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Emotional resource as a psychological predictor of critical thinking in the digital society

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Abstract. In the context of information overload in the digital society and deliberate manipulative influences, critical thinking has become a fundamental psychological competence, while the psychological resources underpinning it remain insufficiently explored. The aim of this study was to investigate the role of emotional regulatory resources as a psychological factor influencing critical thinking among individuals in early adulthood within the digital society. The study was conducted on a sample of young adults (N = 274; aged 20-36 years), active users of the digital environment residing in Ukraine. A comprehensive set of methods was employed, including the Critical Thinking Test, the Difficulties in Emotion Regulation Scale (DERS), and the Intolerance of Uncertainty Scale (IUS-12), all in their Ukrainian-language adaptations. Statistical analysis included the Kruskal-Wallis test with pairwise comparisons, Spearman's rank correlation analysis, and multiple regression analysis using the stepwise method. Comparative analysis across groups with different levels of critical thinking revealed statistically significant differences in four of the six DERS subscales. The most pronounced differences were observed in lack of emotional clarity and difficulties engaging in goal-directed behaviour. Among the components of intolerance of uncertainty, significant group differences were identified only for prospective anxiety. Correlation analysis confirmed a differentiated pattern of associations: lack of emotional clarity demonstrated the strongest negative association with critical thinking, followed by difficulties engaging in goal-directed behaviour and prospective anxiety. Reactive-impulsive components (non-acceptance of emotional responses, impulse control difficulties, and inhibitory anxiety) showed no significant associations with critical thinking. The regression model explained 59.8% of the variance in critical thinking. Independent predictors included emotional clarity, goal-directed behaviour, absence of prospective anxiety, and emotional awareness. The findings indicate that only the cognitively oriented components of emotional regulatory resources possess predictive value for critical thinking, whereas reactive-impulsive components appear to be neutral. The practical significance of the findings lies in substantiating priority targets for psychological interventions aimed at fostering critical thinking among young adults. Developing emotional clarity and the ability to maintain

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cognitive goal orientation under conditions of distress may be incorporated into digital mental hygiene and media literacy programmes

Keywords: motional clarity; goal-directed behaviour under conditions of distress; tolerance of uncertainty; youth media literacy; digital environment; cognitive self-regulation; information manipulation

INTRODUCTION

The digitalisation of society has fundamentally transformed the conditions under which individuals process information and make decisions. In the context of information overload, algorithmically amplified misinformation, and deliberate manipulative influences, critical thinking (CT) has become a fundamental psychological competence rather than merely an educational construct. The ability to critically evaluate the credibility of information, identify logical fallacies, and resist cognitive biases has become an essential prerequisite for effective adaptation to the contemporary information environment. The development of CT is particularly important during periods of societal crisis, armed conflict, and the rapid expansion of digital technologies, when the quality of individual decision-making depends largely on the capacity for independent and well-reasoned analysis of information.

G. Pennycook & D.G. Rand (2021), in a comprehensive review, concluded that the inability to distinguish true information from misinformation is primarily attributable to a lack of analytical thinking and excessive reliance on cognitive heuristics, thereby shifting the research focus from the social context to the individual's internal psychological resources. A. Kwek *et al.* (2023), in a systematic review, further confirmed that disengagement from analytical thinking is a key psychological determinant of vulnerability to misinformation. They emphasised that protection against misinformation is provided not by analytical thinking per se, but by analytical thinking specifically directed towards evaluating the truthfulness of information. These findings indicate that effective resistance to information manipulation requires not only cognitive skills but also the psychological resources necessary to sustain their effective application.

This issue becomes even more acute under conditions of war and deliberate information aggression. Contemporary warfare is conducted not only on the battlefield but also within the media environment, where information operations are designed to create disorientation, foster polarisation, and undermine society's capacity for critical evaluation of events. M. Markova *et al.* (2024) found that one of the principal objectives of information warfare is to reduce the population's CT through targeted psychological operations that systematically impair individuals' ability to evaluate information rationally and promote enduring patterns of uncritical information processing. A. Paziuk *et al.* (2025), in their study of cognitive warfare in the context of the Russian-Ukrainian conflict, demonstrated that manipulative narratives generate self-reinforcing cycles of

misinformation which become increasingly self-sustaining over time, while the development of CT represents a strategic priority for societal resilience under conditions of hybrid aggression. L.V. Chernukha (2023) conceptualised CT as a means of overcoming information illiteracy within the wartime media environment, arguing that strategies for the critical evaluation of information constitute an essential component of psychological protection for all segments of the population, from ordinary citizens to professionals required to make decisions under conditions of informational uncertainty. In circumstances where information aggression is not a temporary phenomenon but a permanent feature of the environment in which individuals function, CT ceases to be merely an academic skill and becomes a fundamental instrument of psychological self-protection and the preservation of individual cognitive sovereignty.

Susceptibility to misinformation is not evenly distributed across the population but is determined by identifiable psychological factors. M. Sultan *et al.* (2024) found that young adults constitute a particularly vulnerable group with regard to online misinformation. This developmental period is characterised by high levels of digital engagement, intensive use of social media as the primary source of information, and epistemic self-regulatory mechanisms that are still developing. At the same time, the authors demonstrated that individual psychological characteristics, including analytical disposition, openness to experience, and reflective capacity, account for substantially more variance in susceptibility to manipulation than demographic variables. These findings indicate that protection against misinformation is fundamentally a psychological rather than a technical challenge and therefore requires the deliberate development of appropriate personal resources.

Among the psychological resources that support the stability of CT, emotional regulatory resources are of particular theoretical relevance. M. Li *et al.* (2022) demonstrated empirically that emotion regulation and CT are closely related constructs, with the ability to regulate one's affective states directly influencing the quality of analytical reasoning. S. Cheng (2022) confirmed this relationship in an independent sample, showing that emotion regulation is a significant predictor of performance on cognitive tasks requiring critical evaluation. Equally important is the construct of intolerance of uncertainty. I. Sahib *et al.* (2023), in a meta-analysis, found that intolerance of uncertainty and deficits in emotion regulation constitute closely related transdiagnostic mechanisms that jointly undermine individuals' capacity for balanced epistemic behaviour.

J.M. Marcos-Vilchez *et al.* (2025), in a systematic review of the effectiveness of CT training programmes, concluded that psychological interventions targeting individuals' internal resources are more effective in the long term than purely instructional approaches.

Despite the growing body of research, the component structure of the influence of emotional regulatory resources on CT remains insufficiently verified empirically. Specifically, it is unclear which components of these resources make an independent predictive contribution and whether different dimensions of intolerance of uncertainty are equally important for the level of CT among individuals in early adulthood within the digital society. Investigating these questions in a sample of young adults, who represent the most active users of the digital environment, constitutes an important scientific task. The aim of the present study was to determine the role of emotional regulatory resources as a psychological factor in the development of CT among individuals in early adulthood within the digital society. To achieve this aim, the following objectives were established: (1) to determine the nature and strength of the relationships between components of emotion regulation, tolerance of uncertainty, and the level of CT in a sample of young adults; and (2) to identify the independent predictive contribution of each component of emotional regulatory resources to the variance in CT using regression analysis.

LITERATURE REVIEW

The methodological foundations of contemporary CT research were established in the seminal work of P.A. Facione (1990), who, in the Delphi Report, defined critical thinking as purposeful, self-regulatory judgement and identified six core cognitive skills underlying it: interpretation, analysis, evaluation, inference, explanation, and self-regulation. This model remains the principal framework for the operationalisation of CT in contemporary empirical research. However, while it describes the structure of CT, it does not explain which psychological resources support its stable implementation under conditions of affective pressure and information overload. This issue has become particularly important within the context of the digital society. A central theoretical framework for understanding such resources is the process model of emotion regulation proposed by J.J. Gross (2015). At the level of component analysis, it is important to emphasise that not all components of emotion regulation are equally associated with cognitive processes. Gross distinguishes between antecedent-focused strategies (such as cognitive reappraisal and the identification of emotional states) and response-focused strategies (such as expressive suppression and impulsive reactions). For the effective implementation of CT, the former are of particular importance, among which the construct of emotional clarity plays a pivotal role. Emotional clarity refers to the ability to identify and differentiate one's own affective states. An unrecognised affective state does not disappear from the evaluative process; rather, it functions as an "invisible bias", systematically distorting judgement (Aldao *et al.*, 2010).

This mechanism explains why, under conditions of algorithmically amplified emotional content on digital platforms, emotional clarity becomes not merely an adaptive resource but a fundamental prerequisite for the epistemically independent evaluation of information.

The second key component of emotional regulation is the ability to maintain goal-directed behaviour under conditions of distress. A. Aldao *et al.* (2010), in a meta-analysis of 114 studies, demonstrated that this subscale is the most sensitive indicator of impaired executive control, even more so than the overall measure of dysregulation. In a digital environment, where constant task-switching and information overload are the norm, maintaining cognitive focus despite affective pressure becomes a critical mechanism for carrying out analytical tasks. At the same time, the reactive-impulsive components of dysregulation (a tendency to judge one's own emotional reactions and difficulties with impulse control) are, according to theoretical assumptions, less relevant to the quality of CT, as they do not directly interfere with the process of information processing. A similar distinction between cognitively oriented and reactive components is also evident in the structure of intolerance of uncertainty (IU). The two-factor model proposed by R.N. Carleton *et al.* (2007) raises an important question: are both dimensions of IU equally linked to CT. Theoretically, anticipatory anxiety is a chronic cognitive disposition that forms a persistent pattern of uncertainty avoidance and "premature judgement closure" – accepting the first plausible answer to reduce epistemic discomfort rather than to arrive at the truth. In a digital environment, where algorithmic systems offer "convenient" answers based on the user's previous behaviour, high predictive anxiety can create a synergistic risk: both the internal disposition and the external environment jointly push the individual towards uncritical confirmation of existing beliefs. Inhibitory anxiety, by contrast, is a situational affective-behavioural reaction and is not necessarily linked to the quality of analytical judgement as such. This distinction, in the context of CT, has not yet been empirically verified.

In Ukrainian psychology and related disciplines, research into CT is becoming particularly relevant in the context of full-scale war and escalating information threats. O.G. Rybchuk (2026) theoretically substantiates and empirically verifies the psychological characteristics of CT development in operational-level officers, identifying tolerance for uncertainty and predictive ability as psychological characteristics of CT in conditions of information complexity and time constraints, which conceptually supports the hypothesis that the relationship between IU and CT is dispositional rather than merely situational. In a broader social context, V. Kurilo *et al.* (2023) argue that citizens' cognitive skills constitute the primary defence against disinformation and cyber-manipulation, as information warfare is waged in parallel with conventional warfare. At a philosophical and practical level, S.V. Kutsepal (2022) regards CT as a "metacognitive strategy of resistance" that ensures an individual's intellectual autonomy in the face

of aggressive propaganda through the ability to identify manipulation and information sabotage. O.V. Zazymko & O. Shylovska (2024) have shown that the capacity for reflective contemplation of one's own experience acts as a metacognitive integrator, uniting the affective processing of situations with the making of informed decisions; that is, it fulfils a function structurally akin to emotional clarity within the framework of CT. This parallel is theoretically significant, as it suggests that emotional clarity and reflectivity may be manifestations of a single metacognitive-affective mechanism, the investigation of which requires separate empirical verification.

A synthesis of the available theoretical and empirical data reveals a significant gap in the scientific literature: despite the obvious theoretical link between the emotional-regulatory resource and metacognition, the component structure of this link remains empirically unverified. In particular, it remains unclear which specific components of the emotional resource (cognitively oriented or reactive-impulsive) act as independent predictors of the level of CT, and whether tolerance of uncertainty is equally significant across its various dimensions, or only in its anticipatory, dispositional dimension. Accordingly, the aim of the present study was to provide a theoretical rationale for and empirically verify the role of emotional regulatory resources as psychological predictors of CT among individuals in early adulthood within the digital society.

MATERIALS AND METHODS

The study was conducted within the framework of the psychological resource-based approach to the investigation of CT in the digital society. Within this framework, CT is conceptualised as an integrated psychological characteristic whose effective functioning is supported by a system of interrelated personal resources. Emotional resources are regarded as an inhibitory construct within this system, such that deficits in their adaptive functioning directly reduce an individual's capacity for epistemically sound evaluation of information in the digital environment. The study was implemented in three stages: a preparatory stage (operationalisation of constructs, selection of research instruments, and pilot testing of the authors' questionnaire), a main stage (data collection), and an analytical stage (statistical analysis and interpretation of the findings). Data were collected online using Google Forms during 2025-2026. Participation was voluntary and anonymous, and all participants provided informed consent in accordance with the ethical principles for research involving human participants established by the World Medical Association (2013). A purposive sampling strategy was employed, targeting individuals in early adulthood who were active users of the digital environment. Inclusion criteria were: age between 20 and 36 years, regular (daily) use of digital devices, and residence in Ukraine. The exclusion criterion was a self-reported history of psychiatric diagnosis. The final sample comprised $N = 274$ participants ($M = 27.1$ years), including 217 women (79.2%) and 57 men (20.8%). Educational

attainment was distributed as follows: 24.8% had incomplete higher education, 31.8% held a bachelor's degree, 33.6% held a master's degree, 8.8% possessed a doctoral or other academic degree, and 1.1% reported other educational qualifications. The sample size was considered statistically sufficient for multiple regression analysis and the detection of medium-sized effects (Field, 2018).

The level of CT was assessed using the Critical Thinking Test developed by L. Starke in the Ukrainian adaptation by E.L. Lutsenko (2014). Prior to categorising participants according to their level of CT, the normality of score distribution was examined using the Shapiro-Wilk test. As the distribution significantly deviated from normality ($W = 0.965$, $p < 0.001$), CT levels were established using quartile-based norming within the study sample as local norms. This procedure ensured adequate differentiation of participants for subsequent comparative analyses and was consistent with the recommendations of the adaptation's author regarding the development of local norms for specific social groups. Emotional resources were operationalised using two complementary instruments that capture both intrapersonal and interpersonal dimensions of emotional functioning within the digital context: the Difficulties in Emotion Regulation Scale (DERS) (Gratz & Roemer, 2004), in the Ukrainian adaptation (Sak & Fedotova, 2023), and the Intolerance of Uncertainty Scale-12 (IUS-12), in the Ukrainian adaptation by H.M. Hromova (2021).

The DERS assesses six components of difficulties in emotion regulation: non-acceptance of emotional responses, difficulties engaging in goal-directed behaviour under conditions of distress, impulse control difficulties, lack of emotional awareness, limited access to emotion regulation strategies, and lack of emotional clarity, defined as the inability to identify and differentiate one's own emotional states. Higher scores on each subscale indicate greater difficulties and, consequently, lower levels of emotional resources. The DERS was selected as the principal measure of emotional resources because it encompasses both procedural dimensions of emotion regulation (access to regulation strategies and impulse control) and cognitive-metacognitive dimensions (emotional awareness, emotional clarity, and goal-directed behaviour), all of which are functionally related to the processes underlying CT. The IUS-12 assesses two relatively independent dimensions: prospective anxiety, reflecting the tendency to cognitively anticipate the negative consequences of uncertainty and a desire to control the future, and inhibitory anxiety, representing an affective-behavioural response to present uncertainty that inhibits action. The inclusion of the IUS-12 in the operationalisation of emotional resources was based on the premise that intolerance of uncertainty is an emotional-cognitive construct reflecting individuals' affective responses to uncertain situations and directly influencing the quality of epistemic behaviour in digital environments, where informational uncertainty is the norm rather than the exception. Individuals with higher levels of intolerance of uncertainty are more likely to engage in premature closure of judgement and to

accept the first plausible explanation uncritically, both of which constitute direct obstacles to the effective application of CT. The regression model presented in this article was derived from a broader investigation of the psychological resources underlying CT in early adulthood and comprises eight predictors drawn from three resource domains. The present article focuses specifically on the four predictors representing emotional regulatory resources, whose contribution was analysed while controlling for the remaining variables in the model. Accordingly, detailed consideration is limited to predictors belonging to the emotional regulatory domain. The remaining variables were included in the regression model as control factors to ensure an accurate estimation of the unique contribution of the emotional regulatory indicators; however, their substantive interpretation falls beyond the scope of the present article and will be addressed in subsequent publications.

Statistical analyses were performed using IBM SPSS Statistics 23. The normality of distributions was assessed using the Shapiro-Wilk test. Comparative analyses between groups with different levels of CT were conducted using the Kruskal-Wallis test with post hoc pairwise comparisons. Spearman's rank correlation analysis was employed to determine the strength and direction of associations between variables. The predictive contribution of emotional resource indicators to the variance in CT was examined using stepwise multiple regression analysis. The assumptions of

regression analysis were evaluated by examining the distribution of standardised residuals and scatterplots. The level of statistical significance for all analyses was set at $p \leq 0.05$.

RESULTS AND DISCUSSION

Descriptive statistics for the DERS indicated a moderate level of difficulties in emotion regulation. The greatest difficulties were observed for limited access to emotion regulation strategies and lack of emotional awareness, whereas lack of emotional clarity and difficulties engaging in goal-directed behaviour were comparatively less pronounced. Based on quartile norming, the following CT categories were established: low (≤ 15 points; $n = 103$, 37.6%), moderate (16-18 points; $n = 119$, 43.4%), and high (≥ 19 points; $n = 52$, 19.0%). The Kruskal-Wallis test revealed statistically significant differences between groups with different levels of CT for four of the six DERS subscales, as well as for the overall DERS score. In every statistically significant case, individuals with higher levels of CT exhibited fewer difficulties in emotion regulation. The largest differences were observed for lack of emotional clarity and difficulties engaging in goal-directed behaviour, with exceptionally large differences in mean ranks between the low- and high-CT groups (191.32 versus 46.41 and 173.17 versus 40.93, respectively). By contrast, non-acceptance of emotional responses and impulse control difficulties did not differ significantly across CT groups (Table 1).

Table 1. Descriptive statistics for the DERS subscales and the results of the comparative analysis by levels of critical thinking

Subscale	M	SD	H (KW)	p
Rejection of emotional reactions	15.45	2.33	0.186	0.911
Difficulties with goal-directed behaviour	13.80	2.29	103.025	<0.001
Difficulties with impulse control	16.19	1.94	0.230	0.892
Lack of emotional awareness	18.35	2.74	19.921	<0.001
Limited access to coping strategies	22.24	2.61	6.669	0.036
Lack of emotional clarity	12.61	2.16	120.814	<0.001
Overall DERS score	98.65	7.50	91.678	<0.001

Note: KW – Kruskal-Wallis test; significant results are presented in *italics*

Source: compiled by the authors

According to the IUS-12 profile, the sample was characterised predominantly by a moderate level of intolerance of uncertainty (83.9%), with prospective anxiety being more pronounced than inhibitory anxiety. Significant differences in IUS-12 scores were identified for prospective anxiety and the overall intolerance of uncertainty score. In both cases, individuals with higher

levels of CT demonstrated lower rank scores (indicating lower intolerance of uncertainty and, consequently, greater tolerance of uncertainty). By contrast, no significant differences were found for inhibitory anxiety, suggesting that it is specifically the anticipatory, cognitive dimension of intolerance of uncertainty that is associated with CT (Table 2).

Table 2. IUS-12 scores: descriptive statistics and comparative analysis by levels of CT

Subscale	M	SD	H (KW)	p
Prospective anxiety	21.65	3.65	34.400	<0.001
Inhibitory anxiety	14.80	2.54	2.658	0.265
Total score	36.46	4.98	28.945	<0.001

Note: KW – Kruskal-Wallis test; significant results are presented in *italics*

Source: compiled by the authors

Spearman's rank correlation analysis confirmed and quantitatively refined the observed associations, revealing a differentiated pattern of relationships. Among the DERS subscales, lack of emotional clarity demonstrated the strongest negative association with CT. This construct reflects an inability to identify and differentiate one's own emotional states. The second strongest association was observed for the overall emotion dysregulation score, followed by difficulties engaging in goal-directed behaviour. A moderate negative association was found for lack of emotional awareness, while a weak negative association

was observed for limited access to emotion regulation strategies. By contrast, non-acceptance of emotional responses and impulse control difficulties showed no significant associations with CT. These findings indicate that cognitively oriented components of emotion regulation are significant correlates of CT, whereas reactive-impulsive components appear to be unrelated to it. For the IUS-12, significant negative associations with CT were identified for prospective anxiety and the total IUS-12 score. Inhibitory anxiety, however, showed no significant association with CT (Table 3).

Table 3. Spearman's rank correlations between emotional resource indicators and individual critical thinking (r_s , $N = 274$)

Indicator	r_s	p
DERS (difficulties in emotion regulation scale)		
Lack of emotional clarity	-0.625	<0.001
Difficulties engaging in goal-directed behaviour	-0.488	<0.001
Lack of emotional awareness	-0.229	<0.001
Limited access to emotion regulation strategies	-0.127	0.036
Non-acceptance of emotional responses	-0.044	0.465 (n.s.)
Impulse control difficulties	-0.021	0.728 (n.s.)
Overall indicator (integrative)	-0.514	<0.001
IUS-12 (intolerance of uncertainty scale)		
Prospective anxiety	-0.365	<0.001
Inhibitory anxiety	-0.096	0.111 (n.s.)
Overall IU index	-0.336	<0.001

Note: DERS and IUS-12 scores reflect deficits in emotional resources; n.s. = statistically non-significant result

Source: developed by the authors

Particular attention should be paid to the pattern of associations between the subscales of the two instruments. The total IU score demonstrated moderate positive correlations with prospective anxiety ($r_s = 0.846$; $p < 0.001$) and inhibitory anxiety ($r_s = 0.682$; $p < 0.001$), confirming that both belong to the same underlying construct. The correlation between the prospective anxiety and inhibitory anxiety subscales was moderate ($r_s = 0.237$; $p < 0.001$), indicating their relative independence. Correlations among the DERS subscales varied in both direction and strength. The total DERS score showed strong positive correlations with difficulties engaging in goal-directed behaviour ($r_s = 0.640$; $p < 0.001$), limited access to emotion regulation strategies ($r_s = 0.589$; $p < 0.001$), and non-acceptance of emotional responses ($r_s = 0.525$; $p < 0.001$). Notably, lack of emotional clarity, which emerged as the strongest correlational predictor of CT, demonstrated a somewhat weaker correlation with the total DERS score ($r_s = 0.503$; $p < 0.001$) and relatively weak correlations with most of the remaining DERS subscales, suggesting its relative independence within the structure of emotion regulation.

The associations between the IUS-12 and DERS were generally of moderate magnitude. The total IU score (IUS-12) was positively correlated with non-acceptance of emotional responses ($r_s = 0.290$; $p < 0.001$) and limited access to emotion regulation strategies ($r_s = 0.221$; $p < 0.001$) as measured by the DERS. Inhibitory anxiety was positively

associated with non-acceptance of emotional responses ($r_s = 0.395$; $p < 0.001$) and impulse control difficulties ($r_s = 0.249$; $p < 0.001$), but negatively associated with lack of emotional awareness ($r_s = -0.264$; $p < 0.001$), suggesting that individuals with lower emotional awareness paradoxically experienced lower levels of inhibitory anxiety. By contrast, prospective anxiety was virtually unrelated to most DERS subscales, with the exception of weak positive correlations with lack of emotional clarity ($r_s = 0.158$; $p = 0.009$) and the total DERS score ($r_s = 0.188$; $p = 0.002$), confirming the conceptual independence of the cognitive dimension of uncertainty-related anxiety from general difficulties in emotion regulation. Notably, lack of emotional awareness was negatively associated with inhibitory anxiety ($r_s = -0.264$; $p < 0.001$), impulse control difficulties ($r_s = -0.280$; $p < 0.001$), and non-acceptance of emotional responses ($r_s = -0.274$; $p < 0.001$), which, in addition to the interpretation outlined above, may indicate that reduced emotional awareness serves a compensatory function with respect to the reactive components of emotion dysregulation. Multiple regression analysis (stepwise method, $N = 274$) confirmed the statistical appropriateness of the procedure (normality of residuals: $M \approx 0$; $SD = 0.985$; range = -3.70 to 3.01; homoscedasticity: satisfied). The final model was statistically significant: $F(8, 265) = 49.238$; $p < 0.001$; $R^2 = 0.598$; Adjusted $R^2 = 0.586$. The model explained 59.8% of the variance in CT and refers to the

complete eight-factor model. Among the indicators of emotional regulatory resources, lack of emotional clarity made the largest standardised contribution ($\beta = -0.387$), followed by difficulties engaging in goal-directed behaviour

($\beta = -0.305$) and prospective anxiety ($\beta = -0.255$). Lack of emotional awareness retained an independent contribution after controlling for the remaining predictors ($\beta = -0.084$; $p = 0.044$) (Table 4).

Table 4. Regression model of predictors of critical thinking (stepwise method, $N = 274$)

Predictor	B	β	t	p	rs	p (rs)
Lack of emotional clarity (DERS)	-0.474	-0.387	-8.417	<0.001	-0.625	<0.001
Difficulties engaging in goal-directed behaviour (DERS)	-0.353	-0.305	-6.922	<0.001	-0.488	<0.001
Lack of emotional awareness (DERS)	-0.081	-0.084	-2.027	0.044	-0.229	<0.001
Prospective anxiety (IUS-12)	-0.185	-0.255	-6.184	<0.001	-0.365	<0.001

Note: dependent variable: CT; $R^2 = 0.598$; Adjusted $R^2 = 0.586$; $F(8,265) = 49.238$; $p < 0.001$; rs – Spearman's rank correlation coefficient, presented for comparison with the independent predictive contribution

Source: developed by the authors

The findings reveal the differentiated and hierarchically organised role of emotional regulatory resources as psychological predictors of CT in the digital society. The central conclusion of the study is that it is not emotion regulation, but rather its cognitively oriented components – namely, the ability to identify and differentiate one's own emotional states and to maintain goal-directed behaviour under conditions of distress – that constitute the principal correlates and independent predictors of CT. This conclusion should be considered in relation to the existing literature and interpreted within the context of the distinctive characteristics of the digital environment. The strongest association observed across the entire dataset was for lack of emotional clarity: the higher the level of CT, the more accurately individuals identified and differentiated their own emotional states. This finding is consistent with the concept of emotional granularity, developed by L.F. Barrett *et al.* (2001), according to which the ability to make fine-grained distinctions between one's affective states is a prerequisite for adaptive functioning in cognitively demanding situations. Within the digital environment, where emotional triggers – including algorithmically curated content, misinformation, and emotionally provocative social media discourse – are pervasive and persistent, the inability to distinguish “what I am feeling at this moment” directly undermines the capacity to evaluate information independently of its affective content. The strength of the observed association ($rs = -0.625$) deserves particular attention, as correlations of this magnitude are uncommon in non-parametric psychological research and suggest that emotional clarity is not merely an accompanying factor but a component structurally linked to CT.

The second strongest predictor, difficulties engaging in goal-directed behaviour, retained an independent contribution in the regression model even after controlling for lack of emotional clarity, indicating a distinct underlying mechanism. This finding is theoretically grounded in the concept of executive control, according to which maintaining cognitive focus under conditions of emotional arousal is essential for the implementation of analytical processes. Findings reported by A. Aldao *et al.* (2010), based on large clinical and non-clinical samples, demonstrated that this

DERS subscale is the most sensitive indicator of impairments in cognitive functioning. Specifically, the inability to maintain organised, goal-directed behaviour under affective pressure represents a common feature of both clinical syndromes and subclinical cognitive deficits. Within the digital context, this mechanism becomes particularly important, as information overload and the constant switching between tasks characteristic of interactions with digital platforms place continuous demands on the ability to sustain goal-directed behaviour. Under such conditions, deficits in this resource become especially detrimental (Ophir *et al.*, 2009).

By contrast, the reactive-impulsive components of emotion regulation (non-acceptance of emotional responses and impulse control difficulties) showed no significant associations with CT. This null finding is both methodologically important and substantively informative. It indicates that emotional reactivity as a temperamental characteristic is essentially unrelated to epistemic competence. Individuals may be emotionally reactive, inclined to judge their own emotional responses negatively, or prone to impulsive reactions while nevertheless retaining the capacity for critical analysis, provided that they are able to identify their emotional states and maintain cognitive focus.

The findings concerning intolerance of uncertainty, which serves a regulatory function for emotions in the digital environment, reveal a similar pattern of differentiation. Prospective anxiety (a cognitive orientation towards controlling the future and avoiding uncertain situations) was significantly negatively associated with CT and retained an independent predictive contribution after controlling for the DERS indicators. By contrast, inhibitory anxiety, as a situational affective response to present uncertainty, was unrelated to CT. In their two-factor model of intolerance of uncertainty, R.N. Carleton *et al.* (2007) argued that prospective anxiety is a more cognitively demanding construct associated with chronic epistemic dispositions, whereas inhibitory anxiety primarily reflects a situational, temperament-based response. The present study provides the first empirical test of this distinction directly in the context of CT, demonstrating that it is not intolerance of uncertainty in general that is relevant, but specifically its chronic,

cognitive, prospective component. This finding can be explained theoretically by the mechanism of premature closure of judgement: individuals with elevated prospective anxiety tend to accept the first plausible answer in order to reduce the discomfort associated with uncertainty, which is the direct antithesis of CT (Dugas *et al.*, 2004; Stanovich, 2011). In the digital society, where recommendation algorithms provide “convenient” answers based on users’ previous behaviour, high prospective anxiety may create a synergistic risk whereby both internal dispositions and the external environment jointly encourage the uncritical confirmation of existing beliefs.

Comparison of the present findings with related research reveals both consistency and novelty. L. Kraft *et al.* (2023), in a longitudinal study, demonstrated that emotional clarity during adolescence and early adulthood predicts academic achievement, a construct that conceptually overlaps with CT. M.N. Turliuc & M. Jitaru (2019) similarly confirmed an association between overall emotion regulation and analytical thinking in a student sample. However, none of the available studies has conducted a component-level analysis of the DERS in relation to CT using a regression approach capable of determining the independent contribution of each subscale while controlling for the others. This component-specific analysis therefore represents the principal scientific contribution of the present study. It demonstrates that emotional clarity and goal-directed behaviour are functionally distinct predictors of CT, rather than merely indicators of general emotional well-being.

In discussing these findings, attention should also be given to the contextual factor of the digital society as the environment in which CT is exercised. The findings of the present study consistently support this perspective. Among the sample of young adults, 37.6% of whom spent more than six hours online each day, it was the cognitively oriented components of emotional regulatory resources, rather than the duration of digital engagement, that emerged as the principal predictors of CT. This supports a qualitative rather than quantitative understanding of digital engagement and reinforces the rationale for incorporating emotional regulatory resources into models of digital literacy. Nevertheless, several limitations should be acknowledged, indicating directions for future research. The cross-sectional design does not permit conclusions regarding the direction of causal relationships. It is possible that higher levels of CT facilitate the development of emotional clarity rather than vice versa, or that both constructs develop concurrently under the influence of shared underlying factors. Longitudinal studies and experimental designs are therefore required to verify these causal relationships.

CONCLUSIONS

The findings of the present study confirm that an individual’s emotional resources constitute a significant psychological predictor of CT in the digital society. However, the nature of this relationship is differentiated rather than homogeneous. The strongest predictive role is played by

cognitively oriented components of emotional resources, particularly the individual’s ability to identify and differentiate their own emotional states and to maintain goal-directed behaviour under conditions of affective pressure. Analysis of the pattern of associations between indicators of emotion regulation and intolerance of uncertainty further demonstrated the heterogeneous nature of emotional regulatory resources. Specifically, lack of emotional clarity, which emerged as the strongest predictor of CT in the regression model, exhibited relative autonomy within the structure of emotion regulation, demonstrating weaker associations with most other DERS subscales than the remaining components. At the same time, prospective anxiety proved to be conceptually distinct from general difficulties in emotion regulation, as it was virtually unrelated to most DERS indicators.

These findings suggest that the key determinants of CT are not overall emotional well-being or the absence of negative emotional experiences, but rather specific cognitive-regulatory mechanisms associated with understanding one’s own emotions, maintaining goal-directed behaviour, and patterns of cognitive responding to uncertainty. These characteristics constitute the psychological foundation that enables independent and unbiased evaluation of information within the digital environment. By contrast, reactive-impulsive components of emotional resources, such as the tendency to judge one’s own emotional responses negatively and impulse control difficulties, were unrelated to the level of CT. This indicates that emotional reactivity as a temperamental characteristic does not hinder CT, provided that cognitive-regulatory mechanisms remain intact. Among the components of tolerance of uncertainty, only prospective anxiety demonstrated predictive value for CT. This construct is conceptualised as a chronic cognitive orientation towards avoiding uncertain situations that serves an emotion-regulatory function in the digital environment.

Inhibitory anxiety, despite its association with general anxiety, did not predict CT, highlighting the specific role of the anticipatory, dispositional dimension of intolerance of uncertainty as a component of emotional resources. At the same time, it should be noted that the explanatory power of the model ($R^2 = 0.598$) reflects the contribution of the complete eight-predictor model, whereas the emotion regulation variables demonstrate their unique contribution to CT after controlling for the influence of the remaining resource-related factors. This finding highlights the multidimensional nature of CT and the need for its further investigation within comprehensive resource-based models of personality. Future research should focus on verifying the causal nature of the identified relationships through longitudinal and experimental designs, as well as examining the mediating role of emotional resources in the relationship between motivational characteristics of personality and CT, which requires dedicated mediation analysis.

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Емоційний ресурс як психологічний предиктор критичного мислення особистості в цифровому суспільстві

Анотація. В умовах інформаційного перенасичення цифрового суспільства та цілеспрямованих маніпулятивних впливів критичне мислення набуває значення базової психологічної компетентності особистості, психологічні ресурси якої залишаються недостатньо вивченими. Метою дослідження було вивчення ролі емоційно-регуляторного ресурсу як психологічного чинника критичного мислення особистості раннього дорослого віку в цифровому суспільстві. Дослідження виконано на вибірці молодих дорослих (N = 274; вік 20-36 років), активних користувачів цифрового середовища, які проживають в Україні. Застосовано комплекс методів: Тест критичного мислення, Шкала труднощів емоційної регуляції (DERS) та Шкала інтолерантності до невизначеності (IUS-12) в українськомовних адаптаціях. Статистична обробка включала критерій Kruskal-Wallis з попарними порівняннями, кореляційний аналіз за Spearman та множинний регресійний аналіз методом покрокового включення. Порівняльний аналіз між групами з різним рівнем критичного мислення виявив статистично значущі відмінності за чотирма із шести субшкал DERS: найбільш вираженими є відмінності за відсутністю емоційної чіткості та труднощами із цілеспрямованою поведінкою. З-поміж компонентів інтолерантності до невизначеності значущі відмінності встановлено лише для прогностичної тривоги. Кореляційний аналіз підтвердив диференційовану структуру зв'язків: найсильніший зворотний зв'язок із критичним мисленням демонструє відсутність емоційної чіткості, далі – труднощі із цілеспрямованою поведінкою та прогностична тривога. Реактивно-імпульсивні компоненти (неприйняття емоційних реакцій, труднощі з контролем імпульсів та гнітюча тривога) значущих зв'язків із критичним мисленням не виявили. Регресійна модель пояснює 59,8 % дисперсії критичного мислення; незалежними предикторами є емоційна чіткість, цілеспрямована поведінка, відсутність прогностичної тривоги та усвідомлення емоцій. Встановлено, що предикторною силою щодо критичного мислення наділені виключно когнітивно-орієнтовані компоненти емоційно-регуляторного ресурсу, тоді як реактивно-імпульсивні є нейтральними. Практична цінність результатів полягає в обґрунтуванні пріоритетних мішеней психологічного сприяння розвитку критичного мислення молодих дорослих: розвиток емоційної чіткості та здатності зберігати когнітивну спрямованість в умовах дистресу може бути включено до програм цифрової психогігієни та медіаграмотності

Ключові слова: емоційна чіткість; цілеспрямована поведінка в умовах дистресу; толерантність до невизначеності; медіаграмотність молоді; цифрове середовище; когнітивна саморегуляція; інформаційні маніпуляції