

AN EVIDENCE-TRIANGULATION FRAMEWORK FOR STAFF DEVELOPMENT IN WELLNESS CENTERS

Bistra Dimitrova

Prof, D. Sc. Faculty of public health, health care and Tourism

National Sports Academy "Vassil Levski", Bulgaria

E-mail: dimitrova.bistra@yahoo.com / ORCID.ID: 0000-0003-3152-9831

Abstract

Background: Wellness-center performance depends on technical competence and interpersonal coordination, yet personality-type frameworks are frequently interpreted as measures of ability. *Objective:* This study develops an evidence-triangulated protocol for using a 16-personality preference framework in staff development without stereotyping or employment decision-making. *Methods:* A prospective mixed-methods implementation design was derived from a wellness-center blueprint. Voluntary preference assessment is combined with competency self-ratings, behaviorally anchored manager observations, work evidence, debriefing, and six-month follow-up. Outcomes include participation, activated development plans, team climate, handover errors, and client experience. Logistic curves are specified to model program adoption and probability of goal attainment; they are scenario projections, not observed effects. *Results:* The protocol defines seven capability domains, five evidence streams, six implementation phases, five proficiency levels, and privacy controls. Six-month targets are at least 90% voluntary participation, at least 85% activation of development plans, a 10-percentage-point improvement in team-climate indicators, and a 10–15% reduction in handover or service errors. *Conclusions:* Personality preferences may provide a shared language for reflection, but valid development conclusions require convergence among self-report, observable behavior, and role standards. The framework offers a testable model for responsible workforce development in wellness services; empirical effectiveness remains to be established through preregistered longitudinal evaluation.

Keywords: wellness center; staff development; personality preferences; competency assessment; implementation science; logistic model; workplace ethics

INTRODUCTION

Wellness centers integrate client-facing care, therapeutic services, reception, sales, operations, and leadership (2, 5, 7-9). Their performance therefore depends on both occupational competence and the quality of coordination across roles. Failures in handovers, unclear ownership, inconsistent documentation, and poorly adapted client communication can weaken service continuity even when individual practitioners possess strong technical skills (1, 4, 12-15). Workforce-development systems must consequently address observable behavior, interprofessional collaboration, and role standards rather than relying on informal impressions alone (6, 10, 19). Personality and work-style assessments can make differences in preferred communication, information processing, decision-making, and organisation easier to discuss (3, 17, 20). A 16-personality preference framework typically represents four paired dimensions: Extraversion–Introversion, Sensing–Intuition, Thinking–

Feeling, and Judging–Perceiving; some commercial versions add an Assertive–Turbulent identity dimension. These categories describe reported tendencies, not ability, motivation, mental health, or inevitable behavior (21). Type labels also compress continuous individual differences into categories and may show imperfect temporal stability (26-29). Their responsible role is therefore developmental and dialogical, not diagnostic or determinative (22). Job performance is multidimensional and context-dependent. Trait measures can contribute information, but their criterion validity varies by construct, role, and measurement conditions (6, 18). In a wellness setting, the practical question is not whether one personality type fits a role, but whether a staff member demonstrates the behaviors required for safe, empathic, reliable, and adaptive service. This distinction supports an evidence-triangulation rule: no conclusion about capability should be drawn from a preference profile (3, 11). Project blueprint underlying this study proposes a protected development cycle combining voluntary assessment, self-reflection, behaviorally anchored manager observation, work evidence, confidential debriefing, team synthesis, targeted learning, and follow-up (23-25). It also separates confidential individual information from aggregated team reporting and excludes type results as the sole or primary basis for hiring, promotion, pay, scheduling, discipline, or termination. These protections are consistent with data-minimization, purpose-limitation, transparency, and access-control principles in the General Data Protection Regulation (16). The aim of this paper is to translate that operational blueprint into a publication-ready, prospectively testable protocol. The specific objectives are to: 1) define a capability model applicable across wellness-center roles; 2) specify implementation phases and measurable outcomes; 3) formalize an analytical plan, including logistic models for adoption and goal attainment; and 4) establish ethical guardrails that prevent stereotyping, re-identification, and inappropriate employment use.

METHODS

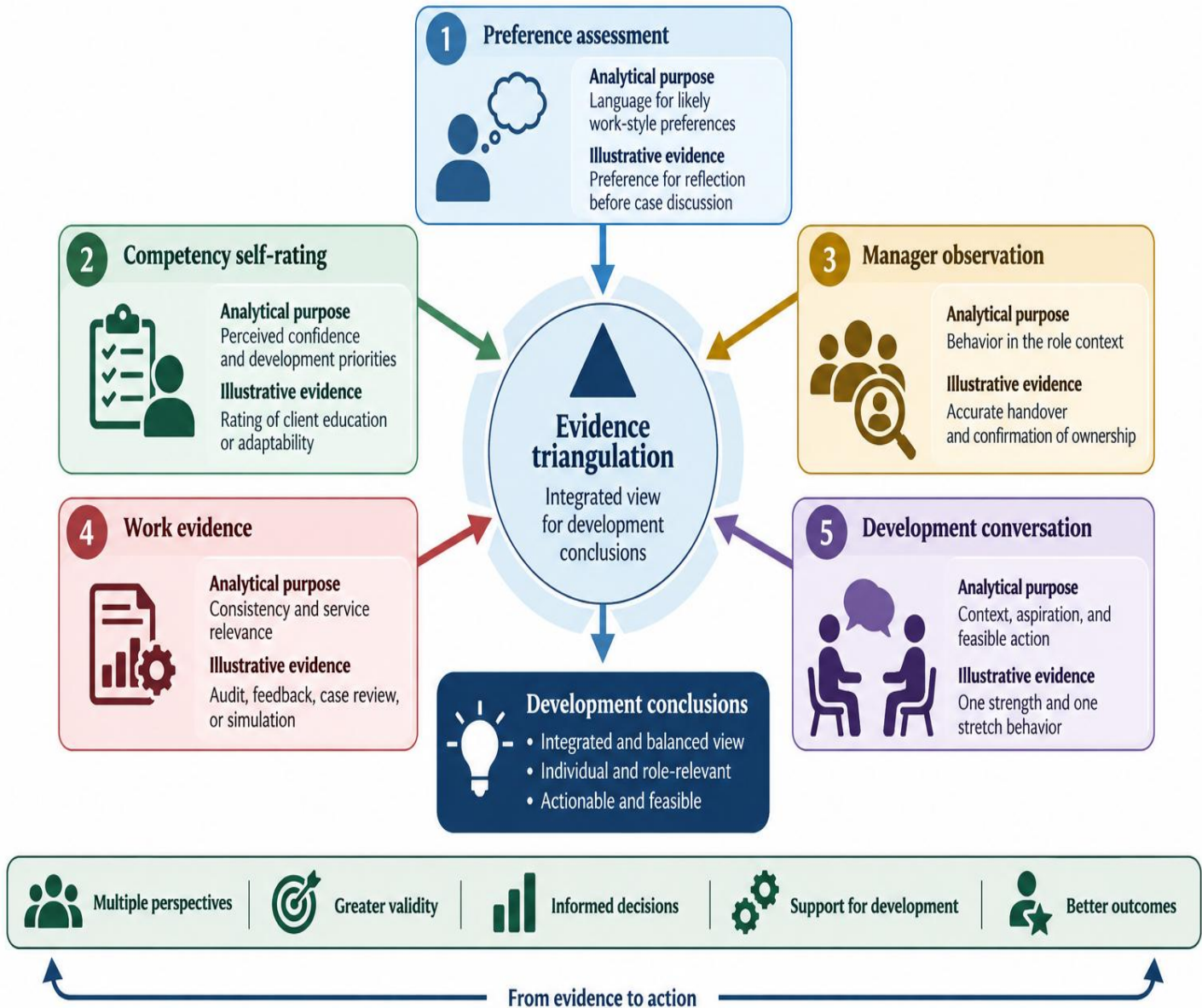
Study design and setting

A prospective, single-center, mixed-methods implementation study is proposed for a multidisciplinary wellness center. The evaluation follows a pre–post design with baseline measurement, an active 12-week development period, and follow-up at months 3 and 6. Quantitative indicators are complemented by debrief notes, structured reflections, and workshop outputs. The protocol is developmental rather than clinical: it diagnoses psychological conditions nor validates the selected personality instrument. Eligible participants include staff in clinical or therapeutic practice, reception, sales, operations, and leadership. Participation in the preference assessment is voluntary and refusal carries no penalty. All staff may access equivalent development activities through an alternative structured reflective interview. The sample size should be the full eligible workforce; inferential

analyses should be reported only when cell counts preserve confidentiality and provide adequate statistical power (tab.1).

Evidence streams and capability domains

Table 1. Evidence triangulation used to formulate development conclusions



Procedure

The implementation comprises six phases. Week 1 establishes scope, governance, consent language, authorized data access, success metrics, and a baseline plan. Weeks 2–3 include staff briefing and collection of preference responses, competency self-ratings, manager ratings, and behavioral examples (tab.2).

Table 2. Core staff-capability framework

Domain			Behavioral indicators	Primary measurement source
Client empathy and communication			Listens, explains clearly, adapts language, maintains boundaries	Client item; observation; simulation
Safety, ethics, and judgment			Works within scope, escalates, protects privacy, documents decisions	Audit; case review; observation
Service delivery and reliability			Prepares, follows through, manages time, maintains standards	Operational records; observation
Collaboration and handover			Shares relevant information, confirms ownership, supports colleagues	Handover audit; team pulse
Adaptability and problem solving			Responds calmly, generates options, learns from feedback	Simulation; manager rating
Commercial and center awareness			Understands client journey, resources, responsible recommendations	Scenario; service indicators
Leadership and development			Sets direction, coaches, addresses tension, remains accountable	360-degree feedback; observation

During weeks 3–5, each participant is offered a 45–60-minute confidential debrief to confirm, qualify, or reject profile language. At week 5, sufficiently aggregated patterns are synthesized for a three-hour team workshop. Weeks 6–12 deliver targeted practice, peer learning, job shadowing, and manager coaching.

Outcomes

Outcome review occurs at months 3 and 6. Individual plans contain one strength to amplify, one observable stretch behavior, supporting evidence, a 90-day action, and a success indicator. Managers receive only development actions agreed by the participant, not raw assessment responses, unless explicit additional consent is provided. Team reports suppress or combine small groups. Identifiable data are retained only for a predefined period, proposed as 12 months, and are then securely deleted or anonymised subject to applicable law and national policy.

Statistical analysis and logistic projections

Descriptive statistics will report counts, percentages, means with standard deviations, or medians with interquartile ranges, as appropriate. Change in pulse scores and client-experience measures will be summarized with 95% confidence intervals and standardized effect sizes. Incident counts may be analyzed using Poisson or negative-binomial regression with exposure offsets. Repeated measures should be modeled using generalized estimating equations or multilevel models when the number of clusters and observations is sufficient. Binary goal attainment at six months will be analyzed by logistic regression: $\text{logit}[P(Y=1)] = \beta_0 + \beta_1 F + \beta_2 R + \beta_3 B$, where F is implementation

fidelity, R is role group, and B is the baseline value of the corresponding outcome. Odds ratios, 95% confidence intervals, calibration, discrimination, missingness, and influential observations will be reported. Personality categories will not be used as deterministic predictors of performance; any exploratory association requires adequate cell size, multiplicity control, and explicit labeling as hypothesis-generating. For planning visualization, cumulative adoption at time t is represented by $A(t) = L/[1 + \exp\{-k(t - t_0)\}]$, where L is the projected upper limit, k the adoption rate, and t_0 the midpoint. Figure 1 uses prespecified illustrative parameters for participation ($L = .92$, $k = .32$, $t_0 = 8$ weeks) and activated plans ($L = .87$, $k = .28$, $t_0 = 11$ weeks). Figure 2 displays an illustrative logistic relationship between fidelity and goal attainment. These parameter values do not estimate effects from participants and must be replaced after data collection (tab.3, fig1 and 2).



Table 3. Prospectively defined outcomes and six-month success criteria

Outcome	Operational definition	Baseline	Month-6 criterion
Participation and debrief completion	Eligible staff voluntarily completing assessment; participants offered debrief	To be established	≥90% participation; 100% offered debrief
Activated development plans	Participants with one documented goal and action	To be established	≥85%
Team climate	Clarity, feedback, and collaboration pulse-score composite	Pre-project score	+10 percentage points
Handover/service errors	Eligible incidents per 100 handovers or encounters	Previous 3-month rate	10–15% reduction, if volume permits
Client experience	Standardized empathy, clarity, or continuity item	Current score	Positive change; effect size and CI reported

Figure 1. Illustrative logistic projections of key outcomes over time

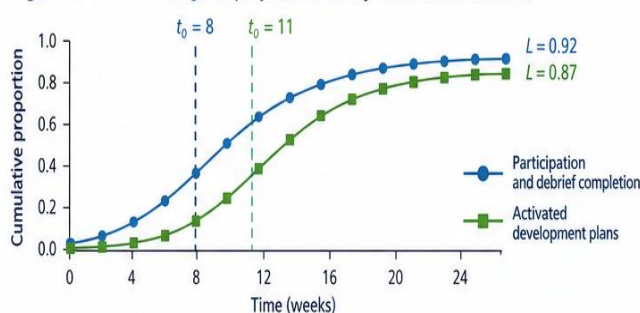
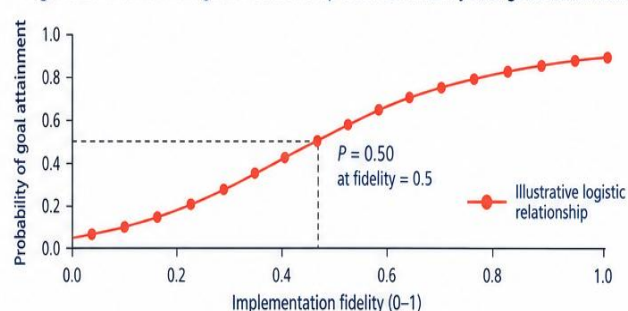


Figure 2. Illustrative logistic relationship between fidelity and goal attainment



Ethics and data governance

Before recruitment, the center should obtain the review required by its institutional and national framework. Participants receive information on purpose, voluntariness, collected fields, access rights, retention, withdrawal, complaints, and intended outputs. Data access is role-based; research extracts are pseudonymized; reporting is aggregated; and free-text responses are screened for identifiers. Personality results are excluded as the sole or primary evidence for employment decisions. Participants may correct contextual inaccuracies, disagree with the profile, and choose what development information is shared. Accessible formats and reasonable accommodation are provided.

RESULTS

The blueprint yielded a coherent measurement architecture comprising five evidence streams, seven capability domains, five proficiency levels, six delivery phases, and five principal outcomes.

Protocol Outputs and Prospective Benchmarks

Its central result is a decision constraint: a development conclusion is admissible only when a reported preference is interpreted alongside an observable behavioral example and a role requirement or service standard. This constraint converts type-based discussion into evidence-based development planning. The protocol also generates three deliverable levels. At the individual level, each participant receives a confidential debrief and a 90-day plan. At the team level, the center receives only sufficiently aggregated preference patterns, capability coverage, collaboration hypotheses, and three owned behavior commitments. At the organizational level, leaders receive a methodology statement, participation and outcome indicators, implementation limitations, risks, and recommendations. Raw answers remain outside routine management reporting (tab.4, fig. 3 and 4).

Table 4. Implementation phases, deliverables, and fidelity indicators

Phase	Timing	Deliverable	Example fidelity indicator
Align and protect	Week 1	Charter, privacy notice, baseline plan	All governance fields approved
Assess	Weeks 2–3	Participant dataset and completion dashboard	Alternative route offered; evidence streams collected
Debrief	Weeks 3–5	Validated insight and draft goal	Confidential session offered to every participant
Team synthesis	Week 5	Anonymized team map and workshop	Small cells suppressed; hypotheses qualified
Develop	Weeks 6–12	90-day plans, learning calendar, agreements	Practice opportunity and manager check-in recorded
Evaluate	Months 3 and 6	Impact report and next-cycle decision	Outcome definitions unchanged or deviations logged

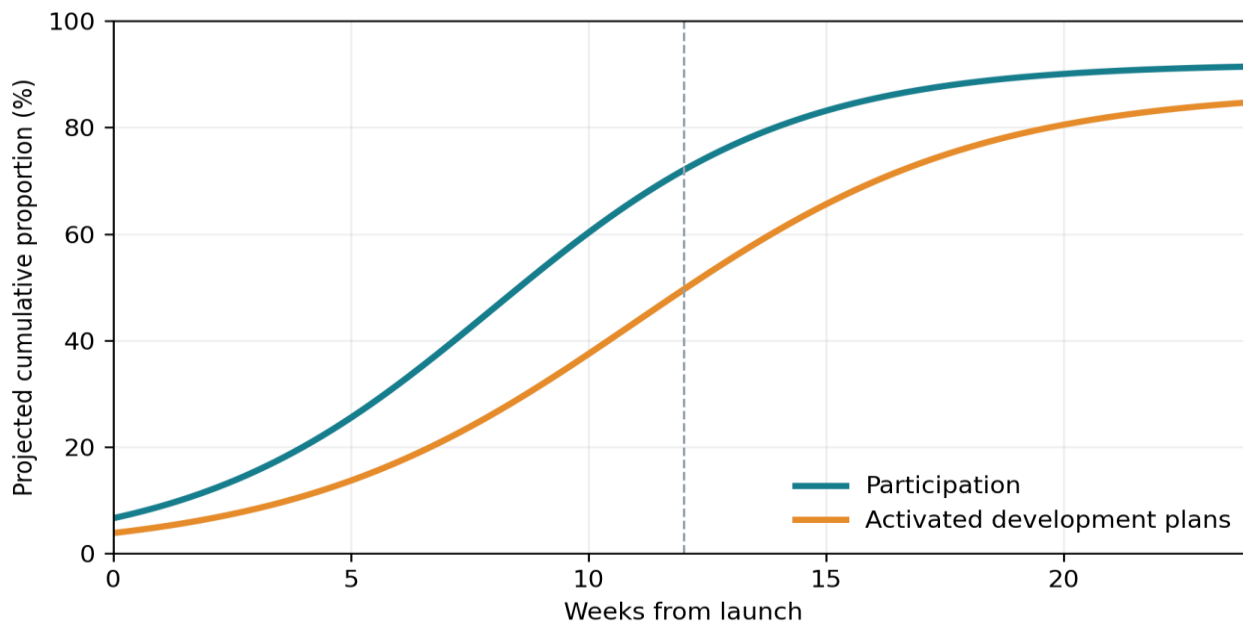


Figure 3. Scenario-based logistic adoption curves for participation and activated development plans

Note. Curves are prospective planning scenarios derived from predefined program targets; they are not observed participant data.

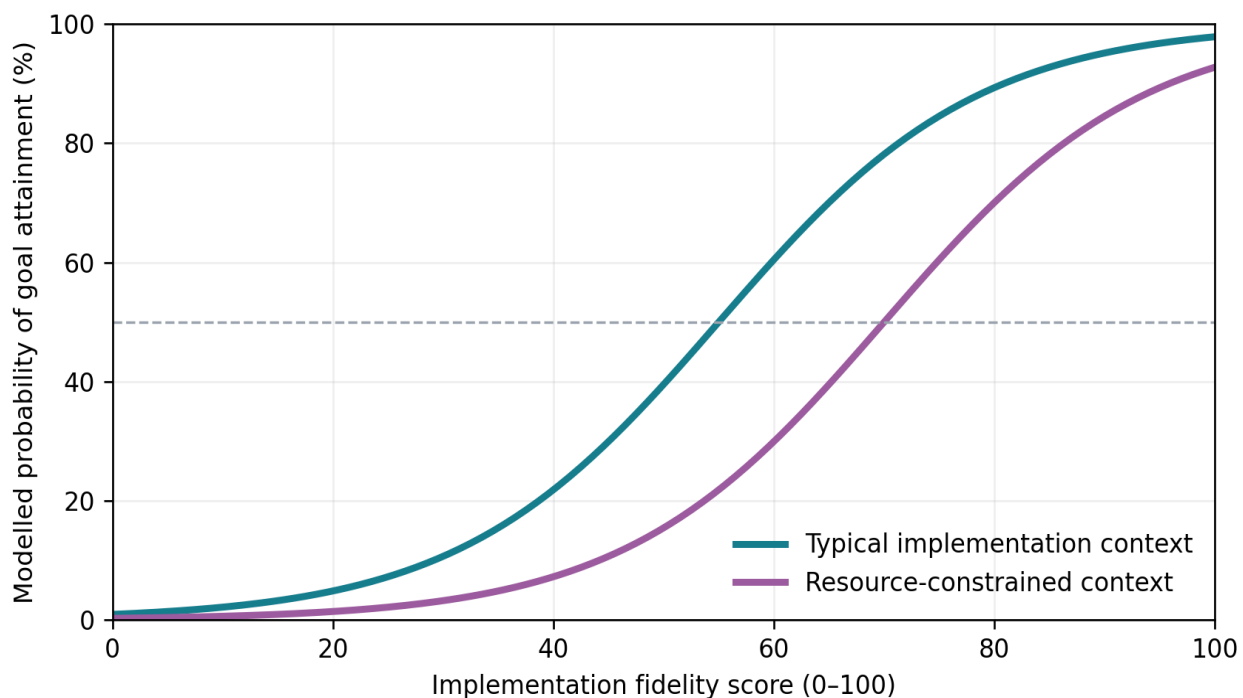


Figure 4. Illustrative logistic relationship between implementation fidelity and six-month goal attainment

Note. The two curves demonstrate how contextual constraints may shift the fidelity threshold. They are sensitivity scenarios, not fitted models.

The illustrative curves operationalise two falsifiable expectations. First, assessment completion should rise before development-plan activation because debriefing and goal formulation occur later in the workflow. Second, the probability of goal attainment should increase nonlinearly as fidelity improves, with a delayed midpoint under resource constraints. Empirical analysis must compare observed cumulative proportions with these trajectories and report deviations rather than treating the targets as achieved results.

DISCUSSION

This paper converts a managerial blueprint into a testable implementation protocol for responsible staff development in wellness services. Its principal contribution is the separation of preference language from capability judgment. A type framework may help participants articulate how they prepare, communicate, decide, and respond to structure, but it cannot establish competence. The triangulation rule makes observable behavior and role standards indispensable, thereby reducing the risk that an intuitively appealing label becomes a substitute for evidence. The framework is aligned with a broader evidence base showing that personality variables may relate to occupational outcomes but do not provide a complete or context-free explanation of performance (Barrick & Mount, 1991; Judge et al., 2002). The design therefore focuses on modifiable behavior: active listening, concise documentation, evidence checks, empathy statements, assertive boundary language, contingency planning, and visible follow-through. This approach shifts the intervention from categorizing people to expanding their behavioral repertoire. The phased design is also practically relevant. Confidential individual debriefing precedes team synthesis, allowing staff to challenge inaccurate descriptions before aggregation. Team workshops translate abstract dimensions into shared case formats, decision checks, handover rules, and repair phrases. Follow-up at three and six months addresses a common limitation of one-off workshops: insight without reinforcement. Training research indicates that design, delivery, and transfer conditions jointly shape whether learning changes work behavior (Salas et al., 2012). Ethical safeguards are not ancillary. Preference data can affect dignity, trust, and perceived employment security even when no clinical information is collected. Voluntary participation in an employment setting requires particular care because formal consent may coexist with perceived pressure. Offering an equivalent reflective route, limiting manager access, preventing small-cell disclosure, defining retention, and prohibiting type-based employment cutoffs make the development purpose more credible. Local legal review remains necessary, especially where occupational health, equality, licensing, or collective-employment rules apply. The logistic figures add analytical discipline but should not be misread as predictions supported by data. Their value is prospective: they identify when participation and plan activation are expected to accelerate, define a plausible ceiling, and make resource-sensitive assumptions visible. Once observations exist, nonlinear mixed models or simpler empirical cumulative plots may be more

appropriate. Similarly, logistic regression for goal attainment should be used only if sample size and outcome frequency support stable estimation; penalized methods or descriptive reporting may be required in small centers. Several limitations follow from the source material. No participants, baseline observations, psychometric scores, or follow-up outcomes were available. Consequently, the paper reports protocol outputs and scenario projections rather than intervention effectiveness. The 16-personality framework is categorical and may obscure within-type heterogeneity. Self-reports and manager ratings are vulnerable to impression management and common-method bias. A single-center study may have limited generalizability, while small role groups create re-identification and power problems. Client experience and incident metrics can also change because of seasonality, staffing, case mix, or parallel quality initiatives. Future research should preregister the outcomes and analysis, document the exact instrument and licensing conditions, test measurement reliability, and distinguish implementation failure from theory failure. A stepped-wedge or cluster-randomized evaluation across centers would strengthen causal inference where feasible. Process evaluation should examine psychological safety, perceived fairness, managerial behavior, and whether staff actually receive practice opportunities. Economic analysis should quantify facilitation time, paid staff time, learning costs, administrative burden, and any change in errors or client retention.

CONCLUSION

A 16-personality preference framework can support reflective dialogue in a wellness center only when its interpretive boundaries are explicit. It should neither diagnose staff nor determine employment outcomes. The proposed protocol embeds preference information within a broader system of competency self-assessment, behaviorally anchored observation, work evidence, confidential debriefing, targeted practice, and longitudinal evaluation. Its five evidence streams, seven capability domains, six phases, and predefined outcomes create a reproducible implementation model. The numerical targets and logistic curves are prospective benchmarks, not claims of effectiveness. The next scientific step is a sufficiently powered, ethically reviewed longitudinal study that replaces scenario parameters with observed data and evaluates behavior, service quality, team climate, client experience, implementation fidelity, equity, and cost.

***Acknowledgements:**

Conflict of Interest: No conflict of interest was declared by the author and the institution.

Financial Disclosure: The article is under the implementation of project BG16RFPR002-1.014-0011 Sustainable Development of the Center of Excellence "Heritage BG," funded under the grant aid procedure BG16RFPR002-1.014 "Sustainable Development of Centres of Excellence and Centres of Competence, Including Specific Infrastructures or Their Associations from the National Roadmap for Scientific Infrastructure".

Declarations of informed consent have been signed regarding the publication of survey data.

AI tools (ChatGPT) were used only for linguistic editing and translation.

REFERENCES

1. Aleksandrova, V. (2021a). *Adaptirano pluvane za detsa s uvrezhdaniya* [Adapted swimming for children with disabilities] [Monograph, in Bulgarian]. IPRESS.
2. Aleksandrova, V. (2021b). The effect of swimming on health and physical activity in children with visual disabilities. *Journal of Environmental Protection and Ecology*, 22(2), 847–857.
3. Aleksandrova, V. (2022). Wellness aqua programs through adapted physical activity and sports for children with special needs. *Research Announcements Heritage BG*, 3, 82–89.
4. Angelcheva, M. (2019). Effects of combination between relax massage and Dr Bach flower remedies on everyday stress. In *Proceedings of the International Scientific Congress "Applied Sports Sciences" & Balkan Scientific Congress "Physical Education, Sports, Health"* (p.348–352). NSA Press.
5. Angelcheva, M., & Petkova, S. (2019). Effects of combination between relax massage and Dr Bach flower remedies on everyday stress. In *Proceedings of the International Scientific Congress "Applied Sports Sciences" and Balkan Scientific Congress "Physical Education, Sports, Health"* (pp. 348–352). NSA Press.
6. Barrick, M. R., & Mount, M. K. (1991). The Big Five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, 44(1), 1–26. <https://doi.org/10.1111/j.1744-6570.1991.tb00688.x>
7. Chipeva, M. (2018). *Aerobika: Istoriya, izsledvaniya, obuchenie* [Aerobics: History, research and education] [In Bulgarian]. NSA Press.
8. Chipeva, M. (2018a). *Aerobno byagane* [Aerobic running] [In Bulgarian]. NSA Press.
9. Chipeva, M. (2019). *Kango jumps aerobika* [In Bulgarian]. Avangard Prima.
10. Dimitrova, N. (2017). The factor motivation for judo training with children. *Research in Kinesiology*, 45(2), 161–163.
11. Dimitrova, N. (2019). Resistance while managing its own inertial power field. *Trakia Journal of Sciences*, 17(1), 631–634.
12. Dimitrova, N. (2019a). Reactions of the motor system in local and global activities. *Trakia Journal of Sciences*, 17(1), 635–637.
13. Dimitrova, N. (2020). Control of the spatial structure in preschool children. *Trakia Journal of Sciences*, 18(1), 854–856.
14. Dimitrova, N. (2025). Specificity of balance in disposal (weightlifting). *German International Journal of Modern Science*, 102, 63–66.
15. Dimitrova, N. (2026). Comparative biomechanical analysis of performance against a real target and a "kata" in karate. *Trakia Journal of Sciences*, 24(2). <https://doi.org/10.15547/tjs.2026.02.012>
16. European Parliament & Council of the European Union. (2016). Regulation (EU) 2016/679 of 27 April 2016 (General Data Protection Regulation). *Official Journal of the European Union*, L 119, 1–88. <https://eur-lex.europa.eu/eli/reg/2016/679/oj>
17. Hosmer, D. W., Lemeshow, S., & Sturdivant, R. X. (2013). *Applied logistic regression* (3rd ed.). Wiley.
18. Judge, T. A., Heller, D., & Mount, M. K. (2002). Five-factor model of personality and job satisfaction: A meta-analysis. *Journal of Applied Psychology*, 87(3), 530–541. <https://doi.org/10.1037/0021-9010.87.3.530>
19. Nesheva, I. (2022). Social benefits of wellness motor activities for women with normal pregnancy. *Smart Innovations in Recreational, Wellness Industry and Niche Tourism*, 4(1–2), 22–27.
20. Nesheva, I. (2023). Pregnancy and wellbeing. *Trakia Journal of Sciences*, 21(Suppl. 1), 231–235. <https://doi.org/10.15547/tjs.2023.s.01.039>

21. Nesheva, I. (2023a). A wellness tool to perform healthy lifestyle practices in the Bulgarian school system. *Strategies for Policy in Science and Education*, 31(5), 560–572. <https://doi.org/10.53656/str2023-5-7-wel>
22. Pittenger, D. J. (2005). Cautionary comments regarding the Myers-Briggs Type Indicator. *Consulting Psychology Journal: Practice and Research*, 57(3), 210–221. <https://doi.org/10.1037/1065-9293.57.3.210>
23. Polimenov, M. (2014). Innovation in SPA and enology as an opportunity to raise the competitiveness of tourist services. In *Proceedings of the International Tourist Forum "SPA and Wine"* (p. 163). South-West University "Neofit Rilski".
24. Polimenov, M. (2018). Technological innovations in niche tourism. *Smart Innovations in Recreational, Wellness Industry and Niche Tourism*, Special Issue, 31–35. <https://scjournal.globalwaterhealth.org/>
25. Polimenov, M. (2019). Transfer of innovation in service technology for increasing restaurant product quality. *Smart Innovations in Recreational, Wellness Industry and Niche Tourism*, 1(2), 29–35. <https://scjournal.globalwaterhealth.org/>
26. Salas, E., Tannenbaum, S. I., Kraiger, K., & Smith-Jentsch, K. A. (2012). The science of training and development in organizations: What matters in practice. *Psychological Science in the Public Interest*, 13(2), 74–101. <https://doi.org/10.1177/1529100612436661>
27. Tomova, T., & Angelov, B. (2023). Wellness practices for healthy ageing. *Trakia Journal of Sciences*, 21(Suppl. 1), 445–450. <https://doi.org/10.15547/tjs.2023.s.01.074>
28. Tomova, T. (2024). Modeling rituals through combined wellness influences. *Smart Innovations in Recreational, Wellness Industry and Niche Tourism*, 6(2), 15–24.
29. Tomova, T. (2025). The impact of manual wellness therapies and body massage: A stress relief effect. *German International Journal of Modern Science*, 105, 23–27.

Appendix A. Reporting Guardrails

Table A1. Statements to avoid and evidence-oriented alternatives

Avoid	Use instead
"You are an introvert, so you cannot lead groups."	"Which leadership formats bring out your best, and what facilitation behavior would you like to practice?"
"Feeling types are too emotional for difficult decisions."	"How did you consider people impact, evidence, risk, and policy in this decision?"
"Perceiving types miss deadlines."	"Which planning and accountability supports reliable delivery while retaining flexibility?"
"This role needs one personality type."	"This role requires defined behaviors and outcomes; assess those directly and use preferences only to tailor development."