

Integrated Development Model for Preschool Children in Small Groups: The Roles of Sleep, Physical Activity (Rhythmics & Sport), Relaxation, Nutrition, and Parent-School Collaboration for Measurable Progress Across 10 Development Domains within a Montessori-Kumon-Inspired STEAM & Sensory Framework in a Multilingual, Multicultural Large-City Context

Implementation & observational framework for small-group early childhood education.

Key components

Sleep • Physical Activity (Rhythmics & Sport) • Relaxation • Nutrition • Parent-School Collaboration • 10 Development Domains • Montessori-Kumon-Inspired STEAM & Sensory • Multilingual & Multicultural context

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CCAP accepted

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Implementation-Observational Preprint: Kinder Academy Daycare (Chicago, USA)

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Abstract

This preprint describes an educational implementation-observational initiative conducted within Kinder Academy Daycare (Chicago, Illinois). The initiative integrates structured daily routines (sleep hygiene including naps, physical activity via rhythmics and age-appropriate sport/play, brief relaxation and self-regulation practices, and nutrition patterns) with a Montessori-Kumon-inspired STEAM and sensory learning framework. The model is designed for small-group preschool settings and for culturally and linguistically diverse urban communities.

Project snapshot

- Licensed childcare program — Illinois DCFS License No. 594810
- CCAP accepted • Small-group preschool model (ages 2–6)
- Primary languages: English, Polish
- Funding: currently self-funded; planned state/federal grants
- FEIN: 83-1602053 • UEI: PPF7SHCC12A8
- Project stage: working draft (no finalized research outcomes)

Document information, authorship, and project stage

This preprint describes an educational implementation–observational initiative conducted within Kinder Academy Daycare (Chicago, Illinois). The initiative integrates structured daily routines (sleep hygiene including naps, physical activity via rhythmic and age-appropriate sport/play, brief relaxation and self-regulation practices, and nutrition patterns) with a Montessori–Kumon–inspired STEAM and sensory learning framework. The model is designed for small-group preschool settings and for culturally and linguistically diverse urban communities.

Authorship and roles. Maria Nielsen is the primary author and project lead, responsible for the concept, strategic assumptions, implementation hypotheses, and the overall analytic framework. Barbara Mistur is the co-author and provides programmatic and didactic advisory input as Administrative Director and Lead Teacher. Brian Nielsen supports operations, implementation logistics, and organizational coordination.

Ethics & privacy. The project uses aggregated, non-identifying educational monitoring. Any reporting will be anonymized and presented in aggregate (no child names, dates of birth, addresses, or medical data). The framework is culturally sensitive and non-stigmatizing, irrespective of language, religion, or family practices. Consent procedures and privacy safeguards are described in Section 8.

Distribution. Until a finalized publication is released, redistribution or commercial use requires written permission from Kinder Academy Daycare and the project lead.

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1. Introduction

The preschool period is a critical developmental window for health, self-regulation, and school readiness. Progress in tasks that require attention, persistence, and cooperation is shaped not only by instruction, but also by sleep quality and regularity, opportunities for movement, the child's capacity to down-regulate arousal (calm), and stable energy supported by nutrition.

This initiative is implemented at Kinder Academy Daycare in Chicago, a DCFS-licensed early childhood program. The R&D; layer is structured as an implementation–observational model (monitoring cycles, rubrics, and non-identifying daily logs) that can be scaled if external funding becomes available.

2. Licensing context and quality infrastructure

Kinder Academy Daycare operates under the Illinois Department of Children and Family Services (DCFS) licensing framework. Daily operations are conducted within applicable U.S. and Illinois standards (safety, care quality, staff training, and program organization). The model described in this preprint is intentionally designed to be compatible with quality and compliance expectations.

3. Model overview: five pillars integrated with Montessori–Kumon–STEAM–sensory practice

The working hypothesis is that strengthening home routines—especially sleep and nutrition—combined with consistent school-based implementation, contributes to measurable improvement across 10 development domains.

- Sleep hygiene (including naps): regularity, sufficient duration, and parent–school alignment.
- Physical activity: rhythmic, structured movement, outdoor play, and age-appropriate sport.
- Relaxation & self-regulation: short, developmentally appropriate calming practices.
- Nutrition routines: stable energy patterns, hydration habits, and non-stigmatizing guidance for families.
- Parent collaboration: simple, actionable home goals supported by Brightwheel reminders and documentation.

4. Objectives and hypotheses

Primary objective: develop and validate an operational, scalable monitoring framework that links daily routines and classroom implementation to measurable progress across 10 development domains in small-group preschool settings.

Working hypotheses (preliminary):

- Improved sleep regularity/quality is associated with higher scores in self-regulation, attention, and school readiness.
- Increased daily movement is associated with improved motor development and reduced behavioral dysregulation.
- Short relaxation routines support emotional regulation and classroom cooperation.
- More stable nutrition patterns (particularly reduced high-sugar intake and improved hydration) support sustained attention and mood stability.
- Parent engagement (e.g., via Brightwheel) improves routine adherence and amplifies school-based effects.

5. Setting, participants, and inclusion approach

Setting: Kinder Academy Daycare (Chicago, IL). Target age range: 2–6 years (program operations). The monitoring framework is designed for small groups and can be implemented by trained staff without collecting identifying

personal data. Any reporting is aggregated; individual-level examples in this preprint use simulated data for illustration.

6. The 10 development domains and scoring rubric

Daily/weekly monitoring uses a compact rubric (recommended 0–3 scale) for 10 domains. Domains can be adapted to program needs, but the recommended set includes:

- Self-regulation and behavior
- Attention and persistence
- Language and communication
- Fine and gross motor skills
- Social cooperation
- Emotional regulation
- Cognitive/problem-solving skills
- Creativity and exploratory play
- Independence and daily living skills
- School readiness (pre-academic routines)

7. Measurement instruments: Parent Log and Analysis Sheet (30 days)

Two core tools support measurement and interpretation: (A) a brief parent questionnaire/workflow supported by Brightwheel reminders and confirmations, and (B) an Analysis Sheet for aggregating daily observations over a 30-day cycle. The tools are designed for repeatable cycles (baseline vs intervention), enabling comparison over time.

8. Ethics, privacy, and cultural sensitivity

The framework avoids sensitive personal data and emphasizes non-stigmatizing language. Monitoring focuses on observable behaviors and routines, uses anonymized identifiers, and supports aggregated reporting. Families' cultural and religious practices are respected. Consent processes and data access rules are to be finalized before any grant-based scale-up.

9. Analysis plan (high-level)

- Descriptive trend analysis across 30 days, with an intervention boundary (e.g., Day 11).
- Pre/post comparisons (baseline vs strengthened routine period).
- Correlations and lagged associations between routine indicators (sleep, movement, nutrition, relaxation) and domain scores.
- Visualization set (time series, heatmaps, scatter, profiles) suitable for non-technical stakeholders and grant reporting.
- Implementation fidelity indicators and parent engagement markers.

10. Funding and development roadmap

At this stage, the project is self-funded. The model is intentionally designed to be “grant-ready”: it specifies instruments, privacy/ethics safeguards, and a repeatable analytic cycle. With external funding (state or federal), the project can be expanded to larger samples, longer follow-up, and more rigorous evaluation (including independent review and external benchmarking).

Appendix A. Parent questionnaire and Brightwheel workflow

A short questionnaire enables high-value information capture without excessive burden on families. Brightwheel supports reminders and documentation of agreed home actions.

Question block	Examples (feasible)
Sleep	Bedtime and wake time; nap; weekly regularity; falling-asleep difficulties.
Nutrition	Meal patterns; beverages (water/sugary); snacks; cultural/religious constraints.
Home language	Language(s) at home; child comfort; family communication preferences.
Well-being	Changes at home; stressors; guidance for teachers.
Home goals	1–2 feasible actions for the next 2 weeks (sleep or nutrition).

Appendix B. Data dictionary and placeholders

Member IDs and ORCIDs are recorded for transparency of qualifications and professional development system alignment. Below is a compact dictionary of variables suitable for cyclic reporting and grant documentation.

Variable	Definition	Scale
sleep_regularity	Sleep regularity (parent report + teacher note)	text + 0–3
activity_minutes	Daily activity minutes (rhythmics/sport)	minutes
relaxation_minutes	Daily relaxation/self-regulation minutes	minutes
nutrition_note	Non-stigmatizing note on nutrition routines	text
brightwheel_engagement	Parent engagement indicator (message/confirmation)	count/flag
domain_score_1..10	Rubric scores for 10 domains	0–3
fidelity_index	Implementation fidelity (dose + cultural alignment indicators)	0–100 plan

Appendix C. 20 innovative analysis elements (tool catalog)

The elements below provide a practical toolbox for analyzing 30-day monitoring cycles. They are designed for educational settings and for grant-ready reporting. Items may be used selectively depending on staff capacity.

- 1. Baseline vs cycle comparison** — Compare Days 1–10 (baseline) vs Days 11–30 (routine strengthening) using means/medians and effect sizes.
- 2. Multi-domain composite index** — Create a composite overall score from the 10 domains for easier communication and monitoring.
- 3. Domain-specific trajectories** — Track each domain over time to identify areas of rapid change vs slower change.
- 4. Intervention boundary visualization** — Mark the start of strengthened routines (e.g., Day 11) on time series plots for interpretability.
- 5. Lagged-effect checks** — Test whether routine changes (sleep, nutrition) affect domain scores with a delay (e.g., next-day effect).
- 6. Routine adherence score** — Quantify how consistently home routines are implemented (sleep regularity, reduced sugary snacks, etc.).
- 7. Parent engagement marker** — Use Brightwheel confirmations/messages as a lightweight adherence/engagement proxy.
- 8. Missingness and reliability tracking** — Monitor missing daily entries and assess confidence of trends.
- 9. Heatmap across domains** — Use a heatmap (domains × days) to quickly spot patterns and intervention responses.
- 10. Domain profile radar/line** — Summarize baseline vs post profiles across domains for stakeholder-friendly reporting.
- 11. Correlation screening** — Explore correlations between routine indicators and domain outcomes, with appropriate caution.
- 12. Outlier review protocol** — Flag and review unusually low/high days to identify contextual events (illness, stressors) without stigmatizing.
- 13. Weekday–weekend contrasts** — Compare patterns by weekday/weekend when relevant to home routines.
- 14. Small-group benchmarking** — Compare anonymized small groups or cohorts (e.g., age band) using aggregated scores.
- 15. Fidelity–outcome linkage** — Relate implementation fidelity (dose/consistency) to observed improvements.
- 16. Narrative-to-metric linking** — Translate teacher notes into simple coded categories for mixed-method reporting.
- 17. Goal-setting cycle** — Define 1–2 home goals, monitor adherence, and summarize progress in a two-week loop.
- 18. Cultural sensitivity check** — Ensure interpretation accounts for cultural/language context and avoids deficit framing.

19. Visualization pack for grants — Standardize a small set of charts/tables for grant proposals and progress reports.

20. Iterative refinement protocol — Use each cycle to refine rubrics, definitions, and workflows; document changes and rationale.

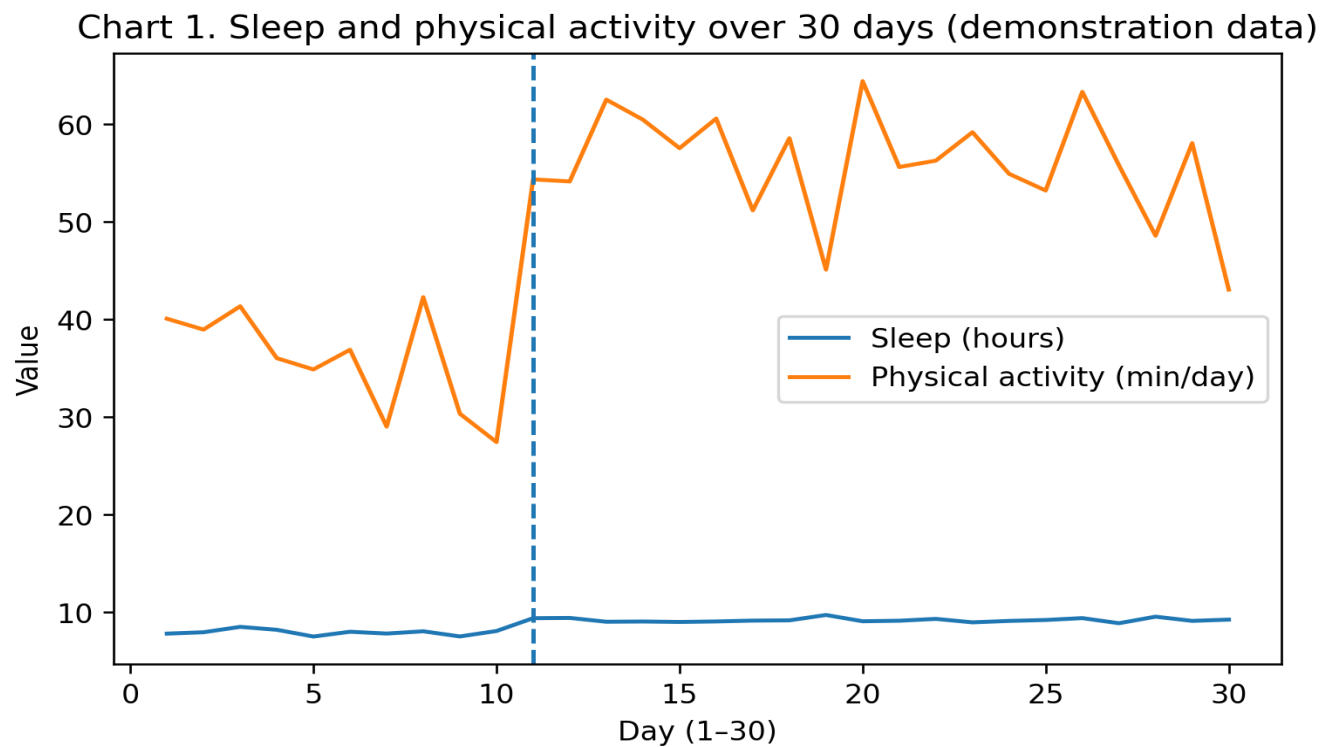
Appendix D. Working thesis example and visualizations (demonstration: “Amelka”, age 4)

This appendix is a didactic–analytic example illustrating how to formulate a working thesis/hypothesis and present results in chart form. All data below are simulated solely for illustration.

Demonstration thesis. At the beginning (Days 1–10), the child’s home routines include shorter sleep and less activity, and scores across the 10 domains are moderate. After strengthening home routines through parent collaboration (from Day 11: sleep hygiene, more activity, better nutrition and regular relaxation), we observe a gradual increase in domain scores and the overall index.

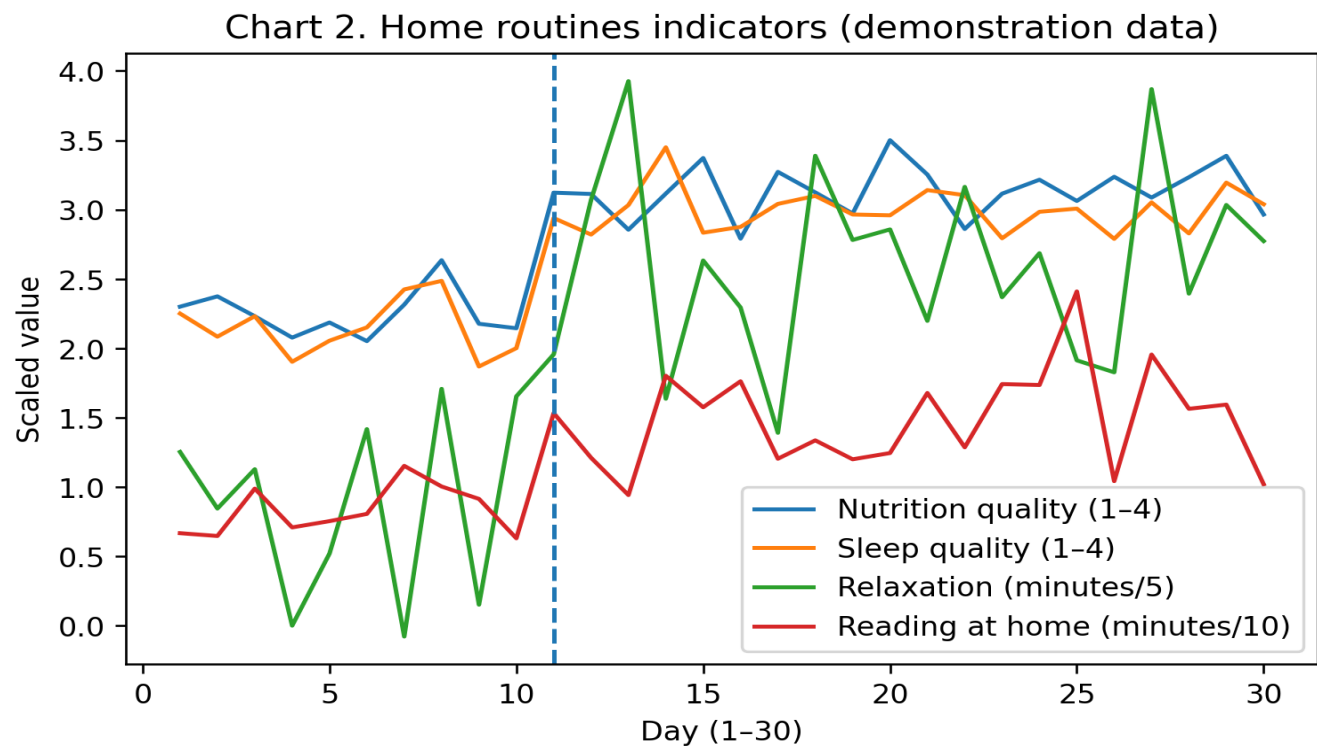
Analytic assumption. Improvements in routine quality may affect well-being and sleep immediately, while some developmental domains may respond with a short delay (e.g., next-day or multi-day lag).

Chart 1 (demonstration). Sleep and physical activity (Days 1–30; boundary at Day 11)

**Example interpretation:**

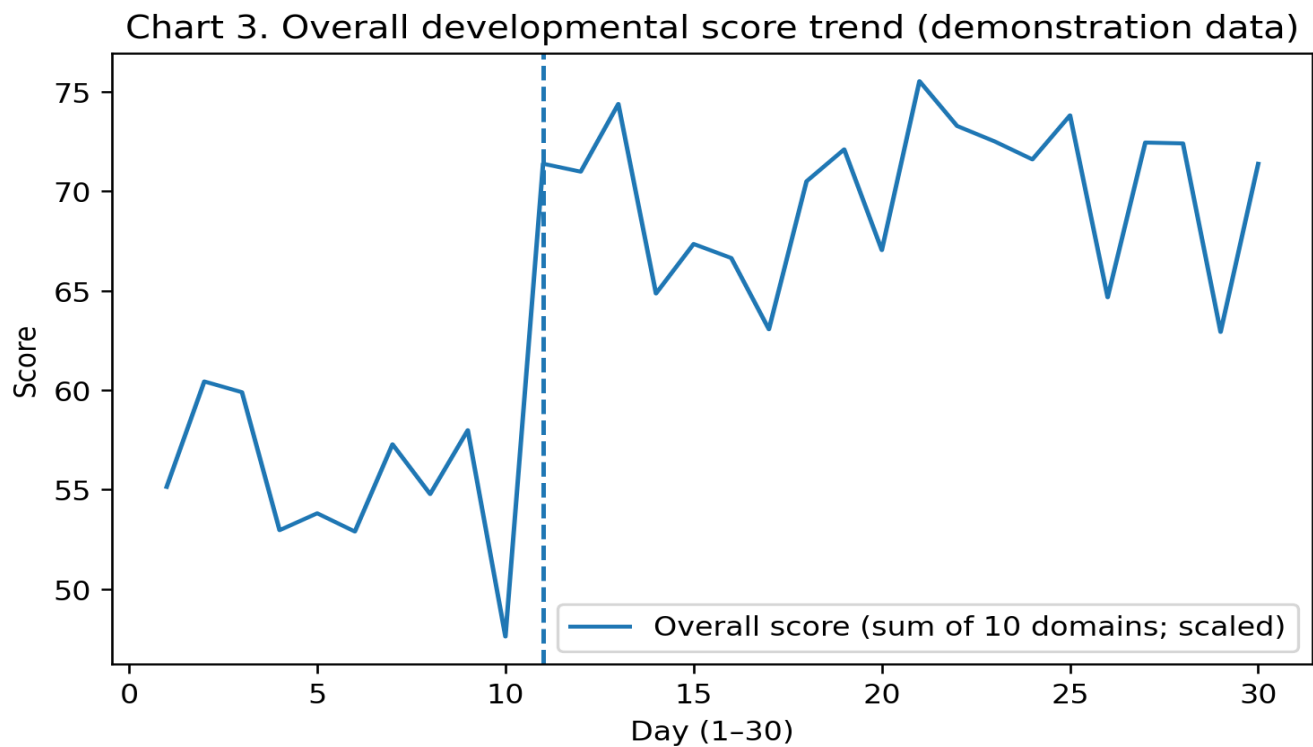
- After Day 11, sleep duration becomes more stable and increases modestly.
- Physical activity minutes increase, suggesting more consistent movement routines.
- The two indicators show co-movement, supporting the plausibility of routine strengthening effects.

Chart 2 (demonstration). Home routines indicators (nutrition, sleep quality, relaxation, reading)

**Example interpretation:**

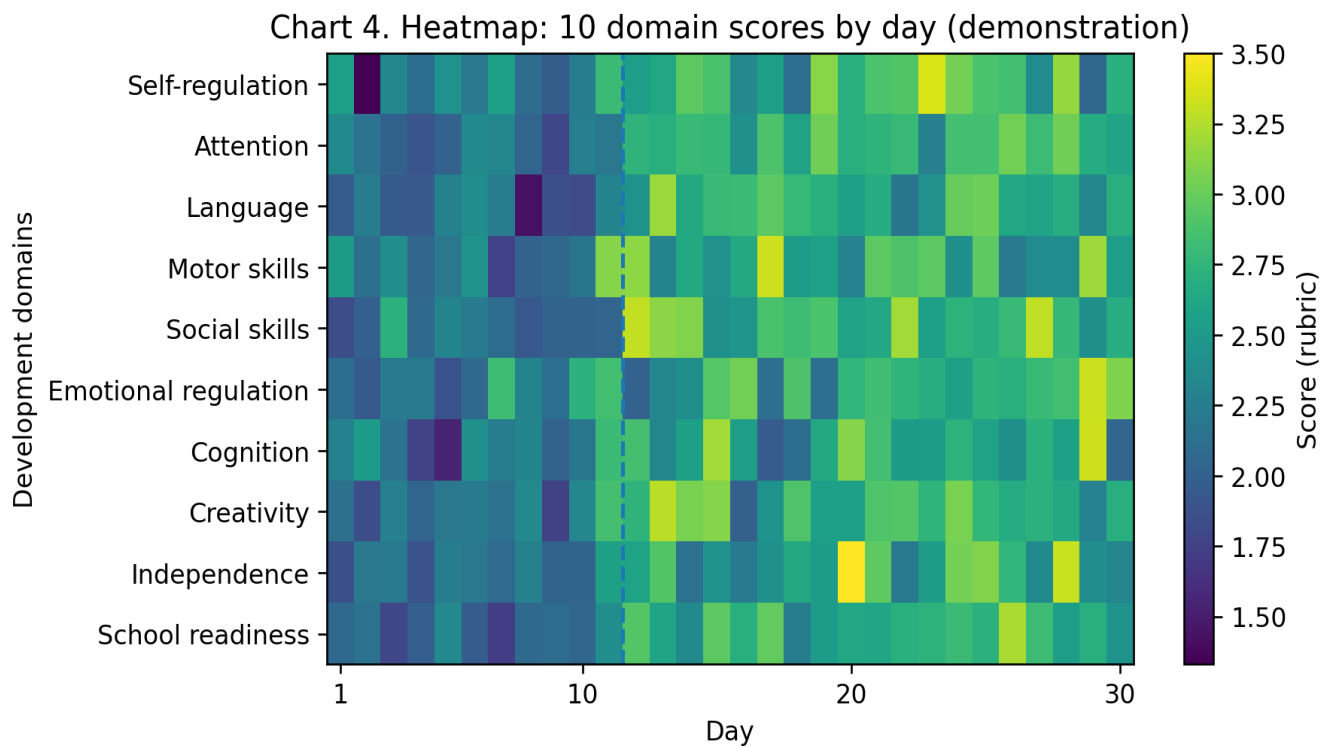
- Nutrition and sleep quality show an upward shift after Day 11.
- Relaxation and reading time increase, indicating higher parent engagement.
- Multiple routine indicators improve concurrently, consistent with a coordinated home plan.

Chart 3 (demonstration). Overall developmental score trend

**Example interpretation:**

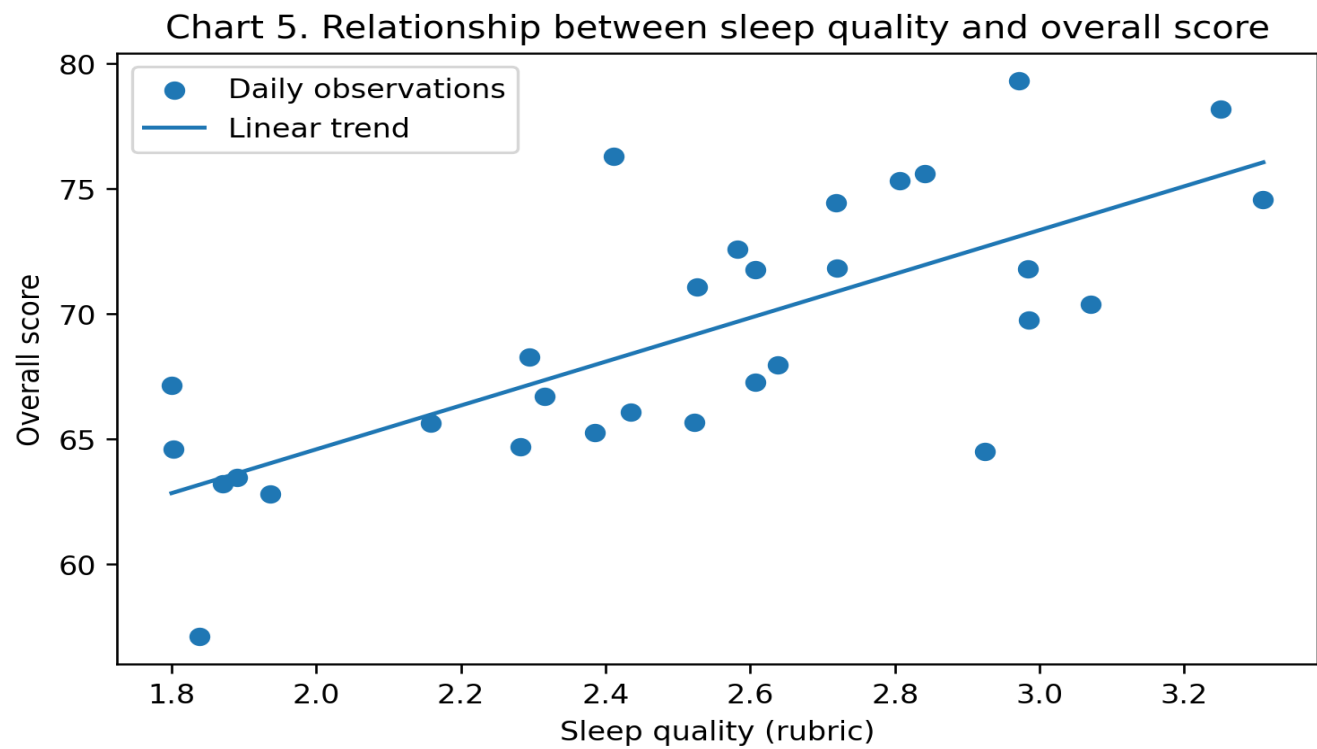
- The overall score increases after routine strengthening begins.
- The trend appears gradual rather than immediate, consistent with skill consolidation over time.

Chart 4 (demonstration). Heatmap of 10 domain scores by day

**Example interpretation:**

- Multiple domains improve after Day 11, with variability across domains.
- Heatmaps help identify which domains respond earlier vs later.

Chart 5 (demonstration). Sleep quality vs overall score

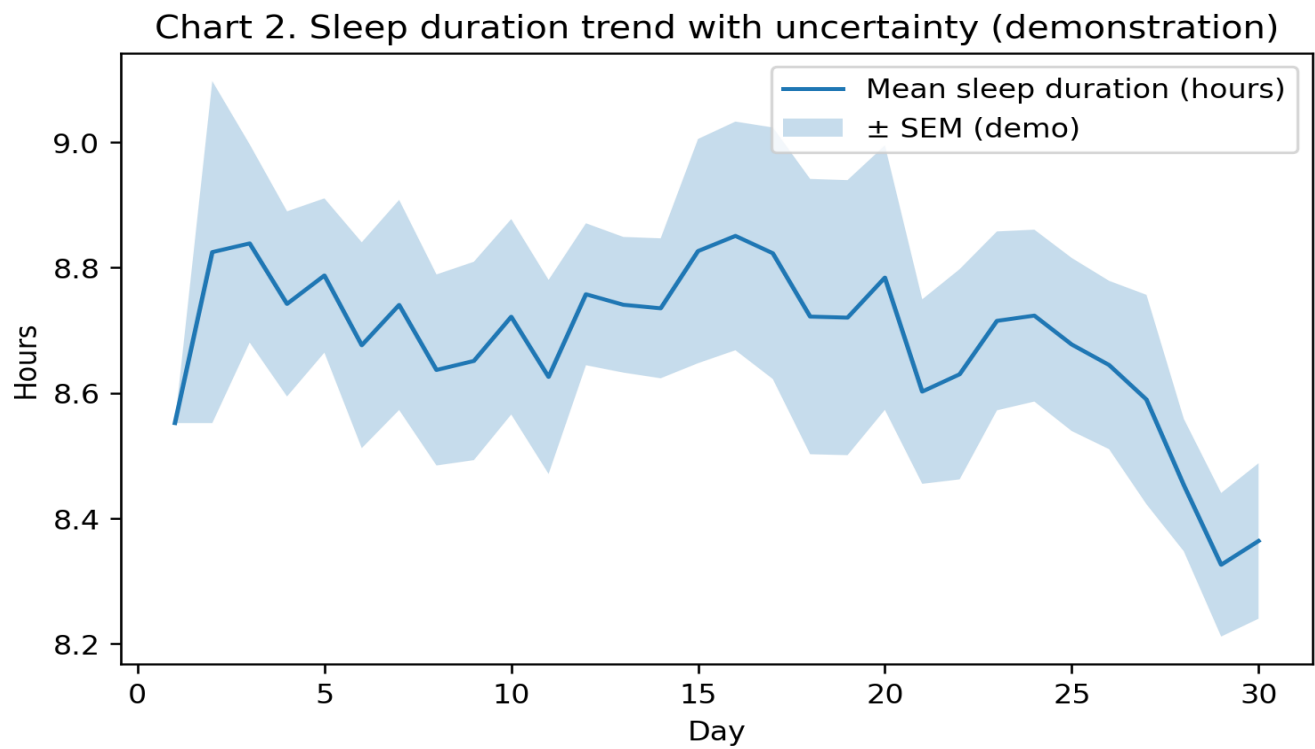
**Example interpretation:**

- Higher sleep quality tends to co-occur with higher overall scores in this simulated example.
- In real monitoring, correlation should be interpreted cautiously and within context.

Appendix E. Example analysis and charts (demonstration)

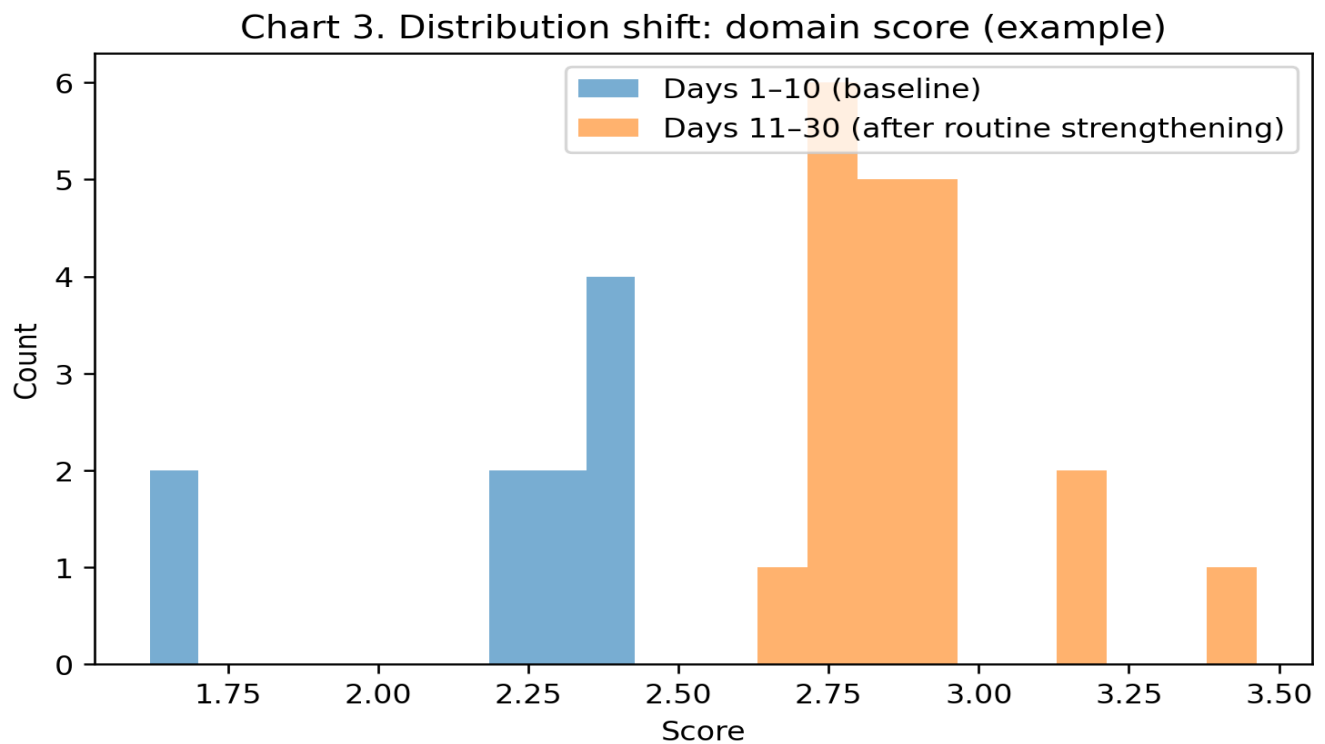
Below is an additional example chart set, intended as a reusable template for reporting. These visuals can be adapted for grant reporting and internal quality improvement cycles.

Chart 2 (demonstration). Sleep duration trend with SEM

**Example interpretation:**

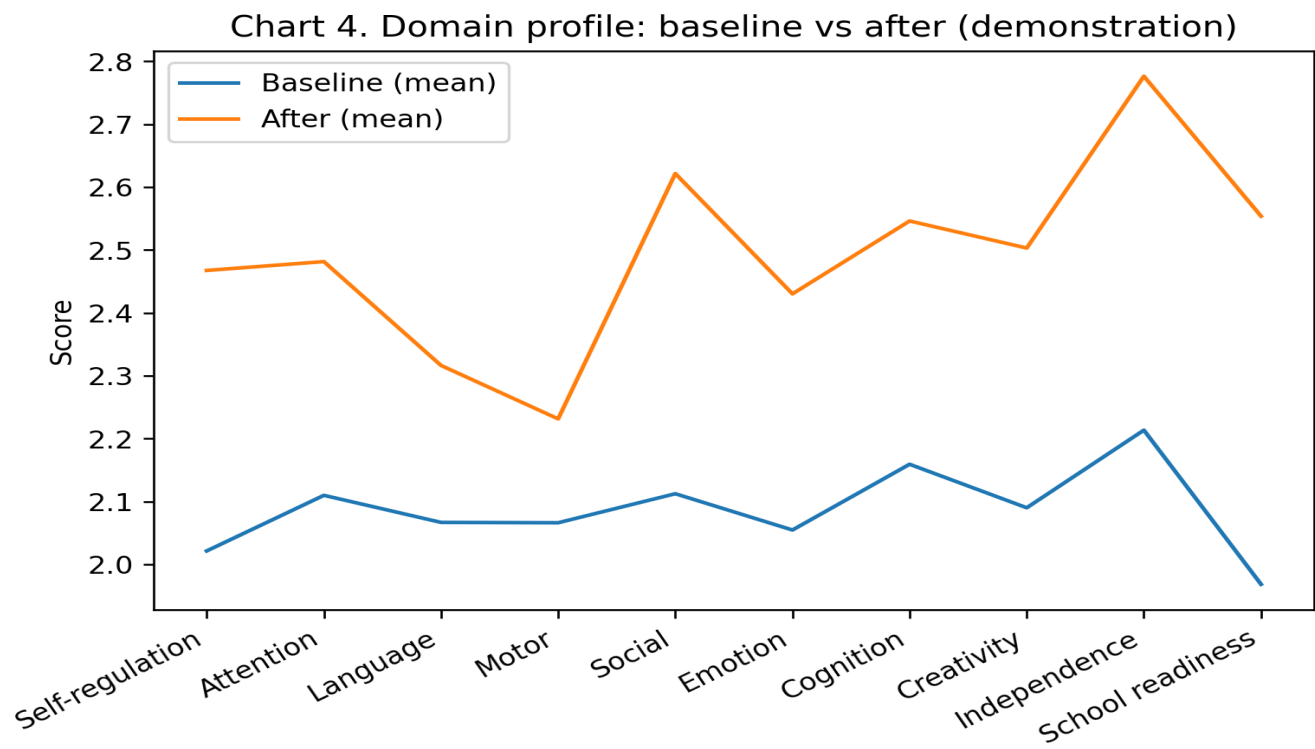
- A small but consistent upward trend can be communicated with uncertainty bands.
- SEM illustrates variability and supports cautious interpretation.

Chart 3 (demonstration). Distribution shift pre vs post

**Example interpretation:**

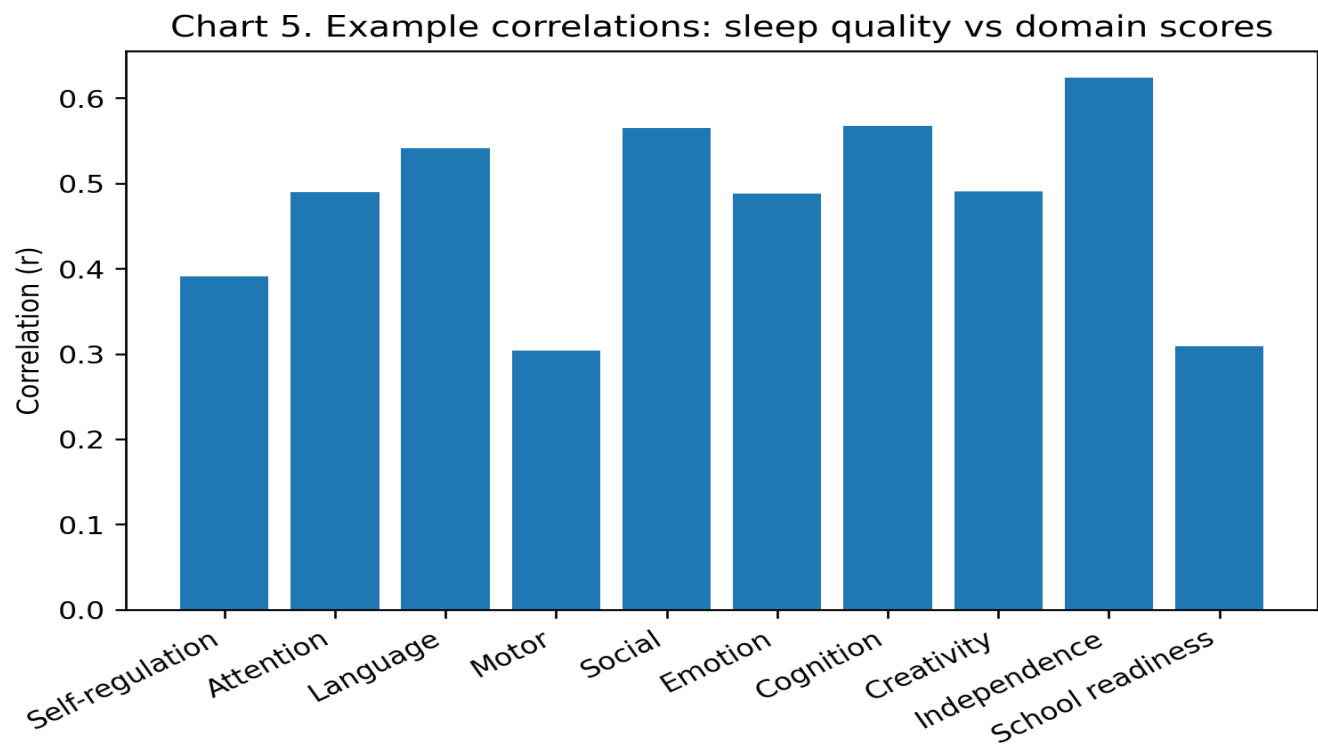
- Baseline (Days 1–10) shows lower scores relative to Days 11–30.
- Distribution shifts are useful when day-to-day noise is high.

Chart 4 (demonstration). Domain profile comparison

**Example interpretation:**

- Profiles highlight which domains show the largest changes.
- Such summaries are appropriate for parent-friendly communication and program reporting.

Chart 5 (demonstration). Correlations: sleep quality vs domains

**Example interpretation:**

- Correlation screening can suggest hypotheses for more rigorous follow-up.
- Avoid over-interpretation in small samples; focus on patterns repeated across cycles.

Appendix F. Analysis Sheet — 30 Days (template)

Print guidance: US Letter, portrait orientation, 100% scale (no fit-to-page, if possible).

Child ID (anonymized): _____

Cycle start date: ____ / ____ / ____

Teacher initials: _____

Day	Self-reg.	Attention	Language	Motor	Social	Emotion	Cognition	Creativity	Independ.	School ready	Sleep quality	Sleep hours	Activity (min)	Nutrition (1-4)
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
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26														
27														
28														
29														
30														

Scoring rubric (recommended): 0-3 per domain (0 = not observed, 3 = consistently observed).

How to use the 30-day analysis sheet

- Use an anonymized Child ID. Do not record names or sensitive personal information.
- Record daily rubric scores for the 10 domains (recommended 0–3) and routine indicators.
- Mark an intervention boundary (e.g., Day 11) if a structured home plan begins.
- At the end of 30 days, compute baseline vs post averages and create a small visualization set.
- Use results to set 1–2 feasible home goals for the next cycle; document adjustments.

Interpretation note: This preprint provides a methodological framework and demonstration analytics. Future versions will incorporate aggregated results from real monitoring cycles, subject to consent and privacy safeguards.

Appendix A. Observation Framework — Question Blocks (Daily and Monthly)

This appendix operationalizes the observation framework used for structured monitoring of child development. The table below provides compact codes for daily observations and monthly rubric descriptors. A detailed legend follows to keep the table readable for publication.

Domain	Daily observation codes	Monthly rubric codes
Sleep	D1, D2, D3	M1, M2, M3, M4
Mood	D4, D5	M5, M6, M7, M8
Emotional Stability	D6, D7	M9, M10, M11, M12
Socialization	D8, D9	M13, M14, M15, M16
Communication	D10, D11	M17, M18, M19, M20
Cognitive Skills	D12, D13	M21, M22, M23, M24
Independence	D14, D15	M25, M26, M27, M28
Physical Activity	D16, D17	M29, M30, M31, M32
Diet	D18, D19	M33, M34, M35, M36
General Health	D20, D21	M37, M38, M39, M40

Daily codes: D1 = hours slept; D2 = sleep continuity (night awakenings); D3 = daytime fatigue/alertness; D4 = baseline mood; D5 = mood variability; D6 = frustration tolerance; D7 = emotional recovery time; D8 = peer engagement; D9 = conflict resolution; D10 = expressive language; D11 = receptive language; D12 = attention/concentration; D13 = problem solving; D14 = self-care routines; D15 = task initiation/finish; D16 = minutes of active play; D17 = coordination/balance; D18 = appetite and variety; D19 = hydration/sugar exposure; D20 = somatic complaints; D21 = illness symptoms/medication.

Monthly codes: M1–M4 = sleep quality rubric (excellent → needs support); M5–M8 = mood stability rubric; M9–M12 = emotional regulation rubric; M13–M16 = social functioning rubric; M17–M20 = communication rubric; M21–M24 = cognitive development rubric; M25–M28 = independence rubric; M29–M32 = physical activity rubric; M33–M36 = diet quality rubric; M37–M40 = general health rubric.

Appendix B. 30-day Data Dictionary (Variables)

Variables used in the 30-day monitoring protocol. Scales are designed for mixed data sources (parent log + daycare observation) and allow aggregation while preserving interpretability.

Variable	Definition	Scale	Notes
sleep_hours	Sleep duration (hours)	continuous	Parent report / observation
sleep_quality	Sleep quality (1–5)	ordinal	1=poor ... 5=excellent
mood_score	Mood (1–5)	ordinal	Daily mood baseline
emotion_reg	Emotional regulation (1–5)	ordinal	Recovery time and self-control
social_eng	Social engagement (1–5)	ordinal	Peer interaction and prosocial behavior
communication	Communication (1–5)	ordinal	Expressive + receptive language
cognition	Cognitive engagement (1–5)	ordinal	Attention, memory, problem solving
independence	Independence (1–5)	ordinal	Self-care and task completion
activity_min	Physical activity (minutes/day)	continuous	Active play; outdoor if available
diet_quality	Diet quality (1–5)	ordinal	Variety, nutrient density, hydration
health_flags	Health events (0/1 or notes)	binary/text	Illness, medication, symptoms
overall_score	Composite daily score	computed	Weighted aggregation (transparent weights)

Note: The composite score is used only for within-subject monitoring and communication with parents. It is not presented as a diagnostic metric and does not replace professional assessment.

Appendix C. 20 Novel Elements of the Analysis Framework

The following elements represent the project's distinct analytical features. They are intended to support transparent, ethically grounded and practically useful monitoring in early childhood settings.

- 1 Daily monitoring as a practical, low-burden instrument implemented in naturalistic settings.
- 2 Standardized question blocks aligned with core developmental domains.
- 3 Monthly rubric that provides a higher-level view and reduces noise from single-day fluctuations.
- 4 Strong emphasis on sleep as a cross-domain driver of behavior and learning.
- 5 Integration of physical activity as a modifiable protective factor.
- 6 Diet/hydration monitored as a context variable (not a moralized outcome).
- 7 A composite score used transparently for communication, not diagnosis.
- 8 Separation of observation (facts) from interpretation (hypotheses).
- 9 Cross-source triangulation (parent log + daycare observation).
- 10 Built-in flags for health events and environmental disruptions.
- 11 Trend focus (baseline vs. cycles) rather than single-point judgment.
- 12 Consistency checks and missing-data handling rules.
- 13 Simple visualization templates that can be generated without advanced software.
- 14 Structured narrative summaries for parents and educators.
- 15 Ethical framing (privacy, consent, minimal necessary data).
- 16 Grant-ready documentation approach (clear variables, rubrics, and analysis plan).
- 17 Scalable framework: from a single child to a classroom aggregate (with anonymization).
- 18 Compatibility with AI-assisted summarization while preserving human oversight.
- 19 Transparency of roles and conflict-of-interest declaration template.
- 20 Continuous improvement loop: periodic review and versioning of instruments.

Appendix D — Example working thesis and visualization (demonstration case)

This appendix presents an anonymized, demonstration case ("Amelka", age 4) to illustrate how the 30-day assessment log can be translated into a concise pedagogical working thesis and a small set of visual summaries. The example is illustrative: it supports planning and communication with caregivers; it is not a clinical diagnosis.

Working thesis (example): Over the 30-day observation window, the child shows steady gains in self-regulation, language expression, and task persistence, with the strongest progress observed in structured routines and small-group activities. Variability increases during transitions (arrival/departure, schedule changes) and in peer-conflict situations, suggesting that targeted adult co-regulation and explicit transition cues remain high-impact levers. Fine-motor and pre-literacy readiness improve when activities are short, clearly sequenced, and paired with immediate feedback.

Operational notes (for educators): (1) prioritize predictable transition routines and visual cues; (2) pair peer-interaction goals with short guided practice and reflection; (3) keep tasks time-boxed, with scaffolded steps; (4) review weekly trends with caregivers using aggregated domain scores and narrative examples.

Privacy and ethics: Use pseudonyms and share only aggregated results. Store raw observation logs securely; obtain caregiver consent for any external use.

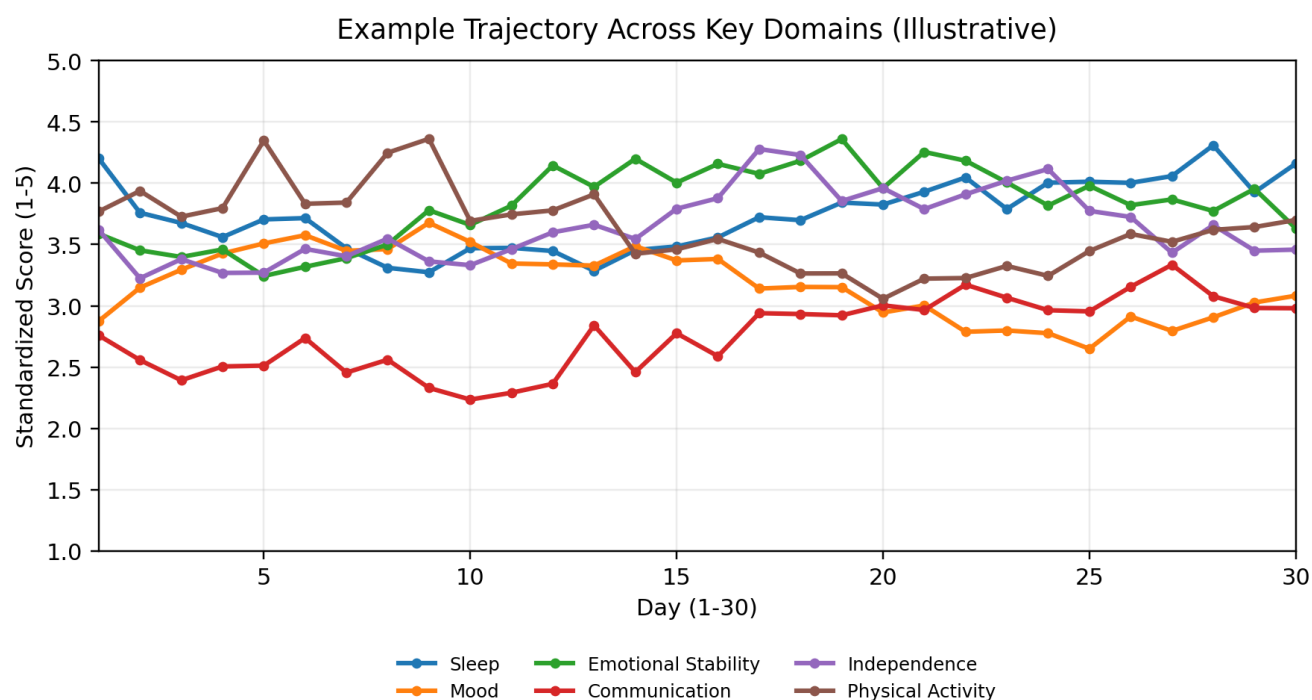


Figure D1. Example trajectory across key domains (illustrative).

Interpretation note: Changes should be read as descriptive signals for pedagogical planning. When a domain dip coincides with sleep/fatigue or transition events, consider adjusting the routine, cues, or adult support.

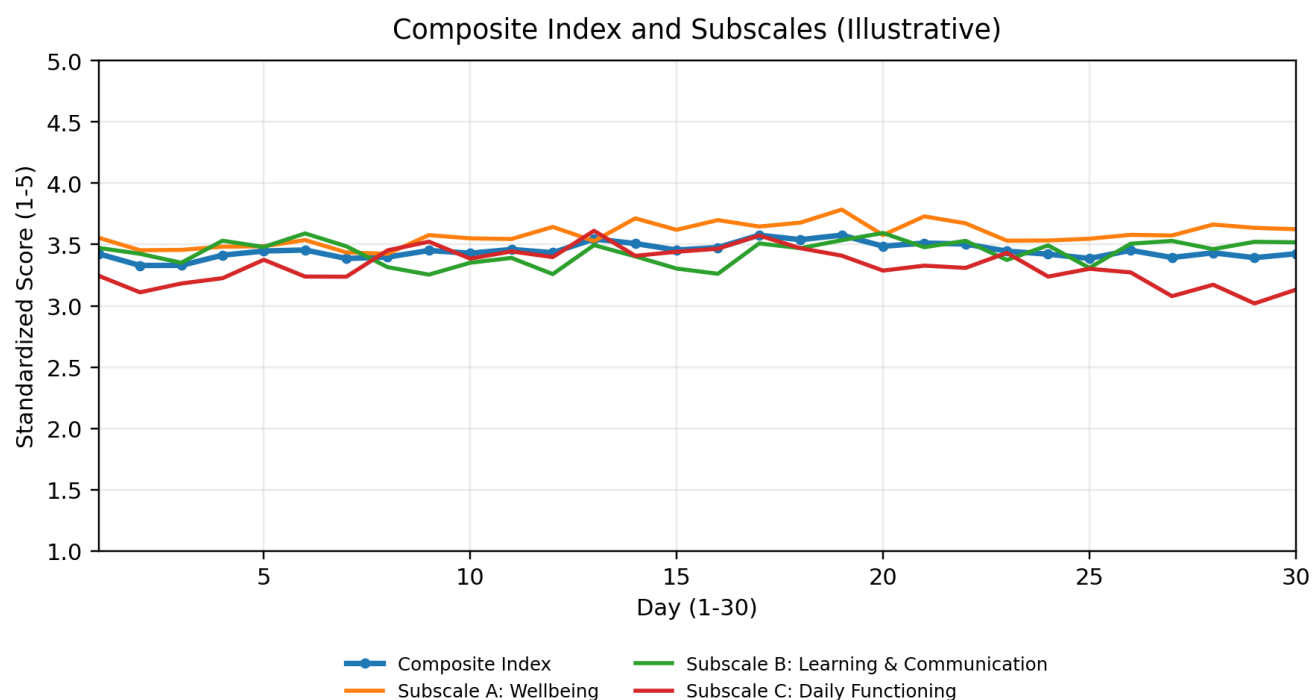


Figure D2. Composite index and subscales (illustrative).

Interpretation note: Changes should be read as descriptive signals for pedagogical planning. When a domain dip coincides with sleep/fatigue or transition events, consider adjusting the routine, cues, or adult support.

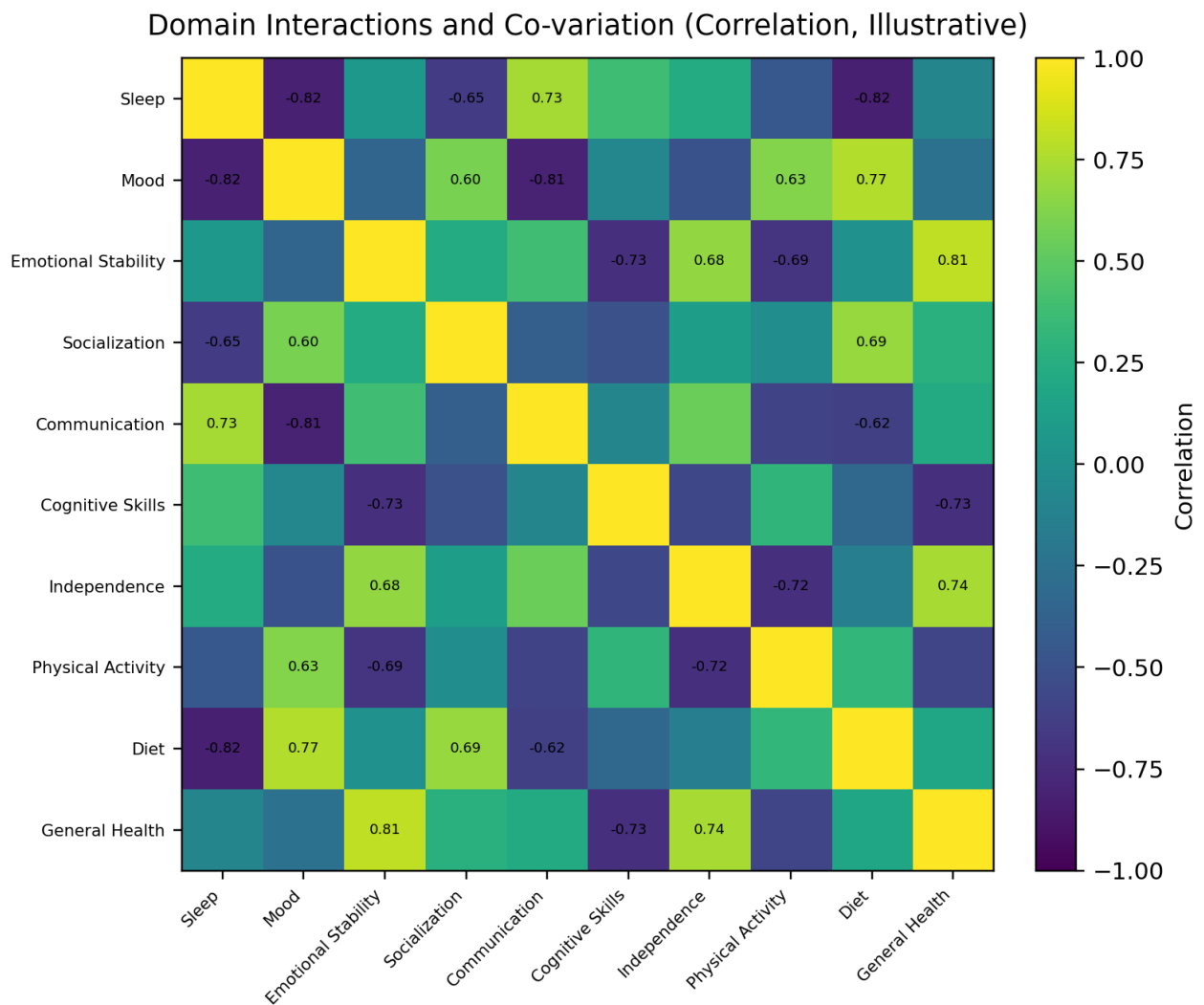


Figure D3. Domain interactions and co-variation (illustrative).

Interpretation note: Changes should be read as descriptive signals for pedagogical planning. When a domain dip coincides with sleep/fatigue or transition events, consider adjusting the routine, cues, or adult support.

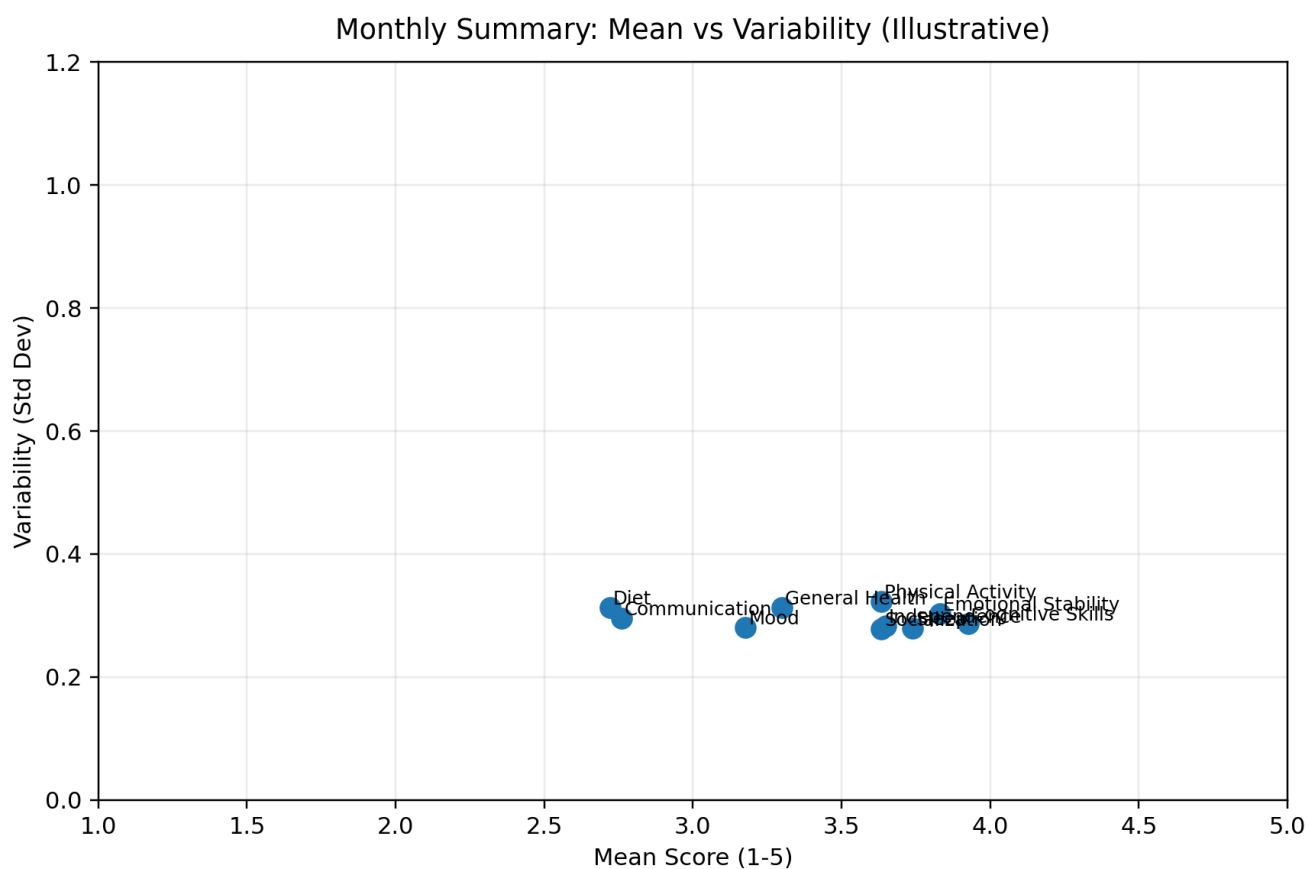


Figure D4. Monthly summary: mean vs. variability (illustrative).

Interpretation note: Changes should be read as descriptive signals for pedagogical planning. When a domain dip coincides with sleep/fatigue or transition events, consider adjusting the routine, cues, or adult support.

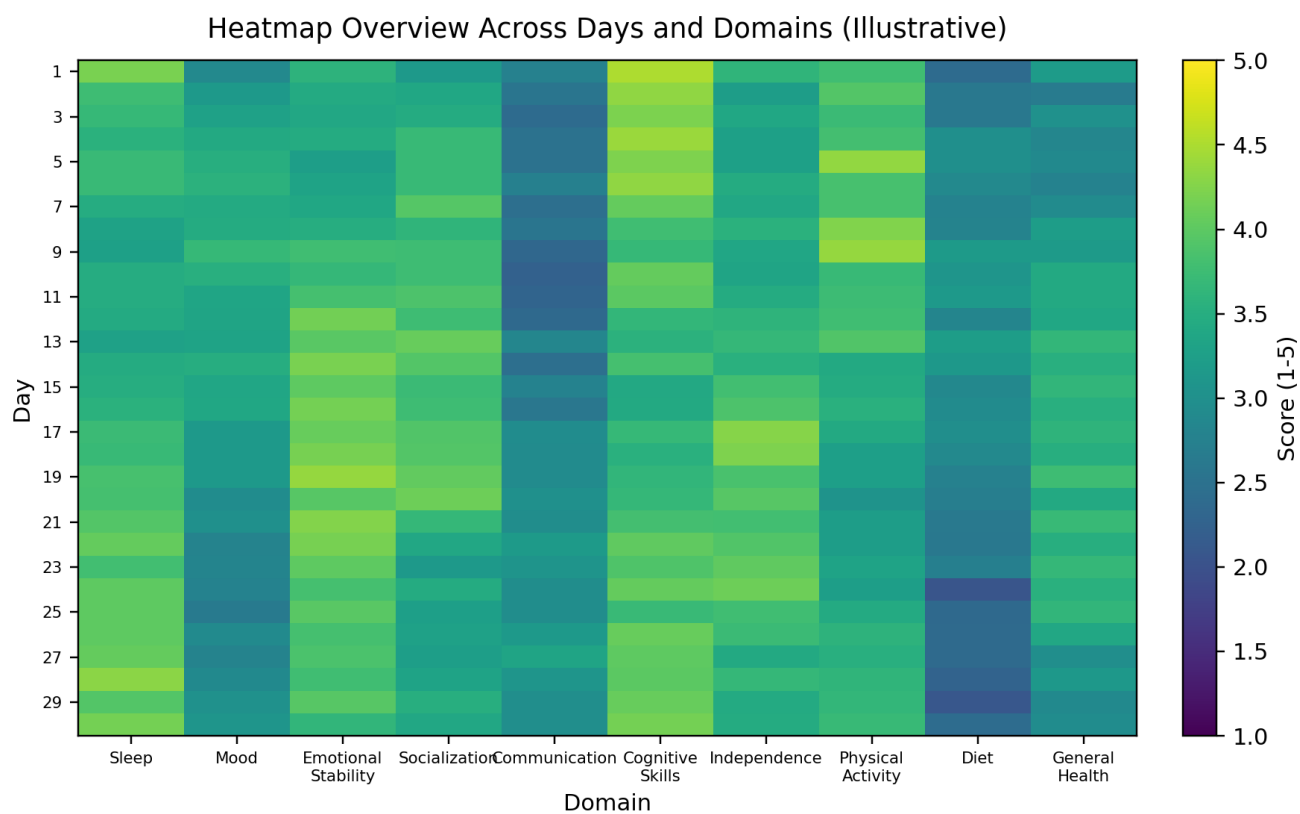


Figure D5. Heatmap overview across days and domains (illustrative).

Interpretation note: Changes should be read as descriptive signals for pedagogical planning. When a domain dip coincides with sleep/fatigue or transition events, consider adjusting the routine, cues, or adult support.

Appendix E. Example Analysis (30 Days) — Figures and Summary

This appendix demonstrates how daily logs can be summarized into a compact set of figures and a final summary table. The focus is on interpretability for educators and parents.

The example uses ten domains (Sleep, Mood, Emotional Stability, Socialization, Communication, Cognitive Skills, Independence, Physical Activity, Diet, General Health). Scores are illustrative and shown on a consistent scale.

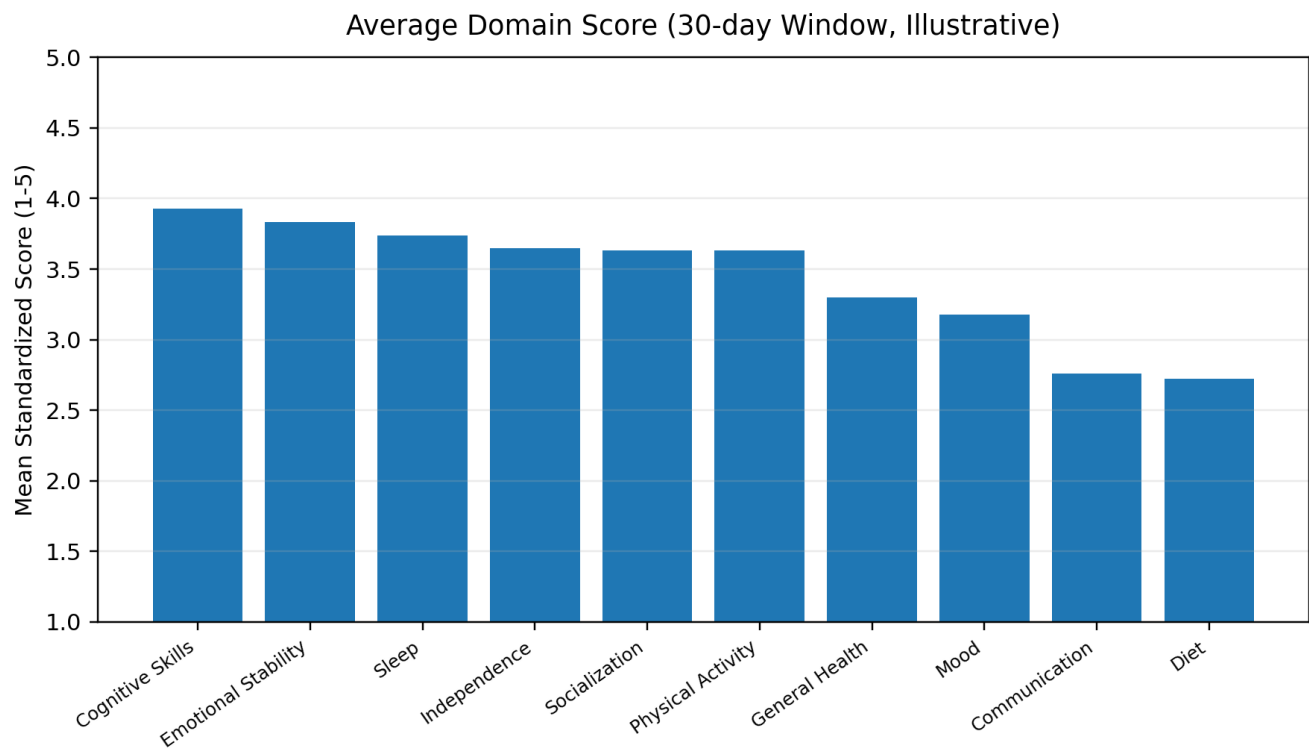


Figure E1. Average domain score (30-day window).

Higher bars indicate stronger observed functioning within the monitoring window. Use domain-specific notes for context.

Practical note: If axis labels are removed for publication clarity, keep a legend in the main text: x-axis = domains or days; y-axis = standardized score (1–5) or minutes/hours depending on the figure.

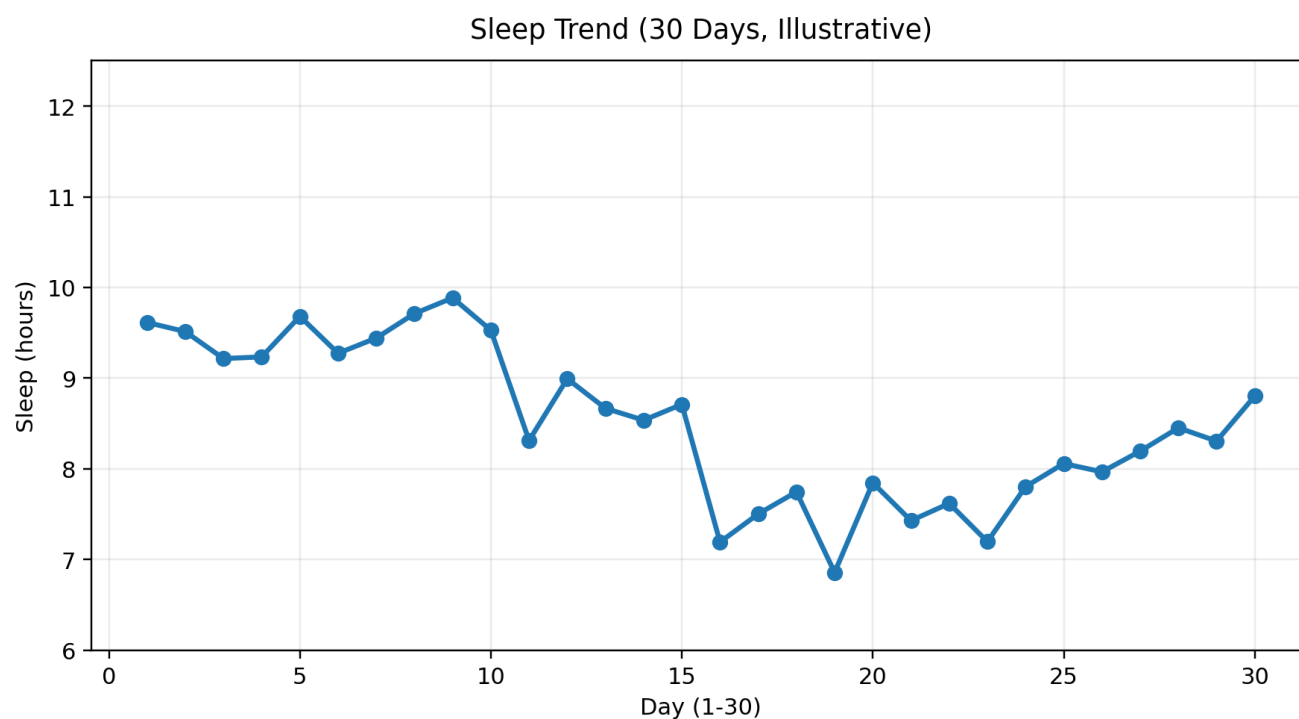


Figure E2. Sleep trend (30 days).

Example longitudinal chart highlighting routine-related changes and potential periods of sleep debt.

Practical note: If axis labels are removed for publication clarity, keep a legend in the main text: x-axis = domains or days; y-axis = standardized score (1–5) or minutes/hours depending on the figure.

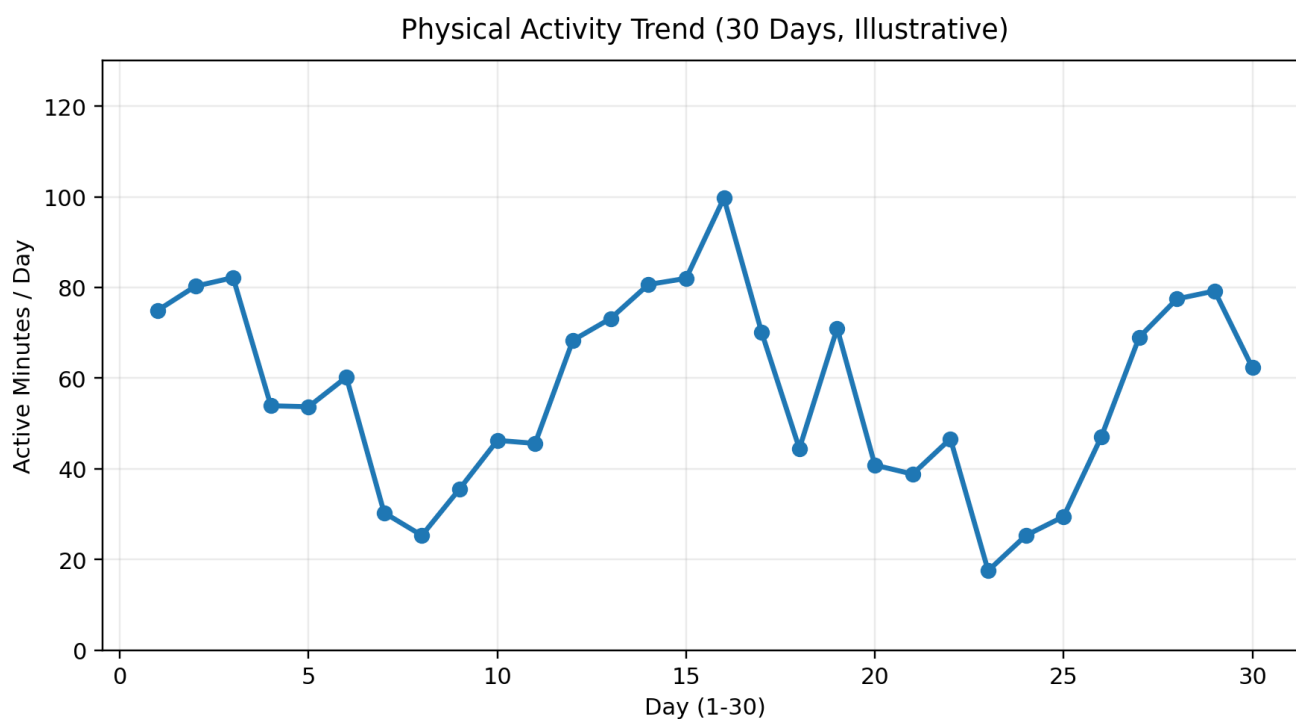


Figure E3. Physical activity trend (30 days).

Example longitudinal chart showing active minutes/day and variability across the month.

Practical note: If axis labels are removed for publication clarity, keep a legend in the main text: x-axis = domains or days; y-axis = standardized score (1–5) or minutes/hours depending on the figure.

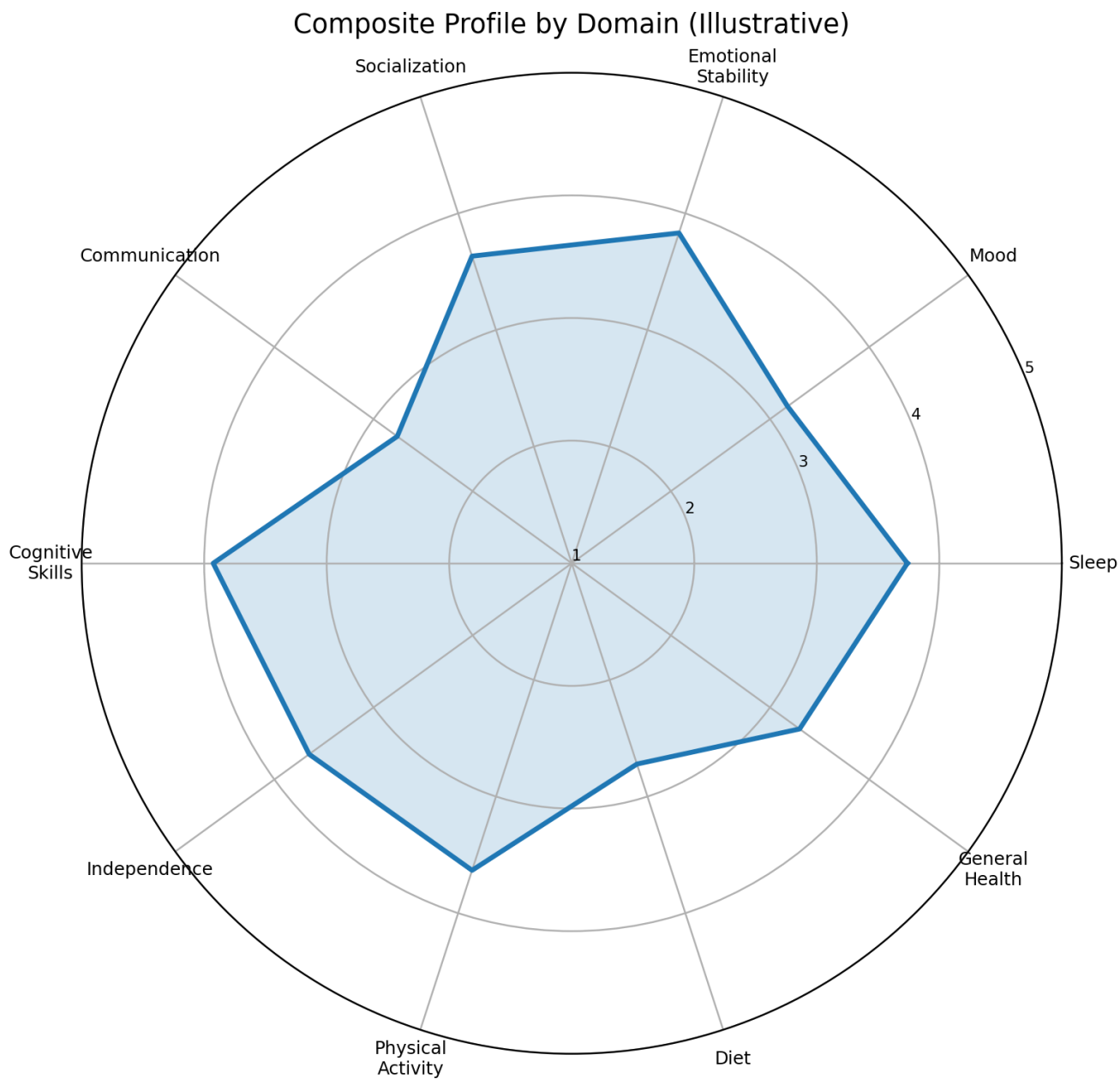


Figure E4. Composite score by domain (illustrative).

A compact view of how each domain contributes to the overall picture; weights should be documented and transparent.

Practical note: If axis labels are removed for publication clarity, keep a legend in the main text: x-axis = domains or days; y-axis = standardized score (1–5) or minutes/hours depending on the figure.

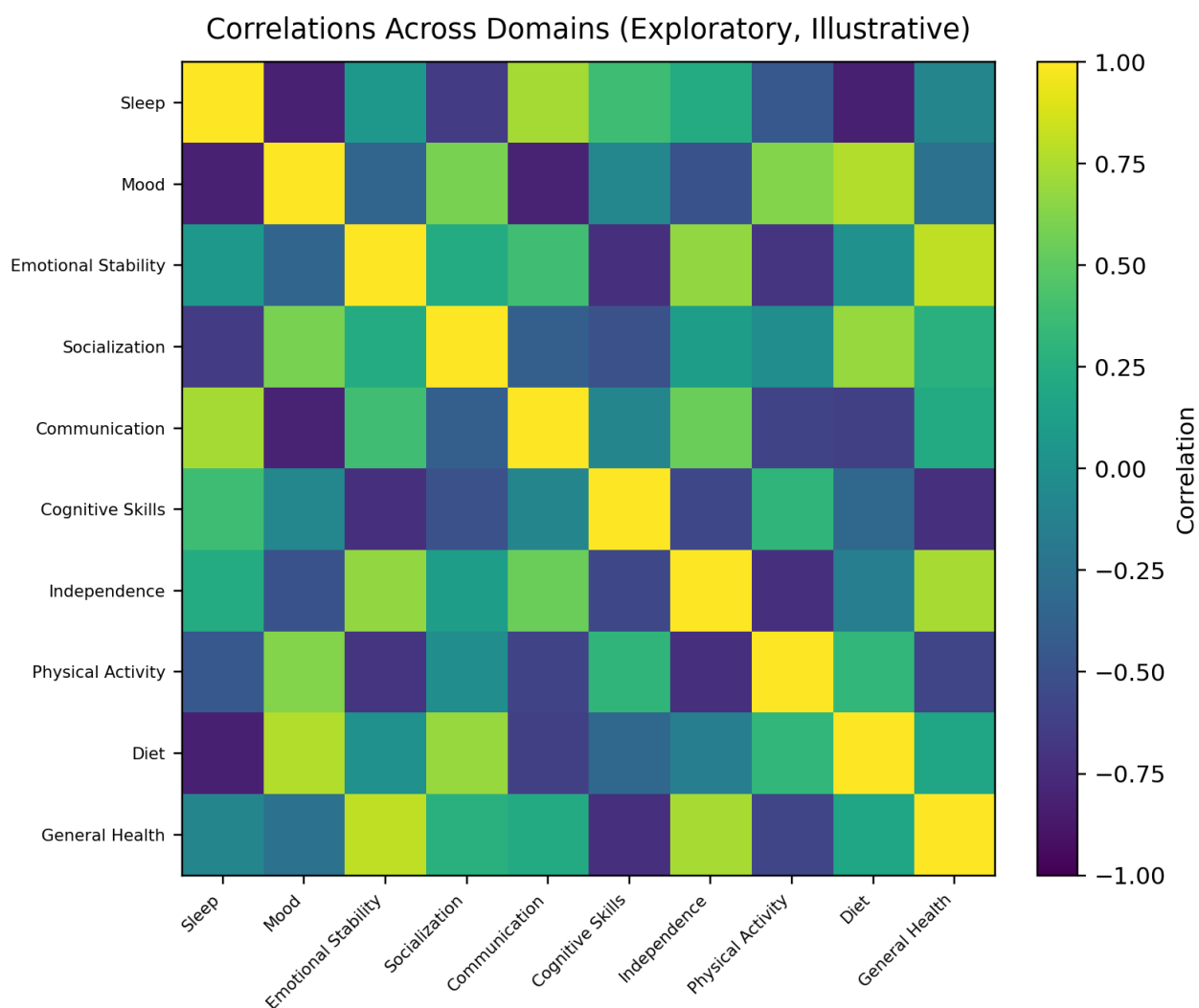


Figure E5. Correlations (exploratory, illustrative).

Exploratory association patterns are shown for hypothesis generation only (not causal inference).

Practical note: If axis labels are removed for publication clarity, keep a legend in the main text: x-axis = domains or days; y-axis = standardized score (1–5) or minutes/hours depending on the figure.

Summary Table E1. Final 30-day summary (example)

Metric	Value
Overall score (mean)	4.06
Sleep (mean)	4.70
Mood (mean)	3.69
Emotional stability (mean)	3.20
Socialization (mean)	4.48
Communication (mean)	3.94
Cognitive skills (mean)	4.12
Independence (mean)	3.20
Physical activity (mean)	3.86
Diet (mean)	4.26
General health (mean)	4.00

Interpretation: The summary table supports parent-facing reporting and internal review. It should be paired with narrative context (events, illnesses, schedule changes) and should not be used for labeling or diagnosis.

Appendix F. 30-day Analysis Sheet (English)

The printable 30-day analysis sheet appears earlier in this English preprint (as part of the main document) and can be printed as a standalone two-page form. For publication packages, it may be attached as a separate supplementary file (PDF) to preserve usability.

Formatting guidance: If any cell text does not fit in a table when typesetting, use short numeric codes in the table and provide a legend below the table (as done in Appendix A). This ensures clarity and prevents text overflow.

References (selected; 22 sources)

The reference list below is curated to align with early childhood education, developmental monitoring, social-emotional learning, sleep/health determinants, and measurement principles relevant to this preprint.

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- 31 © Kinder Academy Daycare. Project Lead & Primary Author: Maria Nielsen (Director & Project Lead). Co-author: Barbara Mistur (Administrative Director & Lead Teacher). Operations & Implementation Support: Brian Nielsen. Working draft — preliminary stage. No copying/distribution without written permission.

Appendix G. Parent Log — 30 Days (Template)

Purpose. This log is intended to support routine, parent–teacher communication, and early detection of patterns relevant to learning readiness and well-being. It is a practical companion to the analysis framework described in this preprint.

How to use. Complete one row per day (or per daycare attendance day). Use short notes; when more space is needed, reference the row number and write details in the “Additional Notes” page.

Privacy & ethics (summary). This template is designed for minimal necessary data. It avoids sensitive identifiers and encourages aggregated, de-identified reporting for any external dissemination. Families should be informed about what is collected, why it is collected, how it is stored, who can access it, and how long it is retained. Consent procedures should align with local/state requirements and the daycare’s privacy policy.

Scale codes (use numbers if text does not fit).

Code	Meaning
Mood (M)	1 = very upset / dysregulated; 2 = low; 3 = typical; 4 = good; 5 = excellent
Appetite (A)	1 = refused; 2 = low; 3 = typical; 4 = good; 5 = very good
Sleep quality (SQ)	1 = poor; 2 = fair; 3 = typical; 4 = good; 5 = very good
Engagement (E)	1 = minimal; 2 = low; 3 = typical; 4 = good; 5 = high
Notes ref.	Use row number (e.g., #12) to link to “Additional Notes”.

Parent Log (Days 1–10) — fill one row per day/attendance day. Use codes for M/A/SQ/E when needed.

#	Date	Arrival	Departure	Sleep (hrs)	SQ	A	M	E	Notes (short) / Ref.	I
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										

Parent Log (Days 11–20) — fill one row per day/attendance day. Use codes for M/A/SQ/E when needed.

#	Date	Arrival	Departure	Sleep (hrs)	SQ	A	M	E	Notes (short) / Ref.	I
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

Parent Log (Days 21–30) — fill one row per day/attendance day. Use codes for M/A/SQ/E when needed.

#	Date	Arrival	Departure	Sleep (hrs)	SQ	A	M	E	Notes (short) / Ref.	I
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										

