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The interplay between mentalization, personality traits and burnout in psychiatry training: Results from a large multicenter controlled study

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Abstract

Background: A better characterization of educational processes during psychiatry training is needed, both to foster personal resilience and occupational proficiency.

Methods: An adequate coverage of medical residents at the national level was reached (41.86% of the total reference population, 29 out of 36 training centers—80.55%). Controls were recruited among residents in other medical specialties. All participants were assessed by questionnaires to evaluate early life experiences, attachment style, personality traits, coping strategies, emotional competencies. A Structural Equation Model (SEM) framework was employed to investigate the interplay between individual factors.

Results: A total sample of 936 people was recruited (87.9% response-rate; 645 residents in psychiatry, 291 other medical residents). Psychiatry trainees reported a higher prevalence of adverse childhood experiences (emotional abuse, emotional neglect, physical neglect), greater attachment insecurity (anxious or avoidant) in comparison to other medical trainees. Psychiatry residents also reported higher social support-seeking as a coping strategy, lower problem-orientation, and lower transcendence. Lower neuroticism, higher openness to experience, and

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higher emotional awareness were also observed in psychiatry trainees. Psychiatry training was associated with a redefinition of conflict management skills as a function of seniority. The SEM model provided support for an interplay between early traumatic experiences, mentalization skills (coping strategies, emotion regulation), interpersonal competencies and occupational distress.

Conclusions: The findings of the present study supported a theoretical model based on mentalization theory for the interactions between personal and relational competencies in psychiatry training, thus providing potential target of remodulation and redefinition of this specific process of education.

KEYWORDS

adverse childhood experiences, burnout, coping, emotion regulation, medical education, occupational psychology

1 | INTRODUCTION

The nature of healthcare profession training has been the object of philosophical discussion since the existence of medicine as a discipline, questioning the best synthesis of technical knowledge with personal characteristics. As stated in the Hippocrates oath, "warmth, sympathy, and understanding may outweigh the surgeon's knife or the chemist's drug." In other words, education in healthcare might be related to the successful acquisition of advanced technical skills, as well as understanding the patient's subjective experience.[1] The progressive refinement of healthcare resources and knowledge, driven by technical and scientific advancements across the 19th century,[2] had led medical school teaching to increasing fragmentation into specialties.[3] In this context, psychiatry has arguably represented a unique field due to its relatively recent distinction from other disciplines, and its historical placement between medicine, psychology, philosophy, and neuroscience.[4] The discussion on the specificity and nature of psychiatry training has been a focus of several psychiatric associations, in response to the wide range of scientific, clinical, and social challenges facing this specialty, as well as the request to improve trainees' professional development.[5,6] In 2018, a commission of the World Psychiatric Association recognized that therapeutic relationships need to remain at the foundation of psychiatry,[7] thus emphasizing the importance of development of interpersonal competencies during training programs.

However, while the answer to the question *what is worthy in training a student to make him/her a good medical doctor* has been already addressed by some heterogeneous studies,[8–14] only a few surveys have been dedicated to the state-of-the art of the psychiatry training program and its specificity within other medical disciplines.[5,15] The mentioned studies highlighted the need for residents in psychiatry to re-discover the tradition of psychopathology, according to which the specificity of the discipline can be enunciated not only in terms of explaining phenomena (by means of categorical and nosography knowledge), but also by understanding individual systems of meanings, values, and lived experiences.[16] According to Karl Jaspers,[17] mental health professionals necessitate an empathic pre-reflective attunement with the patient, through the experience of resonance between oneself and the other person. How this constitutive personal predisposition might be defined, measured, and especially improved by formal teaching is still a matter of debate.[1]

From a psychodynamic perspective, the implicit high-order process which grants an individual with the capability to understand the inner motives for one's behaviors or affective state has been referred to as the so-called "mentalization" process, which includes both metacognition and reflective functions.[18] Mentalization skills support a wide range of psychological domains,[19] including those interpersonal and emotional competencies[18,20–22] which may represent the main focus of the present study on the educational processes in psychiatry training. Well-developed mentalization skills potentially increase adaptiveness in face of acute or chronic stress, as mentalization entails both effective emotion regulation competencies[23] and the adoption of specific coping strategies.[24]

Mentalization processes are shaped across life by different intervening factors, including childhood experiences and attachment styles.[25–28] Different degrees or deficiencies in mentalization skills might affect epistemic trust in relationships,[20] thus interfering with the ability to establish therapeutic alliances on one hand,[20] while also potentially impacting the emotional involvement derived from the encounter with mental pain. In this

regard, the frequently observed burnout in psychiatric trainees[29] might represent the ultimate defeat of individual coping skills in light of the burden imposed by interpersonal requests. In other words, burnout could stem from the inefficacious interplay between personal and relational emotional competencies, associated with poor mentalization skills.[30,31] Thus, poor mentalization strategies might be associated with burnout through the effect of inefficacious interpersonal competencies, such as avoidant strategies in front of chronic stressors.[32] By contrast, problem or emotion focused approaches seem to represent efficacious coping strategies,[33] at least in relation to occupational distress.[34] A high degree of reliance on these two coping strategies may then be conceptualized as a protective factor, representing a well-developed, foundation of mentalization competencies.

In the present investigation, it was hypothesized that both mentalization competencies and clinical supervisions would influence the degree of self-perceived mastery in specific occupational competencies during psychiatry residency training. The failure of these competencies was conceptualized as underlying psychological distress during training programs. Nonetheless, the investigation regarding the role of personal and occupational factors in modulating skill-acquisition during medical residency might be challenged by the confounding effects of other variables. For instance, medical doctors could self-select in terms of residency training programs, in light of personality traits, life experiences and occupational factors.[35] For this reason, it is crucial to investigate which factors could be associated with self-selection, and their role in the perceived acquisition of occupational competencies.

According to the above-mentioned background, the present study was promoted in order to investigate which individual factors would be associated with self-selection for medical doctors enrolled in psychiatry training programs. In order to possibly overcome the heterogeneity observed within the current literature on the topic,[35–37] this investigation was restricted to more specific variables of interest, including personality traits, emotional regulation skills, coping strategies, and attachment styles. Regarding this first aim, we hypothesized that medical doctors choosing psychiatry for their training might show distinct personality traits as well as early life experiences, but that these factors would not necessarily imply a worse psychological status in this population.

Furthermore, the study evaluated how these pre-existing factors might challenge the training process through specific indicators of outcome (e.g., burnout, development of subjective confidence in specific occupational competencies). Regarding this second aim, a structural equation model (SEM) was also developed, to test a theoretical framework based on Fonagy's assumption[18] that the mentalization of the self would be under the influence of attachment style and childhood traumatic experiences (inversely related to insecurity). In turn, relational competence was hypothesized to positively correlate with resilience to burnout.

Finally, the study investigated whether mentalization abilities might be modulated during the training program, with the aim of describing through which factors this effect could take place (e.g., clinical supervision, stigma toward mental health[13]). For this reason, potential differences were explored as a function of seniority for psychiatric trainees.

Significant Outcomes

- Medical trainees choosing psychiatry for their specialty training show distinct psychological characteristics compared to trainees in other medical disciplines. This suggests that there might be a self-selection process wherein individuals with certain early life experiences and attachment styles are drawn to psychiatry training.
- Psychiatry training had notable effects on the personal development and coping mechanisms of trainees. These findings highlight the psychological transformations that occur during psychiatry training and the importance of emotional awareness and interpersonal competencies in this occupational field.
- The current study underscores the importance of mentalization skills in the context of psychiatric education and offers potential areas of focus for improving the training process.

Limitations

- Since the study relied on voluntary participation, individuals who chose to take part might have different motivations or characteristics compared to those who opted not to participate.
- The study employed a cross-sectional design, which assessed the participants' characteristics and outcomes at a specific point in time. This design limitation restricts the ability to establish causality between variables and only allows for the observation of associations.
- The study's reliance on self-report measures, such as questionnaires to evaluate early life experiences, coping strategies, and emotional competencies, introduces potential biases related to recall and social desirability.

2 | MATERIALS AND METHODS

This is a multicentric, longitudinal study on subsequent cohorts of residents in psychiatry and in other medical disciplines, while the analyses performed in the present study are based on a cross-sectional evaluation. Thirty-six Italian universities currently hold a national training program for psychiatry, and the following 29 (80.55%) participated in the study: namely, the Universities of Bari, Bologna, Brescia, Cagliari, Napoli Vanvitelli, Catania, Catanzaro, Cattolica del Sacro Cuore, Chieti-Pescara, Ferrara, Firenze, Foggia, Genova, Milano Bicocca, Milano Statale, Modena e Reggio Emilia, Padova, Parma, Perugia, Piemonte Orientale—Novara, Pisa, Politecnica delle Marche, Sassari, Roma Sapienza, Roma Tor Vergata, Siena, Torino, Udine-Trieste, Verona. As a reference, in 2022, the Ministry of Education in Italy financed 516 individual programs for psychiatry, of which 216 (41.86%) are represented in this study.

2.1 | Procedures and data collection

Subjects were enrolled in the study according to the following inclusion criteria: age above 18 years old and less than 50 years old, knowledge of Italian language, approval of the informed consent, being enrolled in one of the participating institutions, being a medical resident. In each institution, medical residents were contacted by a senior medical doctor and, after the application of inclusion criteria, a personal (yet anonymous) link to an online questionnaire was shared. Study data were collected and managed using REDCap electronic data capture tools hosted at the University of Florence.[38] Further information on REDCap (Research Electronic Data Capture) and ad-hoc questionnaires used to assess sociodemographic and occupational variables are available in the eMethods 1 in Data S1.

To test the abovementioned hypotheses, as well as the theoretical framework based on mentalization theory, several self-assessed questionnaires were administered to all participants.

- Personality factors associated with self-selection in psychiatry were evaluated by means of the big five inventory (BFI).[39] Higher scores indicate the degree to which the individual response corresponds to specific personality factors, according to the five-factor model of personality. This measure was adopted as personality factors can highlight higher order interactions linking behavioral, affective and cognitive responses toward life events.[40]
- Early life experiences which could modulate or even challenge mentalization skills were evaluated by means of the Experiences in Close Relationships (ECR),[41] to assess attachment styles, and the Childhood Trauma Questionnaire (CTQ),[42] for exposure to early trauma during childhood. Greater score indicates more insecure attachment for ECR and increased exposure to childhood adverse experiences for CTQ, respectively.
- Mentalization skills were conceptualized as a higher-order construct, composed of both efficacious coping strategies, constructive emotion regulation competencies, as well as interpersonal competencies. To this degree, the coping orientation to problems experienced (COPE)[43] was adopted to appraise individual coping strategies conceptualized as relatively s elements of one's personality, determining individual reactive patterns to stressful life events.[44] Higher scores indicate the degree of adoption of each specific coping strategies. Furthermore, the Difficulties in Emotion Regulation Scale (DERS),[45] and the Interpersonal Competence Questionnaire (ICQ),[46] were adopted to quantitatively estimate emotion regulation skills, and interpersonal competencies respectively. Higher scores represent lower emotion regulation skills for DERS and greater interpersonal competencies for ICQ.
- Finally, as the main outcome measure of the proposed model, the Maslach burnout inventory (MBI) was adopted to assess burnout symptomatology.[47] The instrument considers burnout as a multi-faceted syndrome, along three main dimensions: emotional exhaustion, depersonalization, and personal accomplishment. Higher scores represent worse symptomatology for emotional exhaustion and depersonalization, while a higher score in personal accomplishment is currently conceptualized as protective.

The study protocol was approved by the Ethics Committee of the coordinating center (University of Florence), and subsequently by each of the participating centers. All participants provided a written informed consent to be enrolled in the study.

2.2 | Statistical procedures

Between groups comparisons were performed with two-tailed *t*-tests and chi-square for continuous and categorical variables, respectively. Significant results were also tested with multivariate linear regression analyses, with the group as a categorical variable, and adjusted by age, gender, and site of enrollment. Predictors of burnout dimensions and occupational competencies (defined as the degree of self-confidence in the following interpersonal skills: negative assertion, emotional support, and conflict management) in

psychiatric residents were similarly estimated, including seniority (years of training) as covariate. In these models, burnout dimensions and occupational competencies represented the dependent variables, while personality factors, coping strategies, emotion regulation competencies, interpersonal skills, attachment styles, and childhood adverse experiences the independent variables. An empirical model and pathways between variables were tested within the SEM framework, as supported by the literature on mentalization[18,20] and its role for what concerns coping strategies and interpersonal competencies, extending these implications for occupational distress and burnout according to the stress-diathesis model.[48,49] The statistical analyses using the SEM framework were conducted on the entire sample without distinguishing between psychiatric residents, other medical residents, and medical students. This approach was chosen because the hypothesized model did not posit any distinction between groups in the regression coefficients. The loading of coping strategies on the latent factor related to mentalization skills was restricted to the three domains with more evidence for a role in influencing outcomes in light of chronic stressors (avoidant strategies, problem-orientation, positive attitude). Personality dimensions were not included in the overarching model on the interplay between psychological dimensions—from early life events to mentalization and burnout. This exclusion derives from the theoretical framework of the study, that posited personality factors as potentially driving self-selection within post-graduate training programs for psychiatry, but not mentalization or burnout themselves. In fact, the literature on mentalization focuses on the role of mentalization deficits in personality disorders.[21] On the contrary, a role for variants of non-maladaptive personality traits in mentalization, or vice versa, has since not fully emerged. To further support this assumption, a sensitivity analysis was conducted to examine whether there was a statistically significant improvement in the model by calculating the regression coefficients separately for psychiatric residents alone. Further information on the SEM model can be found in the eMethods 2 in Data S1. An a priori statistical significance threshold of $p = 0.05$ was chosen for all results. All analyses were performed using R version 4.3.1,[50] with the support of RStudio 2023.03.0 build 386,[51] JASP version 0.17.1,[52] the *tidyverse* collection of libraries,[53] and *lavaan* for SEM.[54]

3 | RESULTS

3.1 | Descriptive statistics

A total of 1065 individuals were invited to participate (724 residents in psychiatry, 341 other residents); 936 (87.9% of the total) completed the questionnaire (645 residents in psychiatry, relative dropout 10.9%; 291 other residents, relative dropout 14.7%). Other medical residents were enrolled in general surgery (115; 39.5%); anesthesiology (56; 19.2%); emergency medicine (75; 25.8%); internal medicine (45; 15.5%). While psychiatry specialty training is a 4-year course in Italy, all other specialties in the current sample are programmed on a 5-year basis. Table 1 reports the general characteristics of psychiatric trainees in comparison with other medical residents. Psychiatric residents were also less likely to report having spent time abroad during their training program. For what concerns occupational factors, psychiatric residents reported a lower number of verbal aggressions, a higher number of physical aggressions, and a higher frequency of clinical supervisions per month. They also reported a lower perceived burden of mental disorders, as well as a higher likelihood to disclose one's own or a family member's hypothetical psychiatric diagnosis.

3.2 | Self-selection within psychiatry training

Group differences between psychiatry residents and other medical residents were investigated to elucidate the process of self-selection within psychiatry training. Group differences and their statistical significance are reported in Table 2.

In favor of the hypothesis of self-selection before training due to individual factors, compared to other residents, psychiatry trainees reported a higher burden of childhood adverse experiences (i.e. emotional abuse, emotional neglect, and physical neglect), as well as a higher level of attachment insecurity (both avoidant and anxious). On the other side, when considering personality factors, a lower level of neuroticism was reported in the group composed of psychiatry residents in comparison to other medical trainees. As further confirmation to this finding, a greater level of openness to experience, and a lower lack of emotional awareness was also found in psychiatry residents. For what concerns coping strategies, psychiatric residents were more likely to rely on social support, and less likely to rely on problem-solving or transcendence in comparison to other medical trainees.

3.3 | Predictors of occupational distress in psychiatry residents

Before testing the overall model of interplay between selected variables, predictors of the main outcome

TABLE 1 Sample descriptives.

	Psychiatry residents	Other medical residents	*p*-Value
N	645	291	/
Age	29.57 ± 3.92	29.86 ± 3.27	0.977
Gender	Men: 252 (39.07%) Women: 378 (58.60%) Other: 15 (2.33%)	Men: 96 (32.99%) Women: 189 (64.95%) Other: 6 (2.06%)	
Relationship status	Single: 208 (32.25%) in a relationship: 407 (63.10%) Married: 29 (4.50%) Divorced: 1 (0.16%)	Single: 88 (30.24%) in a relationship: 186 (63.92%) Married: 16 (5.50%) Divorced: 1 (0.34%)	0.794
Seniority	1st: 216 (33.48%) 2nd: 245 (37.98%) 3rd: 106 (16.43%) 4th: 78 (12.09%)	1st: 81(27.83%) 2nd: 107 (36.77%) 3rd: 35 (12.03%) 4th: 44 (15.12%) 5th: 24 (8.25%)	
Years between graduation and residency	1.35 ± 2.26	1.55 ± 1.86	0.740
Psychiatry as the first choice?	573 (88.83%)	/	/
External psychotherapy course?	81 (12.56%)	0 (0%)	<0.001*
Psychotherapy orientation	CBT: 59 (72.83%) Psychoanalytical: 6 (7.40%) Psychodynamic: 12 (14.81%) Phenomenological: 2 (2.47%) Systemic: 9 (11.11%)	/	/
Exchange abroad? (during medical degree)	171 (26.51%)	68 (23.37%)	0.200
Exchange abroad? (during residency)	6 (0.9%)	11 (3.78%)	0.003*
Victims of verbal aggression	267 (41.40%)	105 (36.08%)	0.057
Mean number of verbal aggressions	3.00 ± 8.28	4.33 ± 13.98	0.006*
Victims of physical aggression	71 (11.01%)	9 (3.09%)	<0.001*
Mean number of physical aggressions	0.26 ± 1.19	0.06 ± 0.34	0.072
Perceived burden of mental disorders (0%–100%)	54.91% ± 20.56%	61.35% ± 22.12%	<0.001*
Perceived likelihood of cure for mental disorders (0%–100%)	60.40% ± 20.36%	58.90% ± 23.17%	0.322
Likelihood to disclose personal diagnosis of a mental disorder with colleagues (0%–100%)	56.32% ± 28.13%	46.09% ± 28.60%	<0.001*
Likelihood to disclose a family member's diagnosis of mental disorder with colleagues (0%–100%)	62.43% ± 27.97%	48.12% ± 29.42%	<0.001*
Frequency of supervision (average number of sessions per month)	None: 271 (42.01%) Once: 105 (16.28%) Twice: 48 (7.44%) Three times: 40 (6.20%) Four times: 92 (14.26%) Five or more: 89 (13.80%)	None: 209 (71.82%) Once: 29 (9.97%) Twice: 16 (5.50%) Three times: 10 (3.44%) Four times: 4 (1.37%) Five or more: 23 (7.90%)	<0.001*

Note: Statistical significance between continuous variables given by two-tailed *t*-tests. Statistical significance between categorical variables given by chi-square.
*$p < 0.05$.

measure of the study—namely occupational distress—were investigated within psychiatry residents. Results are reported in Table 3a. Emotional exhaustion was negatively associated with the frequency of clinical supervisions by senior psychiatrists, neuroticism, and adverse childhood events (physical abuse). Conversely, emotional

TABLE 2 Psychometric characteristics.

	Psychiatry trainees (mean ± SD)	Other medical residents (mean ± SD)	*p*-Value
BFI agreeableness	6.40 ± 1.61	6.59 ± 1.66	0.231
BFI conscientiousness	7.36 ± 1.46	7.54 ± 1.68	0.238
BFI neuroticism	6.04 ± 1.94	6.42 ± 2.08	0.002*
BFI extroversion	6.07 ± 1.72	6.05 ± 1.86	0.629
BFI openness	7.38 ± 1.73	6.90 ± 1.89	0.002*
DERS non-acceptance	13.60 ± 5.61	13.91 ± 5.92	0.810
DERS goal-direction	12.51 ± 4.27	13.91 ± 4.54	0.479
DERS strategies	16.27 ± 6.00	16.49 ± 6.72	0.916
DERS impulse	10.37 ± 4.22	10.82 ± 4.61	0.803
DERS clarity	10.29 ± 3.59	10.71 ± 4.03	0.656
DERS awareness	12.79 ± 4.00	14.56 ± 4.81	<0.001*
DERS total	33.43 ± 9.22	36.09 ± 9.94	0.003*
CTQ emotional abuse	7.80 ± 0.3.53	6.91 ± 3.04	<0.001*
CTQ physical abuse	5.81 ± 2.17	5.58 ± 1.84	0.073
CTQ sexual abuse	5.32 ± 1.59	5.28 ± 1.45	0.459
CTQ emotional neglect	10.65 ± 4.15	8.98 ± 3.84	<0.001*
CTQ physical neglect	6.23 ± 2.03	5.91 ± 1.93	0.027*
CTQ total	5.33 ± 0.97	5.26 ± 0.97	0.533
ECR avoidance	3.40 ± 0.50	3.30 ± 0.54	0.008*
ECR anxiety	3.04 ± 1.02	2.91 ± 1.08	0.004*
MBI emotional exhaustion	18.71 ± 10.86	20.74 ± 11.07	0.064
MBI depersonalization	6.18 ± 5.38	7.12 ± 5.94	0.017*
MBI personal accomplishment	33.80 ± 6.94	34.85 ± 7.35	0.013*
COPE social	33.58 ± 6.72	32.29 ± 7.50	<0.001*
COPE avoidance	24.70 ± 6.10	24.32 ± 5.66	0.075
COPE positive	32.18 ± 5.38	32.31 ± 5.48	0.088
COPE problem	32.16 ± 5.37	32.55 ± 6.20	0.033*
COPE transcendence	17.49 ± 4.08	18.79 ± 4.57	<0.001*
ICQ initiation	25.68 ± 6.24	25.56 ± 6.85	0.684
ICQ negative assertion	25.89 ± 4.77	26.28 ± 5.62	0.068
ICQ disclosure	24.12 ± 5.77	23.08 ± 6.37	0.129
ICQ emotional support	30.20 ± 4.49	29.25 ± 5.33	0.196
ICQ conflict management	26.68 ± 4.73	26.30 ± 4.87	0.609

Note: Statistically significant differences by linear regression, with the group as covariate (adjusted by age, gender, and site of enrolment).
*$p < 0.05$.

exhaustion was positively associated with the number of verbal aggressions, and lack of emotional clarity. Depersonalization was negatively associated with the frequency of clinical supervisions by senior psychiatrists, transcendence as a coping strategy, and competence to grant emotional support to others. Depersonalization was positively associated with the perceived stigma of receiving a diagnosis of mental disorder, number of verbal aggressions, difficulties in engaging in goal-directed behavior and avoidance as a coping strategy.

Personal accomplishment was negatively associated with the perceived stigma of receiving a diagnosis of mental disorder, the number of physical aggressions experienced, difficulties in engaging in goal-directed behavior, childhood adverse events (physical abuse), and avoidance as an attachment style. By contrast, personal

TABLE 3a Predictors of occupational distress in psychiatry residents.

	Emotional Exhaustion	Depersonalization	Personal Accomplishment
Stigma for receiving a diagnosis	−0.028 (*p* 0.459)	0.086* (*p* 0.029)	−0.067* (*p* 0.049)
Stigma for cure	−0.054 (*p* 0.176)	−0.012 (*p* 0.771)	0.023 (*p* 0.531)
Self-disclosure	−0.082 (*p* 0.084)	−0.063 (*p* 0.198)	0.007 (*p* 0.871)
Disclosure for family	0.017 (*p* 0.712)	−0.036 (*p* 0.444)	0.011 (*p* 0.785)
Physical aggressions	0.012 (*p* 0.761)	0.013 (*p* 0.747)	−0.073* (*p* 0.038)
Verbal aggressions	0.087* (*p* 0.030)	0.094* (*p* 0.026)	0.001 (*p* 0.994)
Clinical supervisions	−0.092* (*p* 0.025)	−0.085* (*p* 0.046)	0.029 (*p* 0.437)
BFI agreeableness	−0.015 (*p* 0.723)	−0.023 (*p* 0.599)	0.016 (*p* 0.686)
BFI conscientiousness	−0.015 (*p* 0.727)	0.023 (*p* 0.604)	0.118* (*p* 0.003)
BFI neuroticism	−0.120* (*p* 0.007)	0.073 (*p* 0.131)	0.043 (*p* 0.312)
BFI extroversion	−0.091 (*p* 0.070)	−0.034 (*p* 0.510)	−0.001 (*p* 0.997)
BFI openness	0.064 (*p* 0.087)	0.006 (*p* 0.882)	0.034 (*p* 0.339)
DERS non-acceptance	0.027 (*p* 0.592)	0.073 (*p* 0.165)	0.022 (*p* 0.644)
DERS goal-direction	0.089 (*p* 0.076)	0.152* (*p* 0.004)	−0.150* (*p* 0.001)
DERS strategies	0.029 (*p* 0.652)	−0.038 (*p* 0.578)	−0.010 (*p* 0.868)
DERS impulse	0.009 (*p* 0.867)	0.007 (*p* 0.899)	−0.036 (*p* 0.477)
DERS clarity	0.123* (*p* 0.020)	0.089 (*p* 0.114)	−0.063 (*p* 0.213)
DERS awareness	−0.068 (*p* 0.169)	0.077 (*p* 0.132)	−0.077 (*p* 0.093)
CTQ emotional abuse	0.053 (*p* 0.350)	0.057 (*p* 0.359)	0.127* (*p* 0.022)
CTQ physical abuse	−0.107* (*p* 0.028)	−0.067 (*p* 0.177)	−0.116* (*p* 0.010)
CTQ sexual abuse	0.012 (*p* 0.771)	−0.032 (*p* 0.465)	−0.037 (*p* 0.338)
CTQ emotional neglect	0.074 (*p* 0.193)	−0.061 (*p* 0.324)	−0.101 (*p* 0.069)
CTQ physical neglect	0.025 (*p* 0.653)	0.095 (*p* 0.108)	0.072 (*p* 0.171)
ECR avoidance	0.042 (*p* 0.351)	−0.014 (*p* 0.774)	−0.113* (*p* 0.011)
ECR anxiety	0.008 (*p* 0.862)	0.025 (*p* 0.619)	−0.018 (*p* 0.692)
COPE social	−0.010 (*p* 0.838)	−0.010 (*p* 0.852)	−0.028 (*p* 0.546)
COPE avoidance	0.188 (*p* < 0.001)	0.210* (*p* < 0.001)	0.015 (*p* 0.741)
COPE positive	−0.010 (*p* 0.824)	−0.010 (*p* 0.846)	0.072 (*p* 0.107)
COPE problem	−0.006 (*p* 0.895)	0.011 (*p* 0.832)	0.088* (*p* 0.048)
COPE transcendence	0.017 (*p* 0.653)	−0.089* (*p* 0.032)	0.028 (*p* 0.445)
ICQ initiation	0.036 (*p* 0.506)	0.054 (*p* 0.354)	0.046 (*p* 0.379)
ICQ negative assertion	0.044 (*p* 0.383)	0.078 (*p* 0.141)	0.102* (*p* 0.031)
ICQ disclosure	−0.056 (*p* 0.246)	0.037 (*p* 0.465)	−0.031 (*p* 0.492)
ICQ emotional support	0.021 (*p* 0.667)	−0.133* (*p* 0.010)	0.238* (*p* < 0.001)
ICQ conflict management	−0.083 (*p* 0.070)	−0.040 (*p* 0.426)	−0.052 (*p* 0.241)

Note: Adjusted and standardized betas by linear regression (adjusted by age, gender, and site of enrolment). Dependent variable by column, independent variables by row.
*$p < 0.05$.

accomplishment was positively associated with problem-oriented coping strategies, as well as social competencies in negative assertion and emotional support.

In summary, these results show that both individual and occupational factors (such as the frequency of clinical supervisions attended, and the number of aggressions

TABLE 3b Predictors of occupational competences in psychiatry residents.

	Negative assertion	Emotional support	Conflict management
Stigma for receiving a diagnosis	0.043 (p 0.219)	0.019 (p 0.623)	−0.058 (p 0.126)
Stigma for cure	0.001 (p 0.999)	0.057 (p 0.165)	0.053 (p 0.187)
Self-disclosure	−0.044 (p 0.319)	−0.047 (p 0.330)	0.074 (p 0.120)
Disclosure for family	0.075 (p 0.077)	0.039 (p 0.402)	0.002 (p 0.957)
Physical aggressions	−0.017 (p 0.638)	−0.039 (p 0.321)	−0.050 (p 0.187)
Verbal aggressions	0.090* (p 0.015)	0.019 (p 0.642)	−0.032 (p 0.414)
Clinical supervisions	0.040 (p 0.290)	0.076 (p 0.071)	0.043 (p 0.289)
BFI agreeableness	−0.252* ($p < 0.001$)	−0.013 (p 0.748)	0.175* ($p < 0.001$)
BFI conscientiousness	0.023 (p 0.557)	0.169* ($p < 0.001$)	0.071 (p 0.097)
BFI neuroticism	0.198* ($p < 0.001$)	0.033 (p 0.479)	0.047 (p 0.298)
BFI extroversion	0.265* ($p < 0.001$)	0.165* ($p < 0.001$)	0.051 (p 0.202)
BFI openness	−0.038 (p 0.278)	0.075 (p 0.058)	0.067 (p 0.081)
DERS non-acceptance	−0.109* (p 0.021)	0.089 (p 0.087)	0.052 (p 0.306)
DERS goal-direction	−0.009 (p 0.851)	0.020 (p 0.705)	0.136* (p 0.007)
DERS strategies	0.028 (p 0.651)	0.016 (p 0.814)	−0.024 (p 0.717)
DERS impulse	0.011 (p 0.824)	−0.055 (p 0.329)	−0.198* ($p < 0.001$)
DERS clarity	−0.163* (p 0.001)	−0.088 (p 0.116)	−0.021 (p 0.702)
DERS awareness	−0.065 (p 0.154)	−0.168* ($p < 0.001$)	−0.052 (p 0.292)
CTQ emotional abuse	−0.007 (p 0.906)	−0.031 (p 0.618)	−0.076 (p 0.203)
CTQ physical abuse	0.025 (p 0.581)	−0.024 (p 0.628)	−0.026 (p 0.592)
CTQ sexual abuse	−0.004 (p 0.910)	−0.059 (p 0.173)	−0.019 (p 0.659)
CTQ emotional neglect	−0.004 (p 0.942)	0.043 (p 0.486)	0.069 (p 0.249)
CTQ physical neglect	−0.004 (p 0.939)	−0.040 (p 0.491)	0.041 (p 0.476)
ECR avoidance	−0.060 (p 0.169)	0.049 (p 0.307)	−0.046 (p 0.327)
ECR anxiety	−0.093* (p 0.042)	0.011 (p 0.825)	−0.068 (p 0.166)
COPE social	−0.086* (p 0.046)	0.030 (p 0.546)	−0.097* (p 0.045)
COPE avoidance	0.012 (p 0.801)	−0.001 (p 0.988)	−0.029 (p 0.552)
COPE positive	−0.043 (p 0.329)	0.151* (p 0.002)	0.184* ($p < 0.001$)
COPE problem	0.216* ($p < 0.001$)	0.030 (p 0.534)	0.077 (p 0.102)
COPE transcendence	−0.046 (p 0.213)	−0.008 (p 0.848)	0.012 (p 0.756)

Note: Adjusted and standardized betas by linear regression (adjusted by age, gender, and site of enrolment). Dependent variable by column, independent variables by row.
*$p < 0.05$.

experienced) influence burnout symptomatology in psychiatry trainees.

3.4 | Predictors of occupational competencies in psychiatry residents

Determinants of self-confidence in specific interpersonal competencies as related to clinical practice were also investigated in psychiatry residents, in order to offer preliminary evidence over specific professional competencies as in relation to mentalization skills and individual psychological characteristics. Results are reported in Table 3b. In particular, negative assertion was negatively associated with agreeableness, non-acceptance of emotional content, lack of emotional clarity, anxious attachment, social support as a coping strategy; while it was positively associated with the number of verbal aggressions, neuroticism, extroversion, problem-oriented coping strategies. Emotional support was negatively associated with lack of emotional awareness, and positively associated with consciousness, extroversion, problem-oriented

coping strategies. Conflict management was negatively associated with lack of impulse control, social support as a coping strategy, and positively associated with agreeableness, difficulty in engaging in goal-directed behaviors, problem-oriented coping strategies. In summary, these results show that specific occupational competencies are influenced both by mentalization skills (such as emotional clarity and emotional awareness, the adoption of efficacious coping strategies) and individual characteristics (such as personality factors).

3.5 | Structural equation model

SEM analysis was used to test the complex network of associations among the investigated variables, hypothesized a priori (Figure 1). The data collected from the entire sample confirmed the hypothesized relationships, as supported by excellent fit indices (robust TLI = 0.950, robust CFI = 0.972, robust RMSEA = 0.042, SRMR = 0.037). As expected, domains related to early adverse experiences, including insecure attachment styles, significantly predicted poor self-mentalization abilities, assessed through a latent variable with loadings on higher levels of emotional dysregulation and limited coping skills (Figure 1). Furthermore, diminished self-mentalization abilities were significantly correlated with reduced interpersonal competence, and both these domains, in turn, predicted a higher propensity for burnout (Figure 1).

Serial mediation analyses confirmed the presence of a statistically significant indirect effect of early traumatic experiences on increased propensity for burnout, mediated by the impairment of self-mentalization abilities and interpersonal competence in series (indirect effect: 0.27, 95% CI [0.18–0.41]). This serial effect was evident both through insecure adult attachment style (indirect effect through ECR Anxiety: 0.05, 95% CI [0.04–0.08]; indirect effect through ECR Avoidance: 0.01, 95% CI [0.00–0.02]); and independently (indirect effect: 0.21, 95% CI [0.13–0.32]).

Finally, a sensitivity analysis was conducted by repeating the model computation solely on the subgroup of psychiatry residents. The fit indices in this subsample remained identical to those of the analysis on the entire sample, with similar regression coefficients and overall effects.

3.6 | Differences of outcomes across years of training in psychiatry

In order to offer preliminary evidence over educational processes in psychiatry residents, cross-sectional differences across course years were assessed. Senior

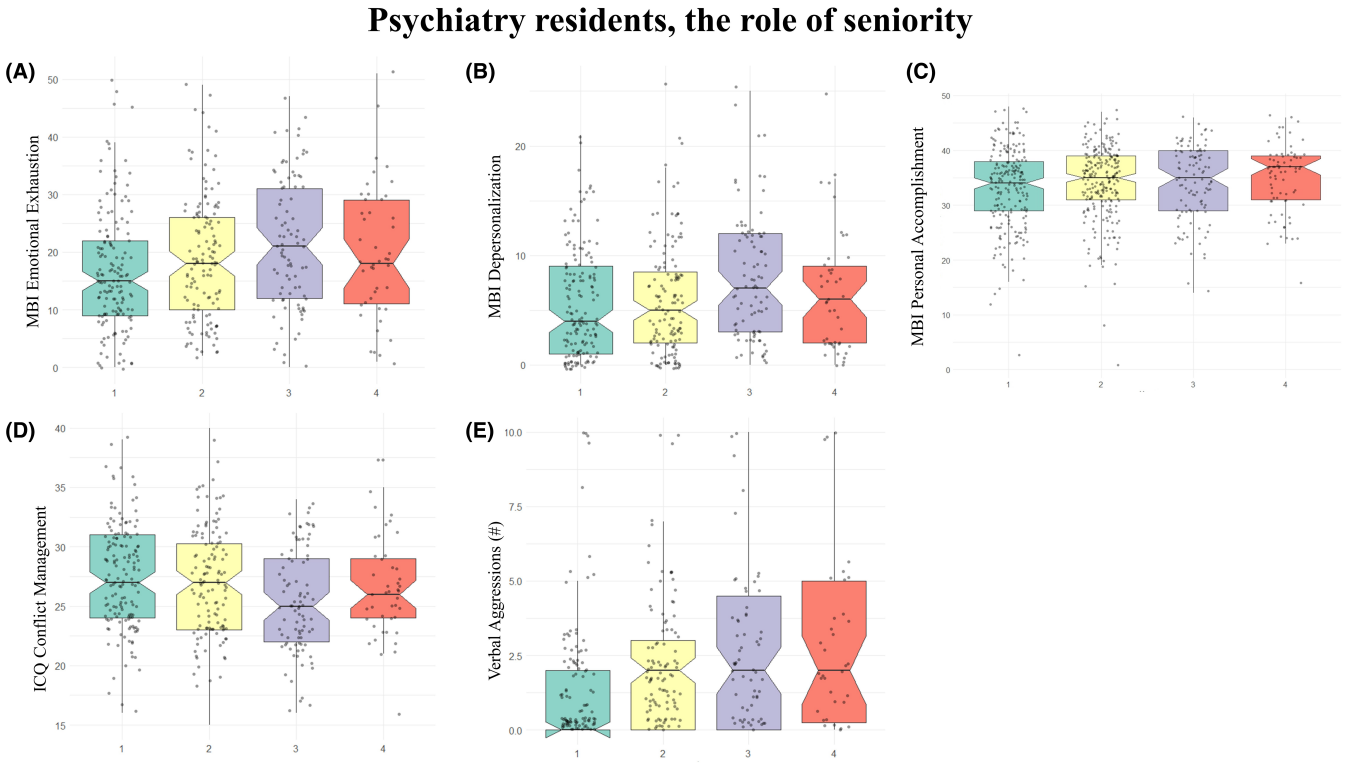

FIGURE 1 Psychiatry training, differences according to course seniority. MBI, Maslach Burnout Inventory[47]; ICQ, Interpersonal Competence Questionnaire.[46]

TABLE 4 Psychiatry training.

	Seniority
Stigma for receiving a diagnosis	−0.077 (p 0.073)
Stigma for cure	0.060 (p 0.165)
Self-disclosure	0.126* (p 0.003)
Disclosure for family	0.096* (p 0.026)
Physical aggressions	0.051 (p 0.233)
Verbal aggressions	0.227* ($p < 0.001$)
BFI agreeableness	−0.033 (p 0.455)
BFI conscientiousness	0.032 (p 0.461)
BFI neuroticism	0.012 (p 0.769)
BFI extroversion	−0.003 (p 0.943)
BFI openness	−0.060 (p 0.166)
DERS non-acceptance	0.012 (p 0.785)
DERS goal-direction	−0.062 (p 0.149)
DERS strategies	−0.039 (p 0.359)
DERS impulse	0.002 (p 0.957)
DERS clarity	0.011 (p 0.802)
DERS awareness	−0.014 (p 0.750)
ECR avoidance	−0.010 (p 0.813)
ECR anxiety	0.009 (p 0.828)
MBI emotional exhaustion	0.106* (p 0.013)
MBI depersonalization	0.095* (p 0.027)
MBI personal accomplishment	0.090* (p 0.040)
COPE social	0.033 (p 0.460)
COPE avoidance	0.015 (p 0.726)
COPE positive	0.027 (p 0.534)
COPE problem	−0.014 (p 0.744)
COPE transcendence	−0.079 (p 0.065)
ICQ initiation	−0.001 (p 0.993)
ICQ negative assertion	0.046 (p 0.285)
ICQ disclosure	0.012 (p 0.772)
ICQ emotional support	−0.053 (p 0.222)
ICQ conflict management	−0.111* (p 0.010)

Note: Adjusted and standardized betas by linear regression (adjusted by age, gender, and site of enrolment). Dependent variable by column, independent variables by row. Seniority as a continuous variable.
*$p < 0.05$.

psychiatric residents exhibited lower stigma against mental health in comparison to junior trainees (propensity for self-disclosure or disclosure of a family member diagnosis). Moreover, senior residents exhibited higher burnout symptoms (emotional exhaustion, depersonalization) but also higher personal accomplishment in comparison to junior trainees, as well as a lower appraisal for conflict management competencies. Different outcomes across years of training are reported in Table 4, and in Figure 2 for a graphical representation of mean values per training year.

4 | DISCUSSION

To date, our study represents the first nationwide, multicenter initiative aimed at establishing an empirically grounded model for evaluation of psychiatric training, from different perspectives. These include personal characteristics preceding the training, outcome measures of interpersonal abilities and burnout, and factors which might challenge these outcomes during the training program. The strengths of the study include the representativeness of the sample for psychiatry residents in training, at least at the national level. The overarching hypothesized theoretical model was supported by the current SEM analysis, suggesting that burnout in medical residents is positively influenced by poor mentalization functions, which are themselves associated with a history of early adverse life experiences. As expected, occupational distress was found to increase as a function of years of training among doctors undergoing training in psychiatry.

4.1 | Specific characteristics and self-selection of psychiatric residents as compared to other medical residents

Regarding self-selection, current findings suggest that medical doctors who pursue psychiatry training represent a distinct population among medical residents for several personal characteristics and for diverging life experiences. Contrary to popular belief, no evidence was gathered in favor of the hypothesis that medical doctors working in psychiatry exhibit higher neuroticism or worse mental health in comparison to their colleagues of other disciplines. Indeed, the opposite was found in the current sample, with psychiatry residents exhibiting a lower neuroticism and a relatively better occupational adjustment, at least in terms of burnout dimensions. The refusal of this popular belief is also corroborated by a recent study, which showed how psychiatrists differed to other physicians, in terms of personality factors, only for a relatively higher openness to experience, not for a greater neuroticism.[55]

Psychiatric residents also reported an increased prevalence of childhood traumatic experiences and insecure attachment. These results confirm that a career in psychiatry may be pursued by individuals with more emotional challenging early life experiences, but also a higher emotional awareness, and a lower stigma toward mental

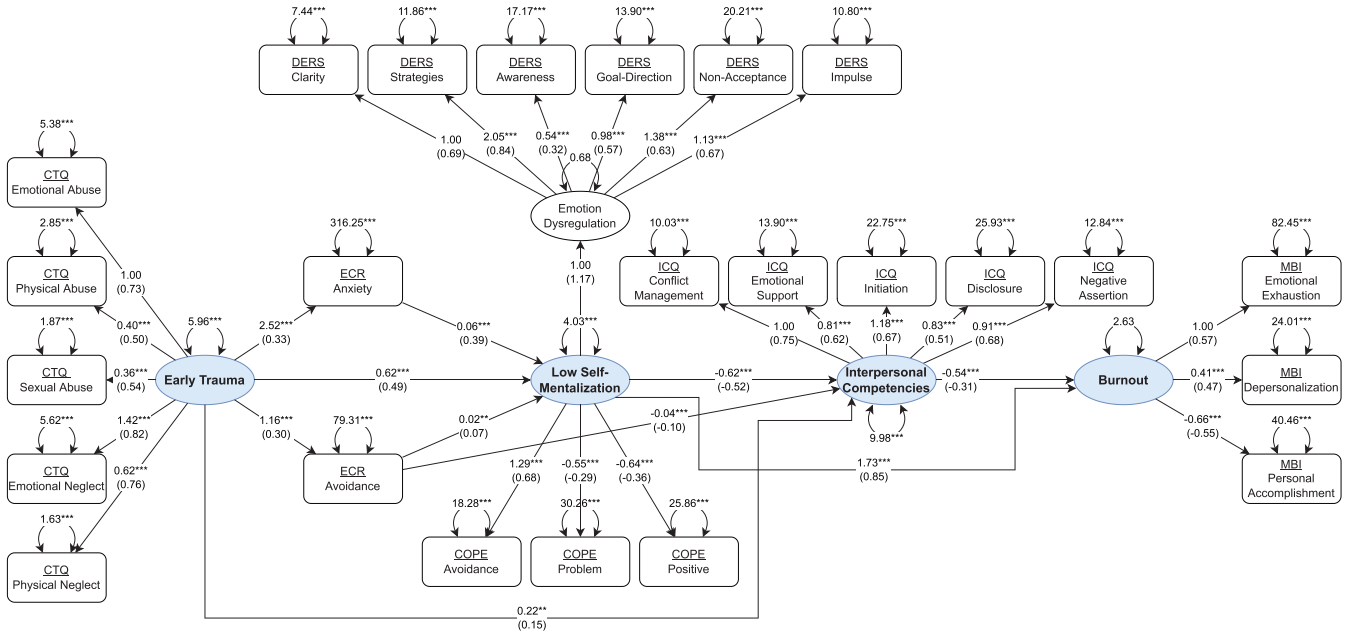

FIGURE 2 Path diagram of the proposed structural equation model. Latent variables are illustrated as ovals and observed variables as rectangles. Arrows illustrate loadings or regressions, with their corresponding coefficients and *p*-values (*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$); completely standardized coefficients are reported in parenthesis. CTQ, Childhood Traumatic Questionnaire.[42] DERS, Difficulties in Emotion Regulation Scale.[45] COPE, Coping Orientation to the Problems Experienced.[43] ICQ, Interpersonal Competence Questionnaire.[46] MBI, Maslach Burnout Inventory.[47]

distress and mental pain.[56–58] As a further support to this interpretation, even though psychiatric residents reported more childhood difficulties, they showed better coping strategies (greater reliance on social support), and emotional regulation skills (greater awareness) compared to their colleagues. Psychiatric residents were also more emotionally stable and more mentally open to experiences in comparison to other medical residents. These traits are both associated with a lower stigma against mental health and a higher propensity for treatment-seeking,[37,59] but also with a higher burden of internalizing symptoms.[60] These findings gain prominence considering how some of the factors associated with self-selection were also found to be positively associated with burnout, as well as worse professional competencies—crucial dimensions playing a role in educational and occupational outcomes.

4.2 | Outcomes connected with training experience and their predictors

Overall, psychiatric residents reported lower emotional distress (e.g., depersonalization symptoms) connected to their training activity as compared to other medical residents, even though they also reported a lower sense of personal accomplishment. This result is in contrast with the previous literature on the topic, that highlighted how psychiatrists might represent a group at higher risk of burnout among physicians.[55,61,62]

Burnout among psychiatry residents was here found to be predicted exactly by those personal factors negatively implicated in self-selection, namely a secure attachment and goal-directed coping strategies (i.e., which were found to be lower among psychiatry trainees). These results confirm previous evidence collected in similar samples.[48,63–65] Furthermore, also as previously observed,[29,66] a relevant role in predicting burnout was found for emotional regulation and coping strategies. In turn, individual emotional regulation skills were observed to impact on the risk of emotion exhaustion and depersonalization, especially regarding the capacity to engage in goal-directed behavior and distracting oneself from negative affect. Greater personal accomplishment was then associated with the degree of confidence in one's own capability to emotionally support others, which is an occupational-specific skill, arguable at the core of clinical practice in mental health. Additionally. our results show that, in contrast to previous theoretical considerations, agreeableness is negatively associated with positive interpersonal competencies,[67] possibly for a lower likelihood to reach effective assertivity in social interactions.

The proposed SEM model, first hypothesized on the basis of the previous literature, is coherent with mentalization theory and supports an extension of its implications for what concerns the therapeutic alliance, not only for the patient,[20] but also for the practitioner and trainee. The hypothesized model did not posit a separate mechanism of functioning in psychiatry trainees in comparison to other medical residents. Instead, a common, generalized framework was conceptualized at the basis of the mechanism linking childhood experiences, personality, and occupational factors.[68,69] Psychiatry training and its outcomes can then be better understood as exposing (possibly self-selected) individuals in the mental health profession with specific stressors. After this exposure, an interplay between individual and occupational factors takes place, and, accordingly to the resource-demand model of burnout, occupational distress observed.[70]

In summary, current results offer further evidence that coping and emotional regulation strategies are acquired and refined as a function of personal competences in the mentalization of the self, under the influence of childhood experiences, attachment style and personality factors.[25–28,71,72] Specific attitudes to mentalization processes—as related to early life trajectories—might be one of the components driving medical doctors to choose a discipline such as psychiatry, which requires understanding and connecting with patients' mental pain. Thus, if from one side young doctors who choose psychiatry might be driven by specific attitudes, it is also feasible that specific interpersonal and emotional competencies could differently challenge the training process and be differently modulated during the residency training program in comparison to other medical specialties.

4.3 | Comparisons across years of training in psychiatry

Even though the present phase of our study only allows cross-sectional comparisons, some suggestions can be derived from the mentioned analyses. Overall, current results suggest that senior trainees might be at increased risk for emotional exhaustion or depersonalization, as compared to more junior residents. These results confirm that burnout symptomatology can be posited as a function of occupational exposure, according to the resource-demand model of occupational distress.[73,74] Furthermore, a reduction of self-appraised conflict management skills was observed across years of training. This result was interpreted considering the increased frequency of aggressions experienced by senior residents. Future iterations of our study will assess whether diverging trajectories interest psychiatric residents for what concerns mentalization skills and interpersonal competencies, with the hypothesis that the specific clinical work within the therapeutic alliance in mental health, and the support of clinical supervisions by senior practitioners, foster a remodulation of personal and social skills in psychiatric trainees.

In fact, clinical supervisions were found to be a significant predictor of better personal outcomes in psychiatric trainees—that is, being predictive of a lower level of emotional exhaustion. This result confirms the need for clinical supervision expressed by psychiatric residents[5,15,75] and the protective effect of clinical supervision on burnout, a process which has been already observed in attending physicians.[76] The importance of this dialectic and maieutic activity has been extensively documented,[5,13,75] and formal or frontal teaching have been reported not to sufficiently address educational needs in psychiatry or psychotherapy trainees.[77] Clinical supervisions, oriented toward a better reflection on self-processes, as well as relational dynamics in the therapeutic setting, may have a better chance than frontal lectures to improve mentalization in psychiatric trainees.[77] Indeed, a previous study on more than 4000 psychotherapists, has shown that personal relationships with mentors positively influence the degree of perceived mastery in psychotherapy, while formal training, frontal lectures, and reading curricular resources might exert the opposite effect.[77]

The World Psychiatric Association[7] and the Accreditation Council for Graduate Medical Education[78] report interpersonal and communication skills as the heart of every healthcare relationship, but evidence-based training programs lack a solid empirical literature to base guidelines and interventions and incentivize nurturing therapeutic alliances, as well as to better foster mentor—mentee relationships. For these reasons, our study brings contemporary insight to the scientific literature on evidence-based training in medical specialties.

4.4 | Future directions and current limitations

The results of the present study should be considered in the light of some limitations. First, several variables, including interpersonal competences, have been assessed by means of self-reported instruments. Thus, individuals with less mentalization function might inflate the perception of their own skill.[79] Given the cross-sectional design of the present work, the specific effect of training on individual skills could not be assessed comprehensively. We will address this phenomenon in future studies from the same network, considering the causal interaction of different variables across different follow-up evaluations. In

particular, we aim to better characterize which processes are actually related to the modulation of individual factors within training in psychiatry. Other medical residents were selected through convenience sampling, and no specific selection for individual training programs was performed. This factor might introduce a selection bias, as trainees willing to participate could correlate with specific psychological constructs of interest. Furthermore, while the sample of medical residents in psychiatry reached a wide population at the national level, the sample of other medical residents was less representative of the underlying general population, as well as more limited in size. Some of the abovementioned limitation might be overcome in the next stage of the study, adopting longitudinal analyses, as the enrolled residents will be asked to participate in yearly follow-up evaluations. This longitudinal design will be able to confirm or refute current preliminary findings, according to which self-selection occurs to a certain degree for psychiatry residents before training itself, in terms of early life experiences and personality traits.

5 | CONCLUSIONS AND IMPLICATIONS OF THE RESULTS FOR PSYCHIATRY TRAINING PROGRAMS

The present results suggest that individuals who chose psychiatry might show distinct personal characteristics, with greater perception of childhood traumatic events and more attachment insecurity. At the same time, in the face of these difficulties in early life, psychiatry residents seem to have developed more efficacious coping strategies and emotional regulation skills as compared to other medical residents. These results provide a better characterization of the phenomenon of self-selection in psychiatric residents. The tested SEM model provided support for theoretical framework based on mentalization theory, where burn out was predicted by interpersonal competencies derived from mentalization functions (emotion regulation and coping strategies), which in turn were predicted by early life experiences. A redefinition of interpersonal competencies during psychiatry training was observed. Both occupational and individual determinants were observed as predictive of occupational well-being (burnout) and occupational mastery (interpersonal proficiency).

In conclusion, the preliminary results of the present study suggest important implications for psychiatry resident training, and potentially for all medical doctors in training. First, considering the role of adverse childhood experience and its prevalence in the included population, training programs could employ "trauma-sensitive" curricula and allocate a sufficient degree of resources to tackle this vulnerability factor. The current study may also offer preliminary evidence supporting the use of screening tools in medical specialty training—such as DERS and the COPE—which might be valuable for enhancing interpersonal competences. Screening tools could also prevent burnout, identifying residents at high risk of mental distress or occupational dissatisfaction. Additionally, the current study suggests that orientation services during medical education could employ a more specific psychological assessment, encompassing emotion regulation skills and interpersonal competencies, to better tailor individual recommendations and guidance. Finally, mentor–mentee pairing, rather than due to chance or occupational constraints alone, could be aided by a characterization of specific aims to target at the interpersonal level. A satisfying and well-developed occupational relationship with one's own supervisor could, on one hand, prevent emotional exhaustion,[75] and, on the other, enhance professional accomplishment,[80] fostering resilience and personal interest in the field.

In general, the authors of the present study believe that the investigation of educational outcomes could also aid in enhancing the long-term sustainability of healthcare systems at the global level. This position is coherent with a recent report by the World Health Organization indicating how healthcare systems face severe challenges related to the healthcare workforce.[81] In this regard, the agency identified work conditions and burnout as a primary driver of fragility for healthcare systems. In order to tackle this issue, the World Health Organization proposed to develop public policies to strengthen the education and training of healthcare workers, as well as to improve work-condition, and protect the mental well-being of the workforce.[81] The present study could then inform future evidence-based interventions on this topic.

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DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ETHICS STATEMENT

The study protocol was approved by the Ethics Committee of the coordinating center (University of Florence) on August 2021, later amended on March 2022 (reference CEAVC 20381 OSS).

INFORMED CONSENT STATEMENT

All participants gave written consent for participating in the study, and for the publication of results.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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