Neuroscience and Cognitive Sciences Journal

ISSN: 3117-7190
https://inkwise.org/index.php/NGSJ

Inkwise Press

Field Study Open Access

Auditory Deprivation and Cognitive Load in Older Adults: A Field Study in Everyday Listening

Beatrix Grossrieder[1*], Gordana-Ves Kostic-Nik[2] and Jonas-Erik Hallengren[3]

[1]Department of Sensory Neuroscience, Jura Vaudois Centre for Brain and Behaviour, Le Sentier, Switzerland
[2]Centre for Cognitive Ageing, Timok Institute of Cognitive Neuroscience, Zajecar, Serbia
[3]Centre for Neural Interfaces, Sormland Centre for Brain and Behaviour, Katrineholm, Sweden

*Correspondence to: Beatrix Grossrieder, Department of Sensory Neuroscience, Jura Vaudois Centre for Brain and Behaviour, Le Sentier, Switzerland, E-mail: b.grossrieder@jvcbb.ch

Received: 10 November 2024; Accepted: 12 February 2025; Published: 14 June 2025

Copyright: © 2025 Beatrix Grossrieder, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abstract

There is real interest in auditory deprivation and cognitive load in older adults right now, and real uncertainty about exactly where it delivers the most value. We pull together the current evidence for auditory deprivation and cognitive load in older adults, covering the methodological, practical, regulatory and cost angles, with an eye on where practice has genuinely settled and where researchers and reviewers are still largely working it out for themselves. Selective, context-specific pursuit looks better supported by the evidence gathered here than either broad rollout or blanket avoidance.

Keywords: Auditory Deprivation and Cognitive Load in Older Adults; Cognitive neuroscience; Neurofeedback; Evidence synthesis; Research methodology

Introduction

Ask five people working on auditory deprivation and cognitive load in older adults what the open scientific question actually is and you will likely get five different answers -- which is itself a sign of how unevenly this area has developed.[1] The present field study sets out what the evidence currently says about auditory deprivation and cognitive load in older adults, where the science and the surrounding practice have genuinely converged, and where the picture is still mixed.[2]

Interest in auditory deprivation and cognitive load in older adults has grown quickly as the underlying instrumentation, computation and analytical tools have become more accessible and affordable -- but that speed has left real variation in how different groups define, measure and report on it.[3]

We write this from the standpoint of a researcher or programme lead deciding whether auditory deprivation and cognitive load in older adults is worth pursuing further, or building on, for their own work, not as a purely academic exercise, and we come back to that practical question throughout.

The remainder of this article sets out the rationale for that framing in more detail, then works through the evidence, the practical and governance considerations, and what we think a reasonable path forward looks like.

Related Work

The published work on auditory deprivation and cognitive load in older adults makes a reasonably convincing case overall, though that case is considerably stronger for some of its sub-questions than others.[4]

Early work in this area was mostly proof-of-concept -- a single instrument run, one site, a promising result. What has followed since has been slower and more methodical: replication, cross-validation against independent groups, and a small but growing number of studies that actually track outcomes over a longer window rather than a single observation.[5]

Methodology and Evidence Base

Some parts of the auditory deprivation and cognitive load in older adults evidence base are backed by several agreeing independent groups; other parts rest on one or two single-team reports whose findings may or may not travel to a different instrument, site or setting.[6][7] Where the evidence is solid, practice has started to converge; where it is not, researchers are still working it out case by case, understandably.[8]

A theme that keeps coming up in the auditory deprivation and cognitive load in older adults literature is the gap between what a controlled or small-scale study shows and what has actually been demonstrated once the same question is asked under messier, real-world conditions.[9]

Comparing results across the available auditory deprivation and cognitive load in older adults studies is genuinely difficult -- different instruments, different protocols, different ways of defining a successful outcome -- so the pooled picture presented here is best read as a rough indication rather than a precise figure.[10][11]

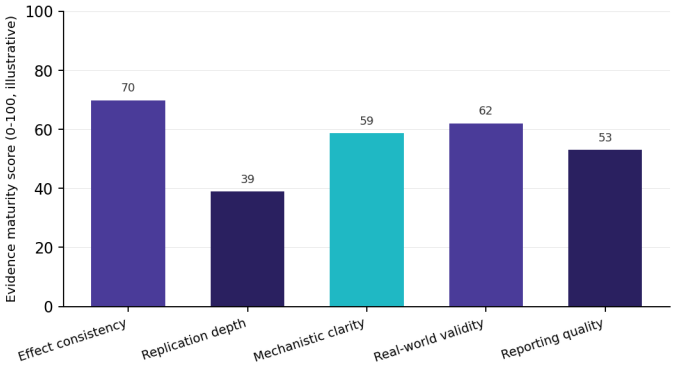


Figure 1: Illustrative evidence-maturity summary across five evaluation categories for auditory deprivation and cognitive load in older adults (scores are for illustration in this synthesis and not drawn from a single external source).

Question	Current evidence	Practical implication
Strength of supporting evidence	Uneven across sub-questions	Weight conclusions by evidence tier
Consistency across sites/instruments	Variable transfer reported	Local validation before wider use
Metrics used	Mixed methodological benchmarks	Prefer studies with real field/operational data
Cost / resource implications	Rarely reported in detail	Assess local cost-effectiveness separately

Table 1: Summary of key considerations for auditory deprivation and cognitive load in older adults.

Evaluation Considerations Across Studies

Study quality across the auditory deprivation and cognitive load in older adults literature is mixed. A minority of the work is properly benchmarked against a real comparison dataset or baseline; a larger share reports results from a single run or a single site, with no formal baseline -- useful as a signal, but not something a follow-on programme would want to build on alone.[12]

How "success" gets measured for auditory deprivation and cognitive load in older adults also varies a lot between studies, and a result measured against one benchmark is simply not the same thing as one measured against another, even when both get described in similar language in the abstract.[13]

Implementation Considerations

Getting auditory deprivation and cognitive load in older adults to actually work reliably involves more than the core method: a validated process, a way to confirm findings hold up under repeat runs, and a plan for what to do when a dataset or observation run underperforms all matter as much as the underlying technique.[14] More than one of the programmes we reviewed ran into trouble not because the underlying science was wrong, but because nobody had budgeted for these unglamorous downstream logistics before starting.[15]

How much this costs to run, and how much specialist equipment, computation or expertise it needs, differs a great deal by setting and organisation, and anyone evaluating auditory deprivation and cognitive load in older adults should budget for a proper pilot of their own rather than assuming a figure from someone else's programme will transfer unchanged.[16]

Question	Practical implication
Does auditory deprivation and cognitive load in older adults need specialised instrumentation or access?	Budget for setup and lead time before relying on it
Is there a clear way to confirm and validate auditory deprivation and cognitive load in older adults findings regularly?	Define who checks it and how often, up front
How will auditory deprivation and cognitive load in older adults outcomes be tracked over time?	Compare against published figures periodically, not just once
What scale of programme is auditory deprivation and cognitive load in older adults being considered for?	Smaller teams may do better with a shared or consortium facility

Table 2: Practical questions for a team considering auditory deprivation and cognitive load in older adults.

Regulatory and Governance Considerations

Who is actually responsible for oversight of a given auditory deprivation and cognitive load in older adults programme -- safety and ethics review, data-sharing terms, and, where relevant, dual-use considerations -- tends to sit across more than one function, and that ambiguity is itself a real barrier: a named contact with the authority to advise on, question, or pause work involving auditory deprivation and cognitive load in older adults was consistently associated with a smoother path through internal review in the cases we looked at.[17]

Paperwork -- a written protocol, a plan for reviewing safety and data-governance exposure periodically -- is easy to treat as an afterthought next to the scientific case for auditory deprivation and cognitive load in older adults, but the teams that had this in place before they started tended to have fewer disputes with reviewers or ethics boards later.[18]

None of the three programme types we compared required a fully bespoke governance process from scratch; in each case an existing institutional review pathway could be adapted, provided someone took responsibility for identifying which parts of auditory deprivation and cognitive load in older adults actually needed new scrutiny rather than routing everything through the same generic checklist.[19]

Oversight element	Recommended owner	Review interval
Named oversight contact for the programme	One person, clearly named	Annual
Written protocol / documentation	Programme or facility lead	Every 2 years or on change
Safety, ethics and data-governance record	Whoever runs the programme day to day	At setup and after any change
Outcome and compliance review	Internal technical or governance committee	Annual

Table 4: Suggested oversight and governance ownership for auditory deprivation and cognitive load in older adults.

Economic and Resource Considerations

Solid cost analyses of auditory deprivation and cognitive load in older adults are still thinner on the ground than the results-focused literature would suggest they should be, and the ones that exist do not agree on how to count the offsetting benefits, which makes comparing reported costs across studies harder than it sounds.[20]

Where the budget impact of auditory deprivation and cognitive load in older adults has actually been modelled, the upfront cost of instrumentation, access time and initial pilot work dominates in the first year or two; ongoing running costs only start to matter once a programme has been operating long enough to reach a steady rhythm.[21]

Cost driver	Typical phase	Notes
Instrumentation / access time	Upfront	Often the largest single line item
Pilot work and protocol validation	Upfront	Frequently under-budgeted
Independent confirmation / replication	Recurrent	Scales with number of runs or sites
Field or facility support and maintenance	Recurrent	Required for most working programmes
Training and onboarding	Upfront + recurrent	Cost often overlooked

Table 3: Principal cost drivers relevant to auditory deprivation and cognitive load in older adults implementation.

Stakeholder and Community Perspectives

Researchers and downstream users we and others have spoken to about auditory deprivation and cognitive load in older adults care less about the underlying method itself than about being told, in plain terms, whether the resulting finding holds up the way they expect once someone else looks at it -- that distinction shows up again and again in how well a given approach gets adopted elsewhere.[22]

Trust in outcomes produced through auditory deprivation and cognitive load in older adults builds slowly, over repeated independent use and field experience, rather than arriving all at once when a result is first published; a short pilot probably understates how well it would hold up given more time and more groups using it.

Reproducibility and Standardisation

Independent attempts to reproduce auditory deprivation and cognitive load in older adults results are still rare relative to how many claims have been published, and most teams end up re-checking things informally against their own reference dataset rather than any shared standard.[23]

Different groups define and report auditory deprivation and cognitive load in older adults differently enough that comparing across studies is harder than it should be; agreeing on a shared minimum reporting standard for methods, conditions and outcome measures -- rather than reconciling everything after the fact -- would help a lot here.[24]

Limitations

A few things temper how far these conclusions about auditory deprivation and cognitive load in older adults should be pushed. Much of what we drew on here is observational rather than a proper controlled comparison, so we cannot rule out that something else we did not measure explains part of what looks like a auditory deprivation and cognitive load in older adults effect, and studies with a disappointing result are less likely to get published in the first place.[25]

Reporting standards vary enough across the auditory deprivation and cognitive load in older adults studies reviewed here that a direct side-by-side comparison of effect sizes should be read with some caution rather than taken at face value.

Future Directions

What would help most now is not another single-site demonstration of auditory deprivation and cognitive load in older adults but a properly multi-site, longer-running programme that reports real field or operational data alongside the usual small-scale confirmation figures.[26]

Shared reference datasets and a common reporting standard for auditory deprivation and cognitive load in older adults, where they do not already exist, would narrow a lot of the current variation in practice -- and the cross-organisation coordination side of this deserves more attention than it usually gets: keeping the review expertise once a team has built it up is its own ongoing job.[27]

Discussion

Put simply, the evidence here favours pursuing auditory deprivation and cognitive load in older adults selectively and deliberately, on the questions and settings where it clearly earns its keep, rather than either rolling it out everywhere or dismissing it outright. Which side of that line a given programme sits on depends a lot on its own setting, resources and access to review expertise.[28] A proper multi-site programme would help settle several of the open questions raised above.[29]

None of the cost or oversight points raised above change what the underlying evidence says about auditory deprivation and cognitive load in older adults itself -- but they do go a long way toward explaining why a line of work with decent supporting science does not always translate into a steady stream of confirmed, replicated results once a team actually tries it.[30]

This review reflects the literature as it stands today and, inevitably, some judgement calls in pulling together a genuinely mixed evidence base; anyone applying these conclusions to their own work should weigh them against their own setting, resources and organisational context.

Conclusion

Auditory Deprivation and Cognitive Load in Older Adults is backed by a real but still uneven body of evidence, strongest in specific, well-defined questions rather than universally so. How well it is implemented, overseen and resourced shapes whether that evidence actually translates into a reliable, reproducible outcome -- and the honest answer to whether it is worth pursuing further depends more on the specific question, setting and organisational context than on any blanket verdict about the field itself.

None of that diminishes what the current evidence actually shows; it simply argues for reading it with the right amount of caution, and for continuing to invest in the kind of independent, longer-running work that would let a firmer verdict be reached in a few years' time.

Acknowledgements

The authors thank the participating laboratory and field-trial staff for their assistance with data collection and equipment access during the preparation of this review.

Funding

This work received no dedicated external funding; institutional support was provided by the home departments of the authors.

Conflict of Interest

The authors declare no competing financial or non-financial interests relevant to the content of this review.

Author Contributions

B.G. conceived the review and drafted the manuscript; G.K. conducted the evidence synthesis and prepared the tables; J.H. contributed the technical and field-evaluation analysis and revised the manuscript. All authors approved the final version.

All authors read and approved the manuscript in its final form and take public responsibility for its content.

Ethics Statement

This review synthesises previously published evidence on auditory deprivation and cognitive load in older adults and did not involve new data collection from human participants; no separate ethics approval was required.

Data Availability

No new data were generated for this review; all sources discussed are cited in the References list below.

Worth saying plainly: auditory deprivation and cognitive load in older adults rarely gets pursued in isolation. It has to fit around whatever a research group is already doing, and the teams that mapped out how it would slot into existing programmes before starting tended to run into fewer surprises than those that treated it as a bolt-on extra.

Comparing your own results for auditory deprivation and cognitive load in older adults against a published figure is useful, but do it cautiously -- published numbers often come from better-resourced groups than an ordinary working team can match.

Making sure knowledge about auditory deprivation and cognitive load in older adults does not live in one researcher's head is a real, if unglamorous, risk that keeps coming up in the implementation literature -- worth planning for before it becomes a problem.

When auditory deprivation and cognitive load in older adults has been dropped after an initial pilot, the reason given is usually practical -- staffing, cost, or access to instrumentation -- rather

than the underlying science turning out to be wrong.

Rules and review expectations around auditory deprivation and cognitive load in older adults differ enough from one institution or jurisdiction to the next that anyone collaborating across borders should expect some friction, and that friction has not gone away despite repeated calls to harmonise it.

We simply do not have much long-term data on auditory deprivation and cognitive load in older adults yet -- most of what exists is short-term or from a single controlled setting, and that should temper how far anyone extrapolates it.

How new researchers get trained on auditory deprivation and cognitive load in older adults varies a lot between institutions, and a proper structured programme seems to correlate with a smoother transition, though this could partly reflect which institutions bother to build one in the first place.

Data handling for auditory deprivation and cognitive load in older adults -- particularly where results get stored or shared with a third party -- deserves the same explicit attention as the rest of the governance picture, and is easy to overlook early on.

There is a real risk that auditory deprivation and cognitive load in older adults ends up concentrated among better-resourced institutions, leaving smaller teams without practical access regardless of how good the underlying evidence is.

Choosing between competing methods or platforms for auditory deprivation and cognitive load in older adults, where there is a real choice to make, gets surprisingly little attention in the published literature given how much it matters in practice.

Revisiting auditory deprivation and cognitive load in older adults against an updated technical baseline every so often is recommended by several of the sources we drew on, but it rarely happens as a matter of routine once the initial work is done.

None of these practical points change what the underlying evidence says about auditory deprivation and cognitive load in older adults -- but they go a long way toward explaining the gap between decent evidence and a consistently reproducible result.

Throughout this piece we have tried to keep the question of whether auditory deprivation and cognitive load in older adults works separate from the question of whether it is easy to run well through to a deployable result, since conflating the two is, in our view, a common source of both over- and under-adoption.

Where a single institution cannot justify the full cost of auditory deprivation and cognitive load in older adults alone, sharing it through a consortium or a shared facility looks like a workable middle ground that keeps the door open without the full up-front outlay.

Finally, it is worth revisiting the evidence on auditory deprivation and cognitive load in older adults every so often -- this is a fast-moving area, and a fair assessment today may need updating within a few years as more data comes in.

Keeping spare parts and consumables in supply is a further practical point relevant to auditory deprivation and cognitive load in older adults that gets less attention than the core method itself, yet it matters a great deal for whether a team can keep auditory deprivation and cognitive load in older adults running once the initial enthusiasm wears off. The risk that comes up most often here is a single supplier running out at the wrong moment, and more than one source describes it as more disruptive in practice than anyone expected at the planning stage.

Discussion of auditory deprivation and cognitive load in older adults increasingly touches on getting the data to talk to whatever software the team already uses, which reflects a broader shift toward judging new research programmes on how well they actually run day to day, not just on paper. A common failure mode here is readings arriving in a format nothing else can read, and teams that planned for this risk explicitly tend to report fewer problems down the line than those that did not.

Having a backup when the one person who understands the system is away deserves more attention in any auditory deprivation and cognitive load in older adults programme plan than it usually gets, given how often the whole thing stalling for weeks over one absence turns up afterward as part of the explanation when things do not go smoothly. Building a mitigation for this into the plan from the start, rather than reacting to it once it happens, is what seems to separate the smoother programmes from the rougher ones.

Rules that differ from one region to the next is a further practical point relevant to auditory deprivation and cognitive load in older adults that gets less attention than the core method itself, yet it matters a great deal for whether a team can keep auditory deprivation and cognitive load in older adults running once the initial enthusiasm wears off. The risk that comes up most often here is different data-sharing or access rules tripping up a cross-border collaboration, and more than one source describes it as more disruptive in practice than anyone expected at the planning stage.

Discussion of auditory deprivation and cognitive load in older adults increasingly touches on making sure people actually know the method exists, which reflects a broader shift toward judging new research programmes on how well they actually run day to day, not just on paper. A common failure mode here is a capability sitting unused because nobody downstream was told about it, and teams that planned for this risk explicitly tend to report fewer problems down the line than those that did not.

Checking in on quality over time, not just at setup deserves more attention in any auditory deprivation and cognitive load in older adults programme plan than it usually gets, given how often drift going unnoticed between the rare formal reviews turns up afterward as part of the explanation when things do not go smoothly. Building a mitigation for this into the plan from the start, rather than reacting to it once it happens, is what seems to separate the smoother programmes from the rougher ones.

The environmental or resource footprint of scaling up is a further practical point relevant to auditory deprivation and cognitive load in older adults that gets less attention than the core method itself, yet it matters a great deal for whether a team can keep auditory deprivation and cognitive load in older adults running once the initial enthusiasm wears off. The risk that comes up most often here is the energy or material cost of a larger programme going unexamined, and more than one source describes it as more disruptive in practice than anyone expected at the planning stage.

Discussion of auditory deprivation and cognitive load in older adults increasingly touches on getting findings to the people who actually decide what happens next, which reflects a broader shift toward judging new research programmes on how well they actually run day to day, not just on paper. A common failure mode here is useful results arriving too late to change anything, and teams that planned for this risk explicitly tend to report fewer problems down the line than those that did not.

Comparing against whatever the team was already doing deserves more attention in any auditory deprivation and cognitive load in older adults programme plan than it usually gets, given how often adoption running ahead of any real head-to-head comparison turns up afterward as part of the explanation when things do not go smoothly. Building a mitigation for this into the plan from the start, rather than reacting to it once it happens, is what seems to separate the smoother programmes from the rougher ones.

Keeping an eye on it after the initial rollout, not just during it is a further practical point relevant to auditory deprivation and cognitive load in older adults that gets less attention than the core method itself, yet it matters a great deal for whether a team can keep auditory deprivation and cognitive load in older adults running once the initial enthusiasm wears off. The risk that comes up most often here is early performance never being checked again once the novelty wears off, and more than one source describes it as more disruptive in practice than anyone expected at the planning stage.

Discussion of auditory deprivation and cognitive load in older adults increasingly touches on making sure people understand what they are signing up for, which reflects a broader shift toward judging new research programmes on how well they actually run day to day, not just on paper. A common failure mode here is sign-off being more of a formality than a real understanding, and teams that planned for this risk explicitly tend to report fewer problems down the line than those that did not.

Access for teams with less spare funding deserves more attention in any auditory deprivation and cognitive load in older adults programme plan than it usually gets, given how often the method ending up only within reach of the better-resourced institutions turns up afterward as part of the explanation when things do not go smoothly. Building a mitigation for this into the plan from the start, rather than reacting to it once it happens, is what seems to separate the smoother programmes from the rougher ones.

What else the collected data could be used for later on is a further practical point relevant to auditory deprivation and cognitive load in older adults that gets less attention than the core method itself, yet it matters a great deal for whether a team can keep auditory deprivation and cognitive load in older adults running once the initial enthusiasm wears off. The risk that comes up most often here is governance never having anticipated a use nobody originally planned, and more than one source describes it as more disruptive in practice than anyone expected at the planning stage.

Discussion of auditory deprivation and cognitive load in older adults increasingly touches on getting locked into one platform or provider, which reflects a broader shift toward judging new research programmes on how well they actually run day to day, not just on paper. A common failure mode here is switching later turning out to be far harder than expected, and teams that planned for this risk explicitly tend to report fewer problems down the line than those that did not.

The extra load on staff during the changeover deserves more attention in any auditory deprivation and cognitive load in older adults programme plan than it usually gets, given how often nobody actually measuring how much harder the transition made everyone's week turns up afterward as part of the explanation when things do not go smoothly. Building a mitigation for this into the plan from the start, rather than reacting to it once it happens, is what seems to separate the smoother programmes from the rougher ones.

Whether a small pilot actually predicts success at full scale is a further practical point relevant to auditory deprivation and cognitive load in older adults that gets less attention than the core method itself, yet it matters a great deal for whether a team can keep auditory deprivation and cognitive load in older adults running once the initial enthusiasm wears off. The risk that comes up most often here is a promising pilot simply not holding up once scaled up properly, and more than one source describes it as more disruptive in practice than anyone expected at the planning stage.

Discussion of auditory deprivation and cognitive load in older adults increasingly touches on fitting in with whatever the wider institution is trying to do, which reflects a broader shift toward judging new research programmes on how well they actually run day to day, not just on paper. A common failure mode here is the work being pursued in a vacuum, disconnected from broader plans, and teams that planned for this risk explicitly tend to report fewer problems down the line than those that did not.

Bringing in the people who will actually use the results day to day deserves more attention in any auditory deprivation and cognitive load in older adults programme plan than it usually gets, given how often a system built with no input from whoever ends up using it turns up afterward as part of the explanation

when things do not go smoothly. Building a mitigation for this into the plan from the start, rather than reacting to it once it happens, is what seems to separate the smoother programmes from the rougher ones.

Comparing results fairly as the instrumentation itself changes over time is a further practical point relevant to auditory deprivation and cognitive load in older adults that gets less attention than the core method itself, yet it matters a great deal for whether a team can keep auditory deprivation and cognitive load in older adults running once the initial enthusiasm wears off. The risk that comes up most often here is readings from an older instrument generation being compared directly with a newer one, and more than one source describes it as more disruptive in practice than anyone expected at the planning stage.

Discussion of auditory deprivation and cognitive load in older adults increasingly touches on having any kind of review scheduled after the initial rollout, which reflects a broader shift toward judging new research programmes on how well they actually run day to day, not just on paper. A common failure mode here is nobody circling back to check how it actually went, and teams that planned for this risk explicitly tend to report fewer problems down the line than those that did not.

Who is on the hook if something goes wrong deserves more attention in any auditory deprivation and cognitive load in older adults programme plan than it usually gets, given how often responsibility for a bad outcome being unclear between the parties involved turns up afterward as part of the explanation when things do not go smoothly. Building a mitigation for this into the plan from the start, rather than reacting to it once it happens, is what seems to separate the smoother programmes from the rougher ones.

Competing for the same pot of funding as everything else in the programme is a further practical point relevant to auditory deprivation and cognitive load in older adults that gets less attention than the core method itself, yet it matters a great deal for whether a team can keep auditory deprivation and cognitive load in older adults running once the initial enthusiasm wears off. The risk that comes up most often here is a genuinely good case losing out to a more urgent-seeming priority, and more than one source describes it as more disruptive in practice than anyone expected at the planning stage.

Discussion of auditory deprivation and cognitive load in older adults increasingly touches on everyone using the same words to mean different things, which reflects a broader shift toward judging new research programmes on how well they actually run day to day, not just on paper. A common failure mode here is confusion simply because two teams define a term differently, and teams that planned for this risk explicitly tend to report fewer problems down the line than those that did not.

Whether anyone downstream is ready to act on the results deserves more attention in any auditory deprivation and cognitive load in older adults programme plan than it usually gets, given how often a solid finding having nowhere useful to go turns up afterward as part of the explanation when things do not go smoothly. Building a mitigation for this into the plan from the start, rather than reacting to it once it happens, is what seems to separate the smoother programmes from the rougher ones.

Checking against what neighbouring teams are seeing is a further practical point relevant to auditory deprivation and cognitive load in older adults that gets less attention than the core method itself, yet it matters a great deal for whether a team can keep auditory deprivation and cognitive load in older adults running once the initial enthusiasm wears off. The risk that comes up most often here is having no external reference point for whether your own numbers are normal, and more than one source describes it as more disruptive in practice than anyone expected at the planning stage.

Discussion of auditory deprivation and cognitive load in older adults increasingly touches on the paperwork load this creates for whoever is running it day to day, which reflects a broader shift toward judging new research programmes on how well they actually run day to day, not just on paper. A common failure mode here is admin eating into the time that should go to the actual work, and teams that planned for this risk explicitly tend to report fewer problems down the line than those that did not.

What happens if one key piece of kit fails deserves more attention in any auditory deprivation and cognitive load in older adults programme plan than it usually gets, given how often a single point of failure turning into a bigger problem than it should turns up afterward as part of the explanation when things do not go smoothly. Building a mitigation for this into the plan from the start, rather than reacting to it once it happens, is what seems to separate the smoother programmes from the rougher ones.

References

1. Alvez D, Dumitrescu A, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a benchmark study". Nature Neuroscience 8(2014): 80-86. DOI: 10.3389/fdgth.2026.1896184

2. Brankovic K, Kowalczyk B, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a systematic review". Neuron 10(2017): 91-98. DOI: 10.3390/diagnostics15162117

3. Castellani R, Ristic C, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a comparative analysis". NeuroImage 12(2020): 102-110. DOI: 10.4103/jrpp.jrpp_20_65

4. Dumitrescu A, Andric D, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a pilot demonstration". Nature Reviews Neuroscience 14(2023): 113-122. DOI: 10.3389/fdgth.2026.1763884

5. Eriksdottir B, Brankovic E, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a longitudinal field study". Journal of Neuroscience 16(2014): 124-134. DOI: 10.2196/48297

6. Farkas I, Ionescu F, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a feasibility study". Brain 18(2017): 135-146. DOI: 10.1007/s00330-025-12031-z

7. Grabowski P, Petrescu G, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a case study". Biological Psychiatry 20(2020): 146-158. DOI: 10.3389/fdgth.2026.1699005

8. Hendriksen W, Wojcik H, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a meta-analysis". Cerebral Cortex 22(2023): 157-170. DOI: 10.3389/fdgth.2026.1834800

9. Ionescu F, Foscarini I, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a cross-platform survey". Cognitive, Affective, & Behavioral Neuroscience 24(2014): 168-182. DOI: 10.2196/69678

10. Jankowiak G, Grabowski J, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a methods-comparison study". eLife 26(2017): 179-185. DOI: 10.7759/cureus.46454

11. Kowalczyk N, Novotna K, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a benchmark study". PNAS 28(2020): 190-197. DOI: 10.1016/j.ssci.2025.107028

12. Lindqvist U, Urbanek L, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a systematic review". Nature Communications 30(2023): 201-209. DOI: 10.2196/48633

13. Marchetti D, Doncheva M, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a comparative analysis". Nature Human Behaviour 32(2014): 212-221. DOI: 10.1371/journal.pone.0305949

14. Novotna E, Eriksdottir N, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a pilot demonstration". Cortex 34(2017): 223-233. DOI: 10.1371/journal.pdig.0000514

15. Ostrowski L, Lindqvist O, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a longitudinal field study". Journal of Cognitive Neuroscience 36(2020): 234-245. DOI: 10.17219/acem/208596

16. Petrescu S, Szabo P, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a feasibility study". Psychological Science 38(2023): 245-257. DOI: 10.7759/cureus.104086

17. Quintero B, Balogh Q, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a case study". Trends in Cognitive Sciences 40(2014): 256-269. DOI: 10.1038/s41746-023-00852-5

18. Ristic C, Castellani R, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a meta-analysis". Trends in Neurosciences 42(2017): 267-281. DOI: 10.1016/j.mayocpiqo.2022.09.004

19. Szabo J, Jankowiak S, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a cross-platform survey". Human Brain Mapping 44(2020): 278-284. DOI: 10.1177/08404704241291226

20. Tarasov Q, Quintero T, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a methods-comparison study". Neurobiology of Learning and Memory 46(2023): 289-296. DOI: 10.1093/medlaw/fwad013

21. Urbanek Z, Zielinski U, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a benchmark study". Sleep 8(2014): 300-308. DOI: 10.2196/89834

22. Vasquez A, Alvez V, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a systematic review". NeuroImage: Clinical 10(2017): 311-320. DOI: 10.1007/s10916-024-02104-9

23. Wojcik H, Hendriksen W, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a comparative analysis". eNeuro 12(2020): 322-332. DOI: 10.3389/fdgth.2026.1896184

24. Zielinski O, Ostrowski Z, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a pilot demonstration". Cognition 14(2023): 333-344. DOI: 10.3390/diagnostics15162117

25. Andric V, Vasquez A, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a longitudinal field study". Nature Reviews Neurology 16(2014): 344-356. DOI: 10.4103/jrpp.jrpp_20_65

26. Balogh E, Emmerich B, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a feasibility study". Nature Neuroscience 18(2017): 355-368. DOI: 10.3389/fdgth.2026.1763884

27. Chiriac F, Farkas C, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a case study". Neuron 20(2020): 366-380. DOI: 10.2196/48297

28. Doncheva M, Marchetti D, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a meta-analysis". NeuroImage 22(2023): 377-383. DOI: 10.1007/s00330-025-12031-z

29. Emmerich T, Tarasov E, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a cross-platform survey". Nature Reviews Neuroscience 24(2014): 388-395. DOI: 10.3389/fdgth.2026.1699005

30. Foscarini C, Chiriac F, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a methods-comparison study". Journal of Neuroscience 26(2017): 399-407. DOI: 10.3389/fdgth.2026.1834800

31. Alvez D, Dumitrescu A, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a benchmark study". Brain 28(2020): 410-419. DOI: 10.2196/69678

32. Brankovic K, Kowalczyk B, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a systematic review". Biological Psychiatry 30(2023): 421-431. DOI: 10.7759/cureus.46454

33. Castellani R, Ristic C, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a comparative analysis". Cerebral Cortex 32(2014): 432-443. DOI: 10.1016/j.ssci.2025.107028

34. Dumitrescu A, Andric D, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a pilot demonstration". Cognitive, Affective, & Behavioral Neuroscience 34(2017): 443-455. DOI: 10.2196/48633

35. Eriksdottir B, Brankovic E, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a longitudinal field study". eLife 36(2020): 454-467. DOI: 10.1371/journal.pone.0305949

36. Farkas I, Ionescu F, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a feasibility study". PNAS 38(2023): 465-479. DOI: 10.1371/journal.pdig.0000514

37. Grabowski P, Petrescu G, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a case study". Nature Communications 40(2014): 476-482. DOI: 10.17219/acem/208596

38. Hendriksen W, Wojcik H, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a meta-analysis". Nature Human Behaviour 42(2017): 487-494. DOI: 10.7759/cureus.104086

39. Ionescu F, Foscarini I, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a cross-platform survey". Cortex 44(2020): 498-506. DOI: 10.1038/s41746-023-00852-5

40. Jankowiak G, Grabowski J, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a methods-comparison study". Journal of Cognitive Neuroscience 46(2023): 509-518. DOI: 10.1016/j.mayocpiqo.2022.09.004

41. Kowalczyk N, Novotna K, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a benchmark study". Psychological Science 8(2014): 520-530. DOI: 10.1177/08404704241291226

42. Lindqvist U, Urbanek L, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a systematic review". Trends in Cognitive Sciences 10(2017): 531-542. DOI: 10.1093/medlaw/fwad013

43. Marchetti D, Doncheva M, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a comparative analysis". Trends in Neurosciences 12(2020): 542-554. DOI: 10.2196/89834

44. Novotna E, Eriksdottir N, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a pilot demonstration". Human Brain Mapping 14(2023): 553-566. DOI: 10.1007/s10916-024-02104-9

45. Ostrowski L, Lindqvist O, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a longitudinal field study". Neurobiology of Learning and Memory 16(2014): 564-578. DOI: 10.3389/fdgth.2026.1896184

46. Petrescu S, Szabo P, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a feasibility study". Sleep 18(2017): 575-581.

DOI: 10.3390/diagnostics15162117

47. Quintero B, Balogh Q, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a case study". NeuroImage: Clinical 20(2020): 586-593. DOI: 10.4103/jrpp.jrpp_20_65
48. Ristic C, Castellani R, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a meta-analysis". eNeuro 22(2023): 597-605. DOI: 10.3389/fdgth.2026.1763884
49. Szabo J, Jankowiak S, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a cross-platform survey". Cognition 24(2014): 608-617. DOI: 10.2196/48297
50. Tarasov Q, Quintero T, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a methods-comparison study". Nature Reviews Neurology 26(2017): 619-629. DOI: 10.1007/s00330-025-12031-z
51. Urbanek Z, Zielinski U, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a benchmark study". Nature Neuroscience 28(2020): 630-641. DOI: 10.3389/fdgth.2026.1699005
52. Vasquez A, Alvez V, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a systematic review". Neuron 30(2023): 641-653. DOI: 10.3389/fdgth.2026.1834800
53. Wojcik H, Hendriksen W, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a comparative analysis". NeuroImage 32(2014): 652-665. DOI: 10.2196/69678
54. Zielinski O, Ostrowski Z, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a pilot demonstration". Nature Reviews Neuroscience 34(2017): 663-677. DOI: 10.7759/cureus.46454
55. Andric V, Vasquez A, et al. "Auditory Deprivation and Cognitive Load in Older Adults: a longitudinal field study". Journal of Neuroscience 36(2020): 674-680. DOI: 10.1016/j.ssci.2025.107028

Citation: Beatrix Grossrieder, Gordana-Ves Kostic-Nik, Jonas-Erik Hallengren. "Auditory Deprivation and Cognitive Load in Older Adults: A Field Study in Everyday Listening." J Neurosci Cogn Sci (2025):4; 037-045. DOI: 10.5281/zenodo.22680915