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## Designing Behavior, Empowering Professionals: Research from the Master's Program in Applied Behavior Analysis at the University of Parma

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*Background:* Applied Behavior Analysis (ABA) is an evidence-based discipline focused on understanding and modifying socially significant behaviors. In the Italian context, the increasing institutional recognition of ABA, particularly in autism services, has supported the development of postgraduate training programs. This special issue gathers applied research projects conducted by students in the University of Parma's ABA Master's Program, which combines scientific rigor with professional training and an entrepreneurial vision.

*Methods:* The contributions primarily employ single-subject designs, widely used in behavior analysis, for their precision in evaluating individualized behavioral interventions. The studies address real-life educational and clinical challenges through procedures that are measurable, replicable, and aligned with evidence-based practices.

*Results:* Findings highlight social, emotional, and communicative improvements for participants, as well as increased well-being among educational staff. Several studies demonstrate that the case study approach enables flexible, context-sensitive intervention planning and effective progress monitoring.

*Conclusions:* This special issue demonstrates the relevance and versatility of ABA across diverse populations and settings. It also emphasizes the value of professional training in preparing behavior analysts who are capable of implementing and evaluating personalized, evidence-based behavioral interventions, particularly using single-subject designs in applied case studies.

*Keywords:* Applied Behavior Analysis; Single-subject design; Professional training; Behavioral intervention; Case study

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Applied Behavior Analysis (ABA) is a scientific discipline grounded in the principles of learning and behavior, developed in the 1960s within the field of behavioral psychology (Baer et al., 1968). It aims to understand and modify socially significant behaviors through evidence-based interventions, and has become increasingly widespread in educational, clinical, and rehabilitative contexts. In Italy, the diffusion of ABA has expanded considerably over the past two decades, particularly in services for individuals with autism spectrum disorder and in school settings, supported by national guidelines and specialized university training programs (Istituto Superiore di Sanità [ISS], 2011; Italian Society of Child and Adolescent Neuropsychiatry [SINPIA], 2020).

Consistent with the ABA framework, single-subject experimental designs play a central methodological role. These designs enable the direct and systematic observation of individual behavior over time, allowing for continuous monitoring of the effectiveness of interventions (Kazdin, 2011). Their flexibility and precision make them particularly suitable for clinical and educational contexts, where personalized, data-driven decision-making is essential (Barlow et al., 2009). Moreover, the use of strategies such as multiple baseline, reversal, and changing criterion designs ensures internal validity and enhances replicability even in the absence of control groups (Cooper et al., 2020).

This special edition of the *Journal of Clinical and Developmental Psychology* brings together a selection of scientific contributions that explore educational and clinical intervention in atypical developmental contexts from different theoretical and applicative perspectives. The topics addressed range from autism to school inclusion, from the use of emerging technologies to the promotion of the well-being of operators, with a particular focus on the acquisition of social-emotional skills and the application of the principles of Applied Behavior Analysis (ABA).

All the contributions to this special issue result from applied research projects developed by students in the Master's Course in Applied Behavior Analysis (ABA) program at the University of Parma. The Master's program, founded by Professor Silvia Perini and active since 2011, is coordinated by the Department of Humanities, Social Sciences, and Cultural Industries. It provides solid academic and methodological training in behavior analysis and promotes an entrepreneurial mindset. Students are encouraged to design innovative services and initiatives that combine scientific rigor with practical social impact. This dual focus is particularly relevant in the Italian and European contexts, where ABA is increasingly recognized but still needs professionals capable of autonomously launching and managing evidence-based services (Cihon et al., 2018).

Most of the studies presented adopt single-subject experimental designs. This methodology is particularly suitable for analyzing case studies, evaluating the effectiveness of individualized interventions, and documenting behavioral changes observable over time. These research results stem

from an intensive training course that combines theoretical in-depth study with professional practice within a rigorous methodological framework, based on systematic observation, measurement of behavioral variables, and the use of empirically validated procedures.

Airoldi and colleagues present a case study using Single-Session Interview-Informed Synthesized Contingency Analysis (IISCA) as the basis for the implementation of a Skill-Based Treatment (SBT) aimed at reducing problem behaviors in a six-year-old boy diagnosed with Autism Spectrum Disorder (ASD). The treatment was conducted within an educational center and involved a functional analysis followed by teaching functional communication skills, tolerance, and collaboration. Preliminary results show a significant reduction in problem behaviors and the emergence of adaptive responses.

Bellodi and colleagues propose an experimental study evaluating the efficacy of the Mirror Protocol for teaching generalized imitation in six children with ASD, aged 3-5 years, placed in an educational center in northern Italy. The intervention took place in structured settings during ABA therapy sessions, utilizing a mirror to promote motor matching. Although not all participants reached the learning criterion across all variables, the researchers observed a positive trend in performance, suggesting the protocol's potential as a supportive strategy.

Diaferia and colleagues focus on the psychological well-being of socio-educational professionals working with children with Special Educational Needs (SEN). The study involved a group of professionals active in a residential facility and included a cycle of monthly meetings conducted by a psychotherapist with a bioenergetic approach. Based on relaxation techniques and social support, the meetings aimed to prevent burnout and promote coping strategies. Data collected through the Link Burnout Questionnaire (LBQ) revealed an increased awareness of stress mechanisms and organizational climate.

Mortini and Giannatiempo explore the use of educational robotics as a mediation tool in ABA treatments for six children diagnosed with ASD. The study in an early intervention center compares an experimental group that used the NAO robot with a control group. The results indicate an increase in the acquisition of verbal operants and visual-perceptual skills in children exposed to robotics, suggesting the effectiveness of technological integration in habilitation programs.

Nocetti and Cattalini present a psychoeducational intervention aimed at a 7-year-old child with ASD, focused on enhancing emotional competence and social skills. The intervention, implemented in a small group setting within a school context, involved teaching the recognition and attribution of emotions through short films and symbolic play activities. The single-subject design improved the understanding of emotions and the quality of peer communication.

Tiozzo and Iacomini propose a theoretical and practical reflection on developing social-emotional skills in school contexts. They emphasize the importance of training programs focused on empathy,

emotional awareness, and conflict management. The authors developed this contribution through a critical review of the literature and direct experiences of intervention in primary and secondary school settings.

Troilo and Berardo explore the educational relationship in inclusive contexts, focusing on intentional communication and inclusive teaching practices. The article proposes a theoretical framework that integrates ABA and special pedagogy, emphasizing the teacher's role as an agent of mediation and promotion of meaning in didactic interactions.

These contributions offer a comprehensive overview of theoretical reflections, experimental evidence, and best practices, providing valuable insights for researchers, clinicians, educators, and decision-makers. The hope is that this special issue can strengthen the dialogue between research and intervention, promoting increasingly effective, sustainable, and person-centered practices.

This special issue highlights the value of postgraduate training as a strategic lever for educational and clinical innovation. Through field-based research experiences, students were able to integrate theoretical knowledge with practical intervention, making concrete contributions to the promotion of well-being and inclusion within their professional contexts. The projects presented not only enrich the scientific literature but also demonstrate tangible effects in the real-world settings where they were applied. These include improvements in emotional, communicative, and adaptive behaviors in children, as well as enhanced well-being and professional efficacy among educational staff. Such evidence reinforces the critical role of postgraduate ABA training in generating measurable impact and fostering the development of high-quality, person-centered services.

We want to extend our heartfelt thanks to the professors and supervisors of the ABA Master's program at the University of Parma, whose commitment and expertise have made these research paths possible. Their guidance has been essential in ensuring methodological rigor and ethical sensitivity throughout the projects.

In the field of special education, objective progress measurement and evidence-based strategies are paramount. Such evidence reinforces the critical role of postgraduate ABA training in generating measurable impact and fostering the development of high-quality, person-centered services. Moreover, continuous professional training ensures the success of interventions (Vascelli, 2024). This vision aligns closely with the educational and operational philosophy of the Master's program and is reflected in the contributions presented in this issue.

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### ***Declaration of Interest statement***

Declarations of interest: none.

### ***Authors' contribution***

VL assisted with concept, study design, manuscript preparation, and manuscript editing; CF assisted with the generation of the initial draft of the manuscript, manuscript editing, and supervision; CP assisted with manuscript editing, conceptual framing, and supervision of the special issue. All authors contributed to and have approved the final manuscript.

### ***References***

- Baer, D. M., Wolf, M. M., & Risley, T. R. (1968). Some current dimensions of applied behavior analysis. *Journal of Applied Behavior Analysis*, 1(1), 91–97. <https://doi.org/10.1901/jaba.1968.1-91>
- Barlow, D. H., Nock, M. K., & Hersen, M. (2009). *Single case experimental designs: Strategies for studying behavior change* (3rd ed.). Pearson.
- Cihon, T. M., Artoni, V., Cavallini, F., & Corsano, P. (2018). Creating and sustaining an international collaboration in behavior analysis. *Behavior and social issues*, 27, 71-90. <https://doi.org/10.5210/bsi.v.27i0.9135>
- Cooper, J. O., Heron, T. E., & Heward, W. L. (2020). *Applied behavior analysis* (3rd ed.). Pearson.
- Istituto Superiore di Sanità (ISS). (2011). *Linee guida sul trattamento dei disturbi dello spettro autistico nei bambini e negli adolescenti*. Ministero della Salute. <https://www.iss.it>
- Kazdin, A. E. (2011). *Single-case research designs: Methods for clinical and applied settings* (2nd ed.). Oxford University Press.
- Società Italiana di Neuropsichiatria dell'Infanzia e dell'Adolescenza (SINPIA). (2020). *Linee guida per il trattamento dei disturbi dello spettro autistico in età evolutiva*. <https://www.sinpia.eu>
- Vascelli, L. (2024), Commentary on “Implementation of an adapted handwriting without Tears® programme for children with developmental disabilities in a special education setting”. *Tizard Learning Disability Review*, 29 (1), 56-61. <https://doi.org/10.1108/TLDR-09-2023-0022>