

Beyond logic: critical thinking as a resource for peace and psychological wellbeing

Rosa Angela Fabio and Caterina Chiara Ascone

Rosa Angela Fabio and Caterina Chiara Ascone are both based at the Department of Biomedical and Dental Sciences and Morpho-Functional Imaging, University of Messina, Messina, Italy.

Abstract

Purpose – *This study aims to examine whether critical thinking (CT), assessed using the critical reasoning assessment (CRA) as a performance-based measure and the critical thinking attitude (CTA) as a dispositional measure, relates to dysfunctional beliefs, peace attitudes and psychological well-being in 354 Italian university students. The study also explored mediating mechanisms linking CT, peace orientations and well-being.*

Design/methodology/approach – *Participants completed CRA, CTA and measures of dysfunctional beliefs, peace attitudes and well-being. Confirmatory factor analyses verified construct distinctiveness. Structural equation modeling tested associations among CT, peace attitudes, dysfunctional beliefs and well-being, and mediation analyses evaluated whether beliefs and peace orientations explained the CT–well-being link.*

Findings – *Both performance-based and dispositional CT positively predicted peace attitudes and well-being, and negatively predicted dysfunctional beliefs. Mediation analyses indicated that lower dysfunctional beliefs and stronger peace orientations partially explained CT's link to well-being. Alternative models fit comparably well, precluding causal interpretations.*

Research limitations/implications – *The cross-sectional design limits causal inference, and the sample restricts generalizability. Future research should use longitudinal or experimental designs and more diverse populations to clarify mechanisms. Findings highlight that CT, particularly as a reflective disposition, interacts with beliefs and social context to promote prosocial attitudes and psychological wellbeing.*

Practical implications – *Fostering CT dispositions can enhance peace attitudes and well-being. Educational programs promoting reflective judgment, open-minded reasoning and cooperation may reduce dysfunctional beliefs and support prosocial behavior. Integrating CT training with social-emotional development can advance individual well-being and promote harmonious social interactions.*

Originality/value – *This study uniquely integrates performance-based and dispositional measures of critical thinking to examine their associations with peace attitudes and psychological well-being, extending CT research beyond cognitive performance to prosocial and flourishing outcomes. By exploring dysfunctional beliefs as a potential mediator, the study highlights mechanisms linking reflective reasoning to peace-oriented behavior. Unlike prior work, it considers CT as a value-neutral capacity that can foster prosocial attitudes while remaining strategically applicable in competitive contexts. The findings provide novel insights for education and intervention design, suggesting that cultivating critical thinking dispositions can contribute to individual flourishing and the promotion of peace.*

Keywords *Critical thinking, Peace attitudes, Dysfunctional beliefs, Well-being, Structural equation modeling, Critical thinking performance*

Paper type *Research paper*

1. Introduction

Critical thinking (CT) and peaceful orientations represent key components of human interaction, with implications for mental health, social cohesion and individual well-being.

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Research across psychiatry (Cloninger, 2006, 2011), positive psychology (Peterson and Seligman, 2004), developmental psychology (Tomasello, 2019) and comparative studies (Ollinheimo and Hakkarainen, 2023) highlights the intertwined nature of reflective judgment, cooperation and well-being. Nevertheless, empirical investigations into how CT relates to peace attitudes remain limited, and questions remain about whether CT promotes peace, reflects broader cognitive dispositions or develops as a by-product of other social and educational goals. The present study aims to address these gaps by examining the relationships among CT, dysfunctional beliefs, peace attitudes and psychological well-being.

1.1 Defining key constructs: critical thinking, peace attitudes and well-being

CT is generally defined as a multifaceted cognitive process involving information analysis, evaluation of evidence, recognition of biases and formulation of reasoned judgments (Halpern, 2007; Hua *et al.*, 2023). Two broad traditions can be distinguished: CT as skill – the ability to evaluate arguments and evidence – and CT as disposition, reflecting open-mindedness, systematicity and a willingness to engage in reflection (Facione and Gittens, 2013, 2015). In the present study, CT was assessed using two instruments: the critical reasoning assessment (CRA), which measures CT as a performance skill, and the critical thinking attitude (CTA), which measures CT as a dispositional orientation. CT is considered a value-neutral capacity; while openness and fair-minded reasoning may promote empathy and constructive dialogue (Haskins, 2006; Braun *et al.*, 2020), it can also be instrumental in strategic reasoning, manipulation and even warfare (Bereczkei, 2018). The present study, therefore, emphasizes both the cognitive and dispositional dimensions of CT, focusing on how these facets relate to peace-oriented attitudes and well-being.

Peace is likewise multidimensional. Galtung (1969, 1996) distinguished negative peace (absence of violence) from positive peace (justice, equity and cooperation). Danesh's (2006) integrative theory describes peace as a state encompassing psychological, social, political and ethical dimensions, achieved when basic human needs are met. The peace attitude scale (PAS) (Broccoli *et al.*, 2021; Fabio *et al.*, 2022; Cavarra *et al.*, 2020) operationalizes this construct in terms of sociopolitical, interpersonal, environmental and caring factors, providing a comprehensive measure of peace-related orientations.

Well-being extends beyond the absence of illness and involves psychological resilience, emotional balance, social integration and perceived quality of life (WHO, 2012; Jarden and Roache, 2023). Empirical research shows that cognitive resources, including CT, are linked to adaptive coping, reduced distress and greater life satisfaction (Michaelson *et al.*, 2012). At the same time, dysfunctional beliefs – rigid and maladaptive cognitions such as catastrophizing or absolute duty – have long been associated with psychological distress (Beck and Beck, 1991). Understanding how CT interacts with such beliefs is therefore essential for clarifying its role in well-being.

1.2 Critical thinking, intelligence and social goals in complex global contexts

Addressing global challenges such as climate change, social polarization and armed conflict requires systemic thinking and advanced problem-solving skills (Funke, 2021). CT provides tools for evaluating evidence, questioning assumptions and integrating multiple perspectives. In practice, CT often develops within broader social and educational contexts, such as academic or professional goals (Halpern, 2007). While intelligence may facilitate reasoning and regulation of emotional responses (Funke, 2021; Bresciani Ludvik, 2023), and social motivations may influence how individuals apply CT, these factors are not empirically tested in the present study. Our focus remains on the associations among CT, peace attitudes and psychological well-being, with dysfunctional beliefs included as part of the well-being construct (Beck and Beck, 1991; WHO, 2012).

1.3 The present study

The present study is guided by three theoretical frameworks. CT theories (Facione and Gittens, 2013; Halpern, 2007) distinguish between CT as a cognitive skill and as a dispositional orientation, supporting the assessment of both performance and attitude. Peace theories (Galtung, 1969, 1996; Danesh, 2006) inform the conceptualization of peace attitudes, including both negative and positive dimensions. Theories on well-being and dysfunctional beliefs (Beck and Beck, 1991; WHO, 2012) explain how maladaptive cognitions can impact psychological well-being and how CT may counteract these effects. Together, these frameworks provide a clear rationale for examining the relationships among CT, peace attitudes, dysfunctional beliefs and psychological well-being. Building on these frameworks, the present study addresses three interrelated hypotheses:

- H1. Higher levels of CT (as measured by CRA and CTA) will be positively correlated with stronger peace attitudes and greater psychological well-being. By fostering reflective judgment and tolerance for diverse perspectives, CT may reduce cognitive rigidity and promote peace-oriented orientations (Facione and Gittens, 2013; Halpern, 2007).
- H2. CT (performance skill via CRA; disposition via CTA) will be negatively associated with dysfunctional beliefs. By encouraging evidence-based reasoning and openness, CT may help individuals challenge cognitive distortions and irrational beliefs, which are known to undermine mental health (Beck, 1993; Beck and Beck, 1991; Hua et al., 2023).
- H3. Peace attitudes and dysfunctional beliefs will act as mediators linking CT (CRA and CTA) to well-being. Specifically, stronger CT may reduce maladaptive cognitions and enhance peace orientations, thereby indirectly supporting psychological resilience and quality of life.

By testing these hypotheses, the study contributes to clarifying whether and how CT relates to psychological and social outcomes, while acknowledging that the relationships may be reciprocal rather than unidirectional.

2. Method

2.1 Participants

The sample consisted of 354 students (43.1% male, 55.7% female, 1.2% nonbinary/LGBTQ+) recruited from multiple departments of a large Italian university, including psychology, economics, education and science faculties. Participants ranged in age from 18 to 32 years ($M = 24.27$, $SD = 5.76$). Recruitment occurred during scheduled lectures, where researchers announced the project and invited students to participate on a voluntary basis. No monetary or academic incentives were provided. Although the manuscript initially referred to “random selection,” the procedure was in fact one of convenience sampling within intact classes. Participation was entirely voluntary, and students were assured that decline would not affect their coursework. This recruitment strategy limits the generalizability of the findings and is addressed in the discussion of limitations. specified interaction effect with adequate power. All participants provided informed consent electronically. The study was conducted in accordance with the ethical standards of the Italian Psychological Association and the Declaration of Helsinki. Ethical approval was obtained from the institutional review board (IRB) of the Ethics Committee for Psychological Research at the University of Messina (Protocol No. 1163889, October 2, 2024). Incomplete or partially filled questionnaires were excluded from analysis. Specifically, responses with over 10% missing data or incomplete critical variables (e.g., truthfulness judgments) were discarded.

2.2 Measures

2.2.1 Critical reasoning assessment. The CRA (Anghel et al., 2021; Fabio et al., 2025), was used as a performance-based measure of CT. Grounded in the Reflective Judgment Model

by King and Kitchener (1994, 2004), the CRA comprises three dilemmas exploring genetics versus choice, fairness and compassion. Participants responded to open-ended scenarios requiring argument evaluation, identification of assumptions and generation of reasoned conclusions. Responses were scored independently by two trained raters who were blind to participants' scores on the other measures. Inter-rater reliability was high ($ICC = 0.87$), and disagreements were resolved through discussion. The CRA assesses five dimensions: cognitive complexity, reasoning style, openness, nature of knowledge and nature of justification, each rated on a one–seven scale. Validation studies have shown that the CRA has good internal consistency ($\alpha = 0.83$) and acceptable test-retest reliability ($r = 0.88$). Higher scores indicated stronger reasoning performance.

2.2.2 Critical thinking attitudes. Dispositional CT was measured using the CTA scale (Facione, 2015), which assesses open-mindedness, truth-seeking and systematicity. Items were rated on a five-point Likert scale ranging from 1 (“strongly disagree”) to 5 (“strongly agree”). Internal consistency in the present study was acceptable ($\alpha = 0.82$).

2.2.3 Peace attitude scale. The PAS (Broccoli *et al.*, 2021) measures sociopolitical, interpersonal, environmental and caring dimensions of peace-related orientations. Participants rated 20 items on a five-point scale. Higher scores reflected stronger peace attitudes. Reliability in the present sample was high ($\alpha = 0.89$).

2.2.4 Dysfunctional beliefs questionnaire. Dysfunctional cognitions were assessed using the DBQ (Beck and Beck, 1991; Fabio *et al.*, 2021), which includes items measuring catastrophizing, absolutist thinking and maladaptive perfectionism. Items were rated from 1 (“not at all true”) to 5 (“very true”). Higher scores indicated stronger dysfunctional beliefs. Internal consistency in this study was satisfactory ($\alpha = 0.80$).

2.2.5 Well-being index. Subjective well-being was measured using a short multidimensional scale adapted from the WHO Quality of Life instrument (WHO, 2012). The scale covers psychological, social and environmental aspects of well-being. Scores ranged from 1 to 5, with higher values reflecting better perceived well-being. Cronbach's α in the current sample was 0.86.

2.3 Procedure

Before data collection, participants provided informed consent and were reminded of their right to withdraw at any time without penalty. Data collection sessions were conducted in small groups in quiet classrooms and lasted approximately one hour. Questionnaires, the CTA and the CRA were administered in counterbalanced order to minimize sequence effects. To reduce demand characteristics, the study was introduced neutrally as “a project on reasoning, beliefs and attitudes” without reference to expected relationships between CT and peace. The researchers avoided any explicit emphasis on peace or dysfunctional beliefs during instructions. Anonymity was ensured by coding responses with participant IDs.

2.4 Statistical analysis

Analyses were performed using SPSS 24.0 and AMOS 24.0. Descriptive statistics, reliability indices and bivariate correlations were computed for all variables. Confirmatory factor analyses (CFAs) were conducted to evaluate the measurement structure of the instruments and to test whether CT, dysfunctional beliefs, peace attitudes and well-being represented empirically distinct latent constructs prior to estimating the structural models. Structural equation modeling (SEM) was then applied to test hypothesized associations among CT (CRA for performance skill, CTA for dispositional orientation), dysfunctional beliefs, peace attitudes and well-being. Model fit was evaluated using multiple indices, following established recommendations (Hu and Bentler, 1999; Schermelleh-Engel, Moosbrugger, and Müller, 2003; Kline, 2016). A nonsignificant χ^2 statistic would indicate exact fit, but

given its sensitivity to sample size, relative fit indices were emphasized. For the comparative fit indices (CFI, TLI), values ≥ 0.95 indicate good fit and ≥ 0.90 acceptable fit. For the RMSEA, values ≤ 0.06 indicate good fit and ≤ 0.08 acceptable fit, with the 90% confidence interval also reported. For the SRMR, values ≤ 0.08 are considered acceptable. We focused on these indices because they are widely recommended and robust; other indices such as NFI and GFI were not reported, as they are less informative and less commonly used in recent SEM research. Given the cross-sectional nature of the design, all models were treated as correlational rather than causal. To assess the robustness of findings, alternative models were also tested, including one specifying dysfunctional beliefs as predictors of CT and another with reciprocal associations. Comparisons were based on χ^2 difference tests, AIC and BIC. The significance threshold was set at $\alpha = 0.05$.

3. Results

3.1 Descriptive statistics and correlations

Tables 1 and 2 presents descriptive statistics and correlations among all study variables. Mean scores and observed ranges were consistent with the theoretical scales. Reliability analyses showed good internal consistency for all instruments (α s between 0.80 and 0.89). CRA ratings demonstrated high inter-rater reliability (ICC = 0.87).

Zero-order correlations indicated that both CRA and CTA were positively associated with peace attitudes ($r = 0.42$ and $r = 0.39$, respectively, $ps < 0.001$) and well-being ($r = 0.31$ and $r = 0.28$, $ps < 0.001$), and negatively associated with dysfunctional beliefs ($r = -0.36$ and $r = -0.33$, $ps < 0.001$). Dysfunctional beliefs were inversely related to peace attitudes ($r = -0.40$, $p < 0.001$) and well-being ($r = -0.45$, $p < 0.001$). Peace attitudes correlated positively with well-being ($r = 0.38$, $p < 0.001$).

3.2 Measurement model

CFA were conducted to evaluate the measurement structure. A five-factor model (CRA, CTA, dysfunctional beliefs, peace attitudes, well-being) provided a good fit to the data,

Table 1 Summary of descriptive statistics for the investigated measures

Measures	Mean	SD	Min.	Max.
Critical reasoning assessment (CRA)	23.84	7.93	5	35
Critical thinking attitude (CTA)	70.67	7.74	12	98
Peace attitude scale (PAS)	116.29	12.96	86	140
Psychological well-being index (PGWBI)	93.05	14.39	78	103
Dysfunctional beliefs questionnaire (DBQ)	99.88	22.54	80	104

Source(s): Authors' own creation

Table 2 Correlation matrix of critical thinking measures with peace attitude, wellness and dysfunctional beliefs

Measures	CRA	CTA	PAS	PGWBI	DBQ
CRA	—				
CTA	0.395**	—			
PAS	0.593**	0.579**	—		
PGWBI	0.384**	0.402**	0.378**	—	
DBQ	-0.514**	-0.328**	-0.430**	-0.395**	—

Note(s): * = $p < 0.05$; ** = $p < 0.01$

Source(s): Authors' own creation

$\chi^2(179) = 412.65$, $p < 0.001$; $\chi^2/df = 2.31$; CFI = 0.94; TLI = 0.92; RMSEA = 0.056 (90% CI [0.048, 0.064]); SRMR = .045. Although the χ^2 test was significant – as expected given the sample size – the χ^2/df ratio was 2.3, below the recommended threshold of 3 (Bentler and Bonett, 1980; Schermelleh-Engel *et al.*, 2003; Kline, 2016), supporting the adequacy of the model fit. All standardized factor loadings were significant ($\lambda = 0.57$ – 0.83 , $ps < 0.001$).

3.3 Structural models

3.3.1 Hypothesized model. The hypothesized structural model specified that CRA and CTA would predict dysfunctional beliefs (negatively), peace attitudes (positively) and well-being (positively). Dysfunctional beliefs were modeled as a mediator between CT and well-being, and peace attitudes as a mediator between CT and well-being.

This model provided a good fit: $\chi^2(182) = 421.38$, $p < 0.001$; CFI = 0.94; TLI = 0.92; RMSEA = 0.057; SRMR = .047. Standardized path coefficients indicated that CRA and CTA significantly predicted fewer dysfunctional beliefs ($\beta = -0.29$, $p < 0.001$; $\beta = -0.24$, $p < 0.001$) and higher peace attitudes ($\beta = 0.33$, $p < 0.001$; $\beta = 0.27$, $p < 0.001$). In turn, dysfunctional beliefs predicted lower well-being ($\beta = -0.38$, $p < 0.001$), and peace attitudes predicted higher well-being ($\beta = 0.26$, $p < 0.001$). The indirect effects of CT on well-being through dysfunctional beliefs and peace attitudes were significant ($ps < 0.01$), suggesting partial mediation.

3.3.2 Alternative models. Two alternative models were tested to examine the directionality of associations.

Reverse model: dysfunctional beliefs predicting CT. This model showed a weaker fit, $\chi^2(182) = 479.22$, $p < 0.001$; CFI = 0.89; TLI = 0.87; RMSEA = 0.072; SRMR = 0.061.

Reciprocal model: bidirectional paths between CT and dysfunctional beliefs. This model fit similarly to the hypothesized model, $\chi^2(181) = 417.54$, $p < 0.001$; CFI = 0.94; TLI = 0.92; RMSEA = 0.056; SRMR = 0.046, but did not improve fit indices ($\Delta\chi^2 = 3.84$, ns).

Model comparisons using AIC and BIC confirmed that the hypothesized model was more parsimonious than the reverse and reciprocal models.

3.4 Summary of findings

Overall, results indicate that both performance-based and dispositional measures of CT are positively associated with peace attitudes and well-being, and negatively related to dysfunctional beliefs. Mediation analyses suggest that these associations are partly explained by reductions in dysfunctional beliefs and increases in peace orientations. However, the comparable fit of the reciprocal model indicates that the direction of influence cannot be determined with certainty.

4. Discussion

The present study investigated the relationships among CT, dysfunctional beliefs, peace attitudes and psychological well-being in a university sample. As expected, both performance-based (CRA) and dispositional (CTA) measures of CT were positively associated with peace orientations and well-being, and negatively related to dysfunctional beliefs. Structural modeling further indicated that dysfunctional beliefs and peace attitudes partially mediated the associations between CT and well-being. These findings are consistent with theoretical accounts that highlight reflective judgment as a psychological resource enabling individuals to challenge maladaptive cognitions and to adopt more cooperative, peace-oriented perspectives (Facione, 2015; Halpern, 2007).

4.1 Critical thinking as a value-neutral capacity

An important clarification concerns the conceptualization of CT. While our findings suggest that CT is linked to peace-oriented outcomes, CT itself is not inherently prosocial. As [Bereczkei \(2018\)](#) and others have noted, critical reasoning may also be applied strategically to manipulation, deception or warfare. Military strategy and Machiavellian tactics often require highly developed forms of CT. Thus, the associations found here likely reflect dispositional dimensions of CT – such as open-mindedness, fair-mindedness and systematic reflection – rather than CT as a purely cognitive skill. This distinction is crucial for both theory and practice, underscoring that interventions fostering prosocial applications of CT must address dispositions as well as abilities.

4.2 Directionality and alternative explanations

Although the hypothesized model (CT → dysfunctional beliefs/peace → well-being) fit the data well, the cross-sectional design does not permit causal inference. Reverse and reciprocal models provided comparable fit, suggesting that alternative explanations are equally plausible. For example, individuals with higher well-being may possess more cognitive resources to engage in critical reflection, while those experiencing high levels of dysfunctional beliefs may exhibit cognitive rigidity that impedes CT. This interpretation is consistent with findings on neuroticism and emotional reactivity, which often constrain reflective thought ([Cloninger, 2011](#)). Future research using longitudinal and experimental designs is needed to clarify the temporal ordering of these relationships.

4.3 The role of intelligence and social goals

Our study also raises questions about the role of intelligence. CT and intelligence are often intertwined in complex problem solving ([Funke, 2021](#)), and higher cognitive ability may facilitate both reasoning and the regulation of emotional responses that support well-being. However, intelligence may also enable strategic uses of CT for self-serving or competitive goals, not necessarily aligned with peace. Because intelligence was not directly measured in this study, its influence remains unexamined. Similarly, CT development is often driven by broader goals – such as educational attainment, social status or professional success – rather than by the intrinsic pursuit of reasoning skills ([Halpern, 2007](#)). These broader social and motivational factors may partly account for the observed links between CT, peace and well-being.

4.4 Methodological considerations

Several limitations should be acknowledged. First, the use of a university student sample restricts generalizability. University environments actively foster CT and may promote liberal or peace-oriented values; different results might be observed in military, vocational or rural populations. Replication in diverse contexts is needed. Second, despite careful efforts to present the study neutrally, classroom recruitment and researcher presence may have created subtle demand characteristics. Although instructions avoided explicit references to hypotheses, the academic setting itself may have influenced responses. Third, while CRA responses were scored blind to other measures, subjective elements in scoring cannot be entirely excluded. Finally, the cross-sectional design precludes strong conclusions about causality.

4.5 Contributions and implications

Despite these limitations, the study contributes to a growing literature on the psychological foundations of peace and well-being. A novel contribution is the demonstration that CT, assessed both as a performance skill and as a dispositional orientation, is linked to well-

being through its associations with dysfunctional beliefs and peace orientations. This mediation pathway has not been empirically tested before and highlights that reflective judgment and open-minded dispositions may function as sociocognitive resources that reduce maladaptive cognitions and foster peace-oriented attitudes.

By distinguishing between CT as cognitive skill and CT as disposition, the findings highlight the importance of reflective judgment, open-mindedness and evidence-based reasoning in supporting adaptive social and psychological outcomes. These results suggest that educational and clinical interventions targeting CT dispositions may have indirect benefits for reducing dysfunctional beliefs, enhancing well-being and fostering peace-oriented attitudes. Importantly, such interventions must explicitly frame CT not merely as a technical skill but as a reflective practice oriented toward fairness and constructive dialogue.

These findings have both theoretical and practical implications. Theoretically, they show that CT functions as a sociocognitive resource that can reduce dysfunctional beliefs and foster peace-oriented attitudes, extending its relevance beyond academic contexts. Practically, interventions that cultivate open-mindedness, reflective judgment and evidence-based reasoning may enhance cognitive performance while also promoting psychological well-being, resilience and constructive social engagement. This underscores the value of framing CT training as a tool for both personal development and civic competence.

4.6 Future directions

Building on these findings, several directions for future research can be identified. First, it would be valuable to examine how CT relates to broader personality dimensions, such as the Big Five traits (e.g. openness, conscientiousness), using short validated instruments (e.g. Gosling *et al.*'s TIPI). Given the focus on peace and cooperative orientations, measures of authoritarianism and conformity may also provide useful insights, as these traits are often linked to rigid belief systems and resistance to alternative perspectives. Integrating such measures could help clarify whether CT primarily contributes to well-being by counteracting rigidity and dogmatism, or whether its effects are more broadly moderated by dispositional tendencies.

Second, future studies should expand beyond university samples and include more diverse demographic groups, as well as cross-cultural comparisons. Broader sampling would make it possible to test whether the associations observed here generalize across educational, occupational and cultural contexts. In addition, longitudinal and experimental designs are necessary to move beyond cross-sectional associations, allowing researchers to test causal pathways and to estimate the temporal stability of the links between CT, dysfunctional beliefs, peace orientations and well-being.

Finally, the present findings suggest both theoretical and practical implications. Theoretically, they reinforce the view of CT as a value-neutral capacity that acquires prosocial significance primarily through its dispositional and motivational contexts. Practically, they point to potential interventions in educational and professional settings: fostering dispositions of open-mindedness and fair-minded reflection could strengthen individuals' resilience to dysfunctional beliefs, support constructive conflict engagement and promote psychological well-being. For practitioners, brief assessments of CT dispositions, personality traits and authoritarian tendencies could inform targeted training programs aimed at cultivating reflective reasoning in ways that are both cognitively rigorous and socially constructive.

5. Conclusion

This study demonstrated that both performance-based and dispositional measures of CT are associated with reduced dysfunctional beliefs, stronger peace attitudes and greater psychological well-being in a sample of university students. Mediation analyses suggest

that CT may contribute to well-being indirectly through its associations with cognitive flexibility and peace orientations. However, the comparable fit of alternative models underscores that causality cannot be inferred from the present data.

Beyond these empirical findings, the present study advances the literature by clarifying the unique contribution of CT to peace and well-being. While research in positive psychology has highlighted affective and motivational resources such as optimism, resilience and meaning-making, our results underscore the role of reflective and evaluative cognitive processes. A novel contribution of this work is the demonstration that CT, conceptualized both as skill and as disposition, exerts its influence on well-being through reductions in dysfunctional beliefs and increases in peace-oriented attitudes. To our knowledge, this mediation pathway has not been empirically tested before. In contrast with the predominant framing of CT as an academic competence in educational contexts, we demonstrate its relevance as a sociocognitive capacity that supports conflict transformation and psychological wellbeing.

Our contribution also extends existing work on openness in conflict. Bar-Tal *et al.* (2021) have shown how closed-mindedness exacerbates intergroup tensions, whereas our findings suggest that CT may serve as a cognitive antidote to such closure. By fostering reflective evaluation and openness to alternative perspectives, CT emerges not only as an educational competence but also as a civic and psychological asset, with implications for both individual well-being and societal resilience.

Taken together, the findings support a nuanced view of CT: as a value-neutral cognitive capacity that, when accompanied by dispositions such as open-mindedness, may foster peace and psychological wellbeing, but can also be deployed for competitive or manipulative ends. Future research should employ longitudinal and cross-cultural designs, incorporate measures of intelligence and motivation and extend investigations to more diverse populations. Such studies will be essential to determine the conditions under which CT contributes to peace and well-being, and to develop interventions that effectively cultivate reflective reasoning in the service of individual and collective resilience.

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Corresponding author

Rosa Angela Fabio can be contacted at: rafabio@unime.it

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