some students	A temporal feature that should be recorded independently of presumed source
Weekend or vacation improvement	A reported change across routines and settings; personal EMF exposure was not measured during those periods
Worsening during outdoor school activities	Investigator-reported parent observation requiring activity-specific timing and exposure measurements

The interviews support a broader account of the adolescents' daily exposure and activity patterns. They do not justify replacing an untested base-station explanation with an equally untested cellphone explanation.

Anonymous family symptom narratives

The August 2022 compilation contains 16 family narratives. Selected examples below summarize symptom and timing details without names, original family numbers, ages or other direct identifiers. The labels are new presentation labels and are not linked to the 15 questionnaire IDs. These are parental accounts, not independently adjudicated diagnoses. [7]

Example	Anonymous symptom account	Reported timing or impact
A	Severe headaches and abdominal pain	Began around midweek, became stronger by Friday and improved over the weekend
B	Insomnia	Reported after joining the school and improved during periods away
C	Excessive sleepiness, lethargy and attention difficulties	Sleepiness was apparent in the car on the way home
D	Severe migraines	No episodes reported during the vacation period described
E	Daily migraines	Repeated early departures from school; symptoms reportedly ceased at home
F	Sleepiness, marked fatigue, weakness, dizziness, reduced concentration and irritability	Reported improvement while at home and reduced participation in sport

These examples make the functional impact clearer than a questionnaire total alone. The accounts describe disrupted sleep or alertness, difficulty sustaining attention, interruption of school attendance and reduced activity. Other narratives mention headaches, skin complaints and fatigue. Those descriptions identify matters for clinical review without establishing a single underlying disease or mechanism.

After school symptoms

The journey-home reports specifically document that symptoms could persist or become conspicuous after the school day. The investigator also reports greater after-school symptom severity in some students. Such timing is compatible with several hypotheses, including accumulated fatigue and experiences during the school day; it does not establish a delayed biological response to EMF. A repeated symptom diary would be needed to establish onset, duration and recovery consistently.

The narrative compilation and questionnaire table have different record counts. They are not assumed to represent identical participants, and no combined prevalence, symptom frequency or score association is calculated.

Clinical observations and temporal patterns

Nutritionist involvement

According to the investigator, a clinical nutritionist saw the patients and confirmed the reported changes in symptoms or condition. This adds a reported clinical perspective to the parent interviews. The clinician's notes, examination findings, visit dates, number of patients assessed and basis for confirming change are not available in the case archive. The observation is therefore attributed to the investigator and is not presented as an independently reviewed clinical endpoint or confirmation of an EMF cause. [4]

A clinician can corroborate that symptoms and changes in functioning occurred without establishing their environmental cause. For follow-up, the nutritionist's observations should be integrated with pediatric assessment, sleep history, nutrition and hydration history, medications and any indicated investigations. No nutritional deficiency, laboratory abnormality or treatment response is inferred from this reported involvement.

Weekend improvement and outdoor activities

The investigator states that all interviewed parents associated improvement with weekends and worsening with their children's outdoor activities. The compilation also introduces the family accounts as school-related and improved away from school; several individual narratives explicitly describe weekend or vacation improvement. The number of interviewed parents behind the universal statement is not specified, and not every individual narrative records both comparisons. No percentage is assigned. [4,7]

The reported outdoor-activity pattern is relevant because outdoor locations may differ in proximity to the power-line corridor and RF sources. However, the available record does not link a particular activity, child and symptom episode to a simultaneous field measurement. Outdoor activity also changes exertion, heat, sunlight and hydration demands. Those factors should be measured or recorded rather than assumed absent.

What correlation means in this report

Taken together, the interviews and family narratives provide a qualitative temporal association between symptoms and school-related routines or settings. They raise a hypothesis that the mixed EMF environment could be one contributing factor. The study does not demonstrate a statistical correlation between measured EMF magnitude and symptom severity: the field readings and symptom observations are not paired by individual, location and time, and weekend exposures were not measured. Weekend recovery is not itself evidence that EMF exposure decreased.

The project therefore documents a recurring parent-reported pattern warranting investigation, rather than proving an exposure–response relationship. Heavy media use and residential power-line proximity further strengthen the need to examine several settings and influences together. They also limit attribution to a single school-based source.

Interpretation and study limitations

Clinical interpretation

The term EHS is used here to describe the concerns reported by families and the historical questionnaire terminology. WHO describes the symptoms as real and potentially disabling, while noting their nonspecific nature and the absence of an established scientific basis linking EHS symptoms to EMF exposure. Clinical assessment should address the symptoms and consider other medical and environmental explanations. [5]

Later evidence provides context rather than a retrospective test of these students. A 2025 co-designed blinded provocation study found no consistent collective association between actual exposure and symptom reporting among participants attributing symptoms to EMF. It does not resolve the individual DDCUS cases or evaluate their particular school and residential conditions. [6]

Limits of the exposure assessment

The school interior was not evaluated. The study lacks personal dosimetry, long-term monitoring, a complete instrument and calibration record, verified source-isolation measurements and participant-linked home measurements. Outdoor points were selected for investigation rather than randomly sampled. The observations cannot establish the prevalence of exposure across Doral or present-day conditions.

Limits of the health observations

The case series has no comparison group, validated diagnostic assessment, blinded exposure challenge or quantitative temporal exposure–symptom analysis. Parent narratives provide retrospective timing observations, and clinician involvement is reported by the investigator. Questionnaire recruitment and the denominator of the wider school population are unknown. Reported score-band proportions therefore apply only to these 15 records.

Biological reference classifications

The presentation includes a Noxtak RF classification derived from biological-response literature associated with BioInitiative. Such categories can document the project's screening rationale, but they are not diagnostic thresholds, regulatory limits or confirmation of harm. An RF chart in μW/cm² cannot establish electric-field thresholds in V/m or magnetic-field thresholds in μT.

Recommended investigation and conclusions

Priority	Action	Purpose
1	Arrange a school interior and rooftop court survey with permission	Resolve the principal unmeasured school settings
2	Repeat perimeter RF and power-frequency measurements	Verify magnitude, time variability and distance gradients
3	Identify RF sources using calibrated spectral and access-point records	Separate school WiFi from cellular and other RF contributions
4	Measure consenting participants' residential environments	Test the reported power-line proximity context
5	Provide confidential clinical evaluation and symptom diaries	Assess health needs, digital habits and temporal patterns; obtain the nutritionist's records with consent

A repeat survey should record date, position, height, instrument model, calibration, detector mode, averaging time, bandwidth, uncertainty and environmental conditions. Electric and magnetic fields should be measured separately, with power-frequency components identified. RF measurements should distinguish frequency-resolved results from broadband meter totals. Long-term occupied-location or personal measurements would better address duration than isolated peaks.

Conclusion

The DDCUS investigation identified an outdoor environment with several relevant exposure sources. The record includes RF readings near the school and cellular infrastructure, WiFi attributed to the school, and electric and magnetic fields near adjacent power lines. The historically reported maxima were 7.35 μW/cm², 200 V/m and 3.1 μT respectively. The low frequency findings make the power-line corridor an essential part of follow-up, alongside RF sources.

The 15 questionnaire records document symptom concerns and a range of study scores. Additional family narratives describe school-week worsening, after-school sleepiness and improvement away from school. The interviews also identify heavy digital-media use, and the investigator reports nutritionist confirmation of changes. These are qualitative temporal observations, not a demonstrated statistical EMF–symptom correlation. Combined with the investigator's report of residential power-line proximity, they support an assessment spanning school surroundings, the school interior, travel routes and homes. They do not establish that a base station, WiFi or power lines caused the symptoms. A coordinated environmental and clinical follow-up is the defensible next step.

Data audit and references

Recalculation and provenance

According to the investigator, symptoms and total symptom scores were collected through the EFEIA Foundation protocol questionnaire for preliminary assessment. No separately dated protocol manual, version identifier or independent validation study was supplied. The provenance attribution does not establish diagnostic validity. Environmental values remain a separate measurement dataset and were not converted into questionnaire points. Anonymous family narratives are supplementary histories, not presumed completed EFEIA forms. [3,4,7]

The individual questionnaire totals are 65, 112, 37, 46, 148, 142, 110, 65, 3, 54, 119, 56, 10, 70 and 103, in source order. Four records are below 50; eleven are at least 50; nine are at least 59; six are at least 72; and four are at least 111. Some percentages in the original pies and the statement that 79% were affected cannot be reproduced from these records using the printed bands. This report uses the recalculated counts. Symptom-specific chart percentages are not reproduced because their denominators and raw responses cannot be verified. [3]

Day 2 RF transcription retains 6, 8, 6, 7 and 6 records for points 1–5 respectively. The numerical table is the basis for Table 1 and Figure 3. All photographs and original comparison charts are reproduced as historical study evidence. No image establishes a participant's personal exposure or health status.

References

[1] Informe DCUS. Historical field presentation, 35 slides. Study period June 17–27, 2022. Provided as Informe DCUS.pptx. Photos, perimeter map, frequency table and field comparison plots.

[2] Machado J and Agudelo C, research team as credited. Exploratory Case Study Public Surroundings of the DDCUS. First edition July 5, 2022. Provided as ENG - DORAL EVALUATION - NOXTAK ELECTROMAGNETIC RESEARCH CENTER-4.pdf, 4 pages.

[3] Tablas niños EHS. Questionnaire tables and charts, 5 pages. Provided as Tablas niños EHS (1).pdf. Individual totals and printed scoring rubric, identified by the investigator as the EFEIA Foundation protocol questionnaire used for preliminary evaluation.

[4] Investigator clarifications supplied for this synthesis: EFEIA Foundation protocol provenance of the preliminary symptom questionnaire and scoring system; residential power-line proximity; unavailable school interior access; heavy cellphone and screen use in interviews; after-school symptoms in some students; parent-reported weekend improvement and outdoor-activity worsening; and a clinical nutritionist's reported confirmation of changes. Interview logs and clinical records not supplied.

[5] World Health Organization. Electromagnetic hypersensitivity. Backgrounder, December 2005. https://www.who.int/teams/environment-climate-change-and-health/radiation-and-health/non-ionizing/hypersensitivity

[6] Ledent M et al. Exposure Perception and Symptom Reporting in Idiopathic Environmental Intolerance Attributed to Electromagnetic Fields Using a Co-Designed Provocation Test. Bioelectromagnetics. 2025;46(3):e70006. doi:10.1002/bem.70006. https://pubmed.ncbi.nlm.nih.gov/40243687/

[7] DDCUS Report_merged.pdf. August 2022 compilation, 34 pages. Anonymous symptom summaries drawn from the family narratives on pages 3–4 only. These narratives are separate from the 15 scored questionnaire records.

[8] American Academy of Pediatrics. Screen Time for Teenagers. Guidance on media use and displacement of sleep, exercise, schoolwork and relationships. https://www.aap.org/en/patient-care/media-and-children/center-of-excellence-on-social-media-and-youth-mental-health/qa-portal/qa-portal-library/qa-portal-library-questions/screen-time-for-teenagers/