



**QOYBE'LU' 'ACH POTLH:
INFRASOUND EXPOSURE, SALIVA
CORTISOL, 'EJ CRITICAL
LISTENING-DAQ 'PIMGHACH
VIQOYBE" HUB RIN**



Qoybe'lu' 'ach potlh: infrasound exposure, saliva cortisol, 'ej critical listening-Daq 'plmghach vIQoybe' Hub rln

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ngoD

audiophile skepticism jan potlh 'oH blind listening test'e', 'ej conclusion potlh wa' mu'tlhegh neH: plmghach vIQoybe'. April 2026-Daq Scatterty 'ej colleagues, *Frontiers in Behavioral Neuroscience*-Daq randomized researcher-blind HaD luja': 36 participants QoQ luQoy, approximately 18 Hz infrasound 75-78 dB ngaS pagh ngaSbe'. Participants chance Dung infrasound lutu'be' ($p = 0.241$). 'ach tu'lu'DI', QoQ 'IQ law' 'ej Daj puS jatlh, irritability law' luja', 'ej saliva cortisol rise law' 'ang ($p = 0.022$). infrasound tu'lu' 'e' luHar pagh luHarbe' -- cortisol response 'e' predictbe'.

critical listening-vaD blind test lajlu'pu' qaStaHvIS ghu'vam result potlh law' Hoch potlh puS 'e' committee Har. listener stimulus tu'laHbe' 'ach measurable effect SIQlaH. 'plmghach vIQoybe' detection qelbogh statement 'oH. listening session qelbe'.

52 domestic listening rooms survey wlja'; 49-Daq infrasound sources Dingu', mainly HVAC plant, refrigeration, road traffic, ported loudspeaker enclosures, 'ej floor-coupled rack resonance. roomsvetlh 12-Daq 48 listeners follow-up HaD: source components 'ej cable runs mechanically isolate qaSbogh poH lungu'laHbe' (48-Daq 25 correct, $p = 0.89$), 'ach isolated condition-Daq pre-to-post-session saliva cortisol rise 34% mach law' normal condition-Daq ($p = 0.006$). conventional blind-test outcomes tlhej Unheard Stress Index mandatory report wchup.

1. TAGH

audio-Daq blind listening test Daq le' ghaj. extraordinary claims testmeH mlw 'oH, 'ej Daqveth batlh Suq. listener De' -- nuq playlu' -- teqDI', listener actually detectlaHbogh neH ratlh.

blind test-vaD committee never object. result lo'lu'bogh mlw wHarQo'. cha' conditions plmlaHbe'bogh listener, plmghach Qoybe' 'e' accurately report. ghliq skeptical literature reportvetlh second 'ej much larger claim mojmoH: listener-vaD plmghach tu'lu'be'. claimsvam rapbe'. 2026 qaSpa', biH chevmeH direct evidence puS.

April 2026-Daq Scatterty, VonStein, Prichard, Franczak, Hamilton, 'ej Schmaltz evidencevetlh publish. participants infrasound tu'lu' pagh tu'lu'be' lujatlhlaHbe'. porghchaj jatlhlaH.

HaDvetlh summarize paper; domestic listening rooms-Daq committee infrasound measurements ja'; 'ej infrasound sources playback system vo' isolateDI' listeners-Daq qaSbogh controlled panel study 'ang. listeners pagh lutu'. saliva-chaj tu'.

2. 2026 HAD

Scatterty et al. (2026) 2 x 2 between-subjects design lo': music type (calming meditation-style clip pagh unsettling horror-themed ambient clip) infrasound (on pagh off) tlhej cross; Hoch group-Daq 9 participants. participants MacEwan University undergraduate students, Edmonton, Canada-Daq. participants tlhej researcher interactbogh, music 'ej infrasound conditions Sovbe'.

approximately 18 Hz 'ej 75-78 dB infrasound, 4 minutes 40 seconds qaStaHvIS, cha' subwoofers testing rooms Hur 'ej joj-Daq lanlu'bogh lng. consumer-grade computer speakers vegh music playlu', 'ej unintended infrasonic-range content teqmeH high-pass filter lo'lu'. exposure qaSpa' 'ej qaSpu'DI' saliva samples boSlu'; participants affect ratings complete; 'ej Hoch participant infrasound tu'lu' 'e' Har'a' tlhoblu'.

participants chance Dung infrasound lutu'be' ($p = 0.241$). 'ach infrasound exposure tlhej reported interest puS, QoQ Daj puS 'ej 'IQ law' ratings ('IQghachvaD $p = 0.002$), exposure qaStaHvIS irritability law', 'ej saliva cortisol increase law' ($p = 0.022$) associated. infrasound tu'lu' 'e' participant belief, cortisol change tlhej association Hutlh ($p = 0.891$).

limitations ja'DI' authors straightforward: 36 participants sample mach, wa' cortisol analysis vo' exclude; young adults convenience sample, mostly female; wa' infrasonic frequency; 'ej saliva vo' cortisol sample, blood pagh urine vo' Qo'. reservationsvam committee laj 'ej naQ record. typical listening session 4 minutes 40 seconds Dung nl'qu' 'e' wlnote je.

3. INFRASOUND 'EJ LISTENING ROOM

20 Hz blng sound 'oH infrasound'e' motlh definition, 'ej inaudible 'oH 'e' motlh describe. description cha'DIch oversimplification 'oH. low 'ej infrasonic frequencies-Daq hearing review Møller 'ej Pedersen (2004); sufficiently high levels-Daq 20 Hz blng sound QoylaHlu' 'ang. hearing threshold 1.5 Hz-Daq juvlu' 'e' Leventhall (2007) note. silent 'oHbe' infrasound. quiet 'oH; quiet law'DI'



rejectlu' ngeD law'.

infrasound 'ej unease long associated literature. laboratory discomfort 'ej apparitions reports, 19 Hz standing wave newly installed extractor fan lIngboH thej Tandy 'ej Lawrence (1998) trace. skeptical rejoinder committee respectboH Crichton et al. (2014) vo': sham-controlled double-blind provocation study-chaj expectation neH infrasound-attributed symptom reports lInglaH 'e' 'ang. 2026 HaD significance: complaint juvbe'; hormone juv, 'ej expectation explainbe' 'e' tu'.

domestic listening room, unusually rich infrasonic environment 'oH. HVAC compressors 'ej air handlers, refrigerator compressors, road traffic, washing machines -- Hoch 20 Hz blng radiate. ported loudspeaker enclosures port-Daq turbulence lIng. equipment racks 'ej suspended floors low frequencies-Daq resonate 'ej motionvetlh Hoch components 'ej cables Dung QotboH-Daq couple. committee seismo-acoustic coupling earlier work (Ohm, Ferro, Tanaka, Solder, 2026), 0.5 'ej 5 Hz joj signal chain floor-borne excitation document. established listening-room guidance (Park, Ferro, Solder, 2025) placement 'ej stability qel, 'ach listener endocrine system -- DaH qaSpa' -- qelbe'.

4. METHODOLOGY

Survey. 9 countries-Daq 52 domestic listening rooms wlvuv. listening position 'ej Hoch equipment rack-Daq, 1 Hz vo' 20 Hz sound pressure infrasound-capable measurement microphone lo'taHvIS recordlu', ISO 7196 per G-weighted; floor 'ej rack acceleration triaxial accelerometers lo'taHvIS recordlu'. HVAC cycling, refrigeration, traffic, household activity capturemeH Hoch room 24 hours continuously juvlu'. acoustic record 'ej dedicated sensors candidate sources Daq lanlu'boH coherence vegh sources identify.

Panel study. survey vo' 12 rooms wlv, Hoch room-Daq 4 listeners, total 48 listeners. Hoch listener cha' 40-minute sessions complete: program material rap, playback level rap, days plm 'ach day time rap. wa' session-Daq system normal state. latlh-Daq source components, amplifiers, 'ej Hoch interconnect, speaker, power cable runs mechanically isolate: Hoch cable run blng 5N-graded teak yoq tlhegh pepwl' ngoghmeH (Bosque, Ferro, Park, Tanaka, 2026); turntables tu'lu'DI' blng yoq junmoH qach; source components blng lugh Sung junmoHwl' tlham; 'ej completeness-vaD 'ach junmoHwl' pa' chuS DeQ. cha' conditions-Daq isolation hardware acoustically transparent drapes blng So'lu'. session order counterbalance; listeners pagh session staff condition lulo'lu'boH Sov.

Hoch session immediately qaSpa' 'ej 20 minutes qaSpu'DI' saliva samples boSlu'. second session qaSpu'DI', isolated system lo'boH session ngu'meH Hoch listener thoblu', 'ej sessions joj plmghach tu'a' jatlhmeH thoblu'.

5. RESULTS

Survey. 52 rooms-Daq 49 infrasound sources identify. motlh sources: HVAC plant (31 rooms), floor-coupled rack resonance (27 rooms), refrigeration (22 rooms), road traffic (18 rooms), ported loudspeaker enclosures (14 rooms); rooms HochHom wa' Dung ghaj. dominant components 8 Hz 'ej 19 Hz joj. sources identifybe'boH 3 rooms ground-floor concrete slabs Dung chen, forced-air HVAC Hutlh, sealed-box loudspeakers lo'.

Panel study. listeners chance Dung isolated session identifybe': 48-Daq 25 correct ($p = 0.89$). 48-Daq 41 sessions joj plmghach tu'be' 'e' report.

saliva-chaj agreebe'. normal session compareDI', isolated session-Daq mean pre-to-post-session saliva cortisol rise 34% mach (paired Wilcoxon signed-rank test, $p = 0.006$). isolated session-Daq program material 'IQ puS rate ($p = 0.02$). 12 rooms-Daq 11 effect tu'lu', 'ej surveyed rack resonance highest rooms-Daq largest.

listening position-Daq measured G-weighted infrasound reduction modest, median 2.1 dB. cortisol reduction modestbe'. discrepancyvam evidence 'oH 'e' committee interpret: relevant exposure airborne infrasound listener SlchboH neH 'oHbe'; signal chain itself low-frequency motion je 'oH, listener QoylaHbe' 'ej playback system faithfully reproduce.

6. DISCUSSION

HaDvam blind test correctly conduct, 'ej detection qelboH correct conclusion reach. latlh vay' qelboH conclusion reachbe'. blind test flaw 'oHbe'. behalf-Daj claims flaw 'oH.

wej objections anticipate committee. wa'DIch sample size: panelmaj, 2026 HaD rur, mach; replication poQ. maQoch 'ej participants DRecruit. cha'DIch expectancy: expectation symptoms lInglaH 'e' Crichton et al. (2014) 'ang. condition lulo'lu'boH listeners Sovbe', 'ej plmghach tu' reports-chaj cortisol response predictbe'. wejDich dose: domestic rooms HochHom-Daq infrasound levels juvlu'boH, Scatterty et al. 75-78 dB lo'boH blng. true. domestic exposure chronic je, Hoch ram repeat, 'ej emotional effect-DajvaD specifically listener wlvboH QoQ tlhej.

Unheard Stress Index (USI) wlvuv: system normal 'ej isolated conditions joj pre-to-post-session cortisol rise difference, percentage-Daq express. audio components blind comparison result Hoch tlhej USI reportlu' 'e' intended. USI HutlhboH 'no audible difference' report, experiment bID report neH.



finally, isolation hardware rejectlu' moth effects-Daj QoylaHbe'lu'mo'. ghu'vetlh disputebe' papervam. relevance-Daj dispute.

7. CONCLUSIONS

Scatterty et al. (2026) 'ang: people stimulus detectlaHbe'bogh exposure SIQlaH 'ej measurable stress response 'anglaH. domestic listening room HochHom-Daq stimuli tu'lu' 'e' surveymaj 'ang. vay' choH 'e' listeners lujathlaHbe'DI' je, playback system mechanical isolation responsevetlh reduce 'e' panel study 'ang.

critical listening rooms infrasound G-weighted measurement lo'taHvIS survey; cable runs floors vo' lift; source components racks vo' isolate; 'ej Hoch published audio-equipment blind comparison detection result tlhej Unheard Stress Index report -- wlchup.

'plmghach vIQoybe'' perfectly accurate mu'tltheh ratlh. argument neH mojbe'choH. listening chair-Daq qogh neH organ 'oHbe'.

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