

RELATION BETWEEN CLINICAL AND SOCIAL CHARACTERISTICS OF PATIENTS HOSPITALIZED FOR A DEPRESSIVE EPISODE AND SELF-EFFICACY: A STUDY USING A NEW RESEARCH DOMAIN CRITERIA (RDOCS) INSPIRED EVALUATION BATTERY

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SUMMARY

Background: Depression is a common disabling disease. Self-efficacy has been identified as a key factor in the prognosis of depression, as it influences how affected individuals cope and manage depressive symptoms.

Subjects and methods: This study aims to gain a deeper understanding of the factors that contribute to the development of personal self-efficacy by using a framework inspired by the Research Domain Criteria (RDoC). A total of 41 adult inpatients meeting DSM-5 criteria for major depressive disorder were assessed on a comprehensive battery of measures spanning emotional, cognitive, and social domains.

Results: Multiple linear regression analyses revealed that trait emotional intelligence and particularly its well-being and self-control subscales, was the most robust predictor of self-efficacy. Satisfaction with social support emerged as a secondary contributor.

Conclusions: These findings underscore the importance of targeting emotional intelligence and social support in therapeutic interventions for depression, suggesting that fostering adaptive emotion regulation and enhancing perceived support may bolster patients' confidence in their ability to manage depressive challenges.

Key words: self-efficacy - emotional intelligence - social support – RdoC - major depressive disorder - emotion regulation

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INTRODUCTION

Depression affects about 5% of adults worldwide (WHO) and is a leading cause of disability, impacting some 300 million people globally and significantly contributing to work impairment, including in Belgium (KCE 2017). As a multifaceted disorder, depression arises from biological, psychological, and social factors; disruptions in self-regulation play a central role (Rosas et al. 2019). Central to these disruptions is a loss of self-efficacy, the belief in one's ability to carry out actions necessary for desired outcomes (Bandura 1978; Thomas et al. 2016). When self-efficacy is low, individuals interpret challenges as threats, feel helpless in the face of setbacks, and experience more severe and persistent depressive symptoms. Conversely, high self-efficacy fosters resilience: individuals view obstacles as surmountable, attribute failure to effort rather than innate incapacity, and engage more actively in coping behaviors (Perraud 2000). Empirical studies confirm that stronger self-efficacy predicts fewer depressive symptoms, better adherence to treatment, and greater engagement in health-promoting activities across both clinical and general populations (McCusker et al. 2016; Derese et al. 2024). In the present study, we examined the relationships between multiple Research Domain Criteria (RDoC)-inspired dimensions, encompassing emotional intelligence, impulsivity, social support, therapeutic alliance, childhood trauma, and symptom severity mea-

asures, and perceived self-efficacy in a sample of adult inpatients with major depressive disorder. Identifying the strongest predictors of self-efficacy can guide interventions to boost patient autonomy and recovery.

SUBJECTS AND METHODS

Participants and procedure

Adult inpatients (18-70 years) meeting DSM-5 criteria for major depressive disorder (MDD) at two Belgian psychiatric units (Saint-Luc, Beau Vallon) (all native French speakers) were recruited in week one of admission. Exclusions: current substance use disorders (except tobacco/cannabis). After consent, patients completed self-report measures via REDCap®. The protocol was approved by the local ethics committee (Belgian Reg. No. B4032024000056).

Evaluation tool

We used a new, multidimensional assessment tool, developed by our team and grounded in both the RDoC framework and recovery-oriented principles, to profile mood disorders and major depression (Adam Henet P. et al. submitted). This platform was originally created to aid clinical decision-making and to give patients individualized feedback on their emotional strengths and vulnerabilities. The full list of self-reported questionnaires administered in this study is described in Table 1.

Table 1. PHQ-9 -Patient Health Questionnaire (Kroenke et al. 2001)

	N	Mean	SD	Median
Clinical symptoms and internal states				
Mood/Psychopathology				
Patient Health Questionnaire (PHQ-9)	41	18	4.9	19
Montgomery-Asberg Depression Rating Scale (MADRS)	25	23	6.3	22
Generalized Anxiety Disorder Scale (GAD-7)	41	14	4.1	14
Perceived Stress Scale (PSS)	40	28	5.1	29
Sleep related				
Insomnia Severity Index (ISI)	32	14	6.4	14
Sleep Hygiene Index (HSI)	41	17	6.8	18
Rumination - Ruminative Response Scale (RRS)				
Brooding	26	14	2.9	15
Reflection	26	12	3.5	12
Affect (PANAS)				
Positive affect	41	22	7.9	23
Negative affect	41	27	10.2	29
Cognitive/Regulatory traits				
Self-efficacy				
General Self-Efficacy Scale (GSES)	40	25	7.1	26
Impulsivity (UPPS)				
Lack of premeditation	41	8	2.7	8
Positive urgency	40	10	2.5	10
Sensation seeking	39	9	2.7	8
Negative urgency	40	10	3.2	11
Lack of perseverance	41	8	3.1	9
Trait Emotional Intelligence Questionnaire (TEIQue)				
Well-being	41	3	1.2	3
Self-control	41	3	1.0	3
Emotionality	41	4	0.9	4
Sociability	41	3	0.9	3
Self-motivation	41	3	1.3	3
Adaptability	41	4	1.5	4
Total score	41	282	64.8	280
Interpersonal and environmental variables				
Therapeutic alliance				
Working Alliance Inventory (WAI)	37	64	11.9	67
Social support -Social Support Questionnaire (SSQ-6 A)				
Availability	39	19	11.4	17
Satisfaction	39	27	5.5	28
Trauma -Childhood trauma questionnaire (CTQ)				
Physical abuse	40	8	4.8	5
Physical neglect	40	8	4.0	7
Emotional neglect	40	14	5.3	14
Emotional abuse	40	12	6.1	12
Sexual abuse	40	7	4.7	6
Total trauma exposure	40	2	2.2	2

MADRS - Montgomery-Åsberg Depression Rating Scale (Montgomery & Åsberg 1979); GAD-7 - Generalized Anxiety Disorder Scale (Spitzer et al. 2006); PSS-10 - Perceived Stress Scale (Cohen, Kamarck, et Mermelstein 1983); ISI -Insomnia Severity Index (Bastien, Vallières, et Morin 2001); HSI - Hypersomnia Severity Index (Kaplan et al. 2019); RRS-10 - Ruminative Response Scale (Conway et al. 2000); PANAS - Positive and Negative Affect Schedule (Watson, Clark, et Tellegen 1988); GSES - General Self-Efficacy Scale (Schwarzer et Jerusalem 1995); UPPS-P -Impulsive Behavior Scale (Lynam et al. 2006); TEIQue - Trait Emotional Intelligence Questionnaire (Petrides et Furnham 2001), WAI -Working Alliance Inventory (Horvath et Greenberg 1989), SSQ-6 -Social Support Questionnaire (Sarason et al. 1983), CTQ-SF -Childhood Trauma Questionnaire -Short Form (Bernstein et al. 1997).

RESULTS

Among 41 MDD inpatients (30 women, 11 men; mean age 44.0±13.8), nearly half (47.5%) held a tertiary degree, with the remainder spanning secondary to primary education levels. Table 1 presents descriptive statistics for all measures (Ns vary slightly due to missing data).

Correlation analysis

Spearman correlations were run between self-efficacy and all measures. Age, gender, and education showed no significant associations and were excluded from further analyses. Table 2 lists significant correlations ($p < 0.05$), both uncorrected and Bonferroni-adjusted. Seven variables were significant uncorrected, but only social support satisfaction, negative urgency, and emotional intelligence remained after correction.

Multiple regression analysis

A simultaneous multiple regression with social support satisfaction, negative urgency, and TEIQue total score yielded a highly significant model, $F(3,34)=27.07$, $p < 0.001$, explaining 70.5% of self-efficacy variance (adjusted $R^2=0.705$). In this model, TEIQue was the strongest predictor, social support satisfaction also contributed ($p=0.002$), while negative urgency was no longer significant ($p=0.453$) (Table 3). Exploring TEIQue subscales, all six correlated with self-efficacy ($\rho \geq 0.50$, $p < 0.001$), with “well-being” ($\rho=0.695$) and “self-control” ($\rho=0.679$) highest. A backward stepwise regression (AIC criterion) on these six facets retained only “well-being” ($B=2.68$, $SE=0.83$, $p=0.002$) and “self-control” ($B=2.76$, $SE=1.00$, $p=0.008$), accounting for 56.3% of variance (adjusted $R^2=0.563$).

DISCUSSION

We applied a unique RDoC-inspired, multidimensional tool to identify which domains most powerfully predict self-efficacy in depressed inpatients. Of 23 measures, only emotional intelligence, social support satisfaction, and negative urgency survived stringent correction, and only the first two contributed unique variance (70 %) in a simultaneous regression. Trait EI was the strongest self-efficacy predictor, consistent with research linking higher EI to lower symptom severity and better coping (Petrides et al. 2007; Mikolajczak et al. 2007). By showing that these competencies independently predict beliefs about one’s self efficacy, we extend prior work beyond symptom relief to a key motivational construct implicated in recovery trajectory. The prominence of the well-being facet, capturing optimism, self-esteem, and life satisfaction, echoes Bandura’s emphasis on positive outcome expectancies as a core source of efficacy beliefs (Bandura 1978). The self-control facet, encompassing emotion regulation and impulse inhibition, likely facilitates mastery experiences by allowing patients to persevere when confronted with dysphoric states.

Satisfaction with social support also significantly predicted self-efficacy, echoing findings that perceived support enhances confidence, is linked to fewer symptoms, better quality of life, faster recovery (Thomas et al. 2016), and further boosts efficacy (Fukui et al. 2010). According to Bandura (1978), social persuasion and vicarious success strengthen mastery beliefs, so strong support networks likely aid depression recovery by elevating self-efficacy.

Although negative urgency, therapeutic alliance quality, and insomnia severity initially showed significant correlations with self-efficacy, their influence disappeared (negative urgency presumably sharing variance

Table 2. Correlation analysis

Variable	Spearman’s ρ	p-value	Adjusted p-value (Bonferroni)
Social support satisfaction	0.613	< 0.001	< 0.001
Impulsivity – Negative urgency	-0.477	0.002	0.043
Therapeutic alliance	0.374	0.023	ns
Insomnia severity	-0.346	0.029	ns
Impulsivity – Lack of perseverance	-0.334	0.035	ns
Positive affect	0.442	0.044	ns
Emotional intelligence	0.741	< 0.001	< 0.001

Table 3. Multiple regression analysis

	β (std)	B (unstd)	SE	t-value	p-value	95 % CI for B	Signif
Intercept	-0.007	-2.421	0.094	-0.08	0.935		
Social support satisfaction	0.368	0.479	0.110	3.35	0.002	[0.19 ; 0.77]	**
Impulsivity-Negative urgency	-0.084	-0.188	0.111	-0.76	0.453	[-0.69 ; 0.32]	
Emotional intelligence	0.542	0.060	0.119	4.55	<0 .001	[0.03 ; 0.09]	***

with the “self-control” facet of emotional intelligence) once emotional intelligence and perceived social support were entered into the model. It indicates that the apparent effects of impulsivity, the care relationship, and sleep are largely absorbed by these central resources. By contrast, classical symptom load (depression, anxiety, perceived stress), rumination, sleep hygiene, and childhood trauma displayed no significant association with self-efficacy, reinforcing the idea that the belief in one’s self-efficacy depends less on symptom intensity than on transdiagnostic emotional competencies and interpersonal supports. The non significant association of childhood trauma with self-efficacy may reflect the low variability of CTQ scores in our relatively homogeneous inpatient sample, which reduced statistical power to detect any link.

This study’s small sample (N = 41) limits both power and generalizability. Replication in larger, multicenter cohorts is required. Its cross-sectional design precludes causal inference, higher self-efficacy may also enhance emotion regulation and perceived support, so longitudinal work is needed. Finally, because no depression-specific self-efficacy instruments are validated for this population (Rosas et al. 2019), we used the Generalized Self-Efficacy Scale which may overlook nuances specific to coping with depression (Bandura 1978).

CONCLUSION

In sum, among adult inpatients with major depressive disorder, emotional intelligence (especially well-being and self-control facets) and satisfaction with social support appear to be the most robust predictors of perceived self-efficacy. Interventions that target these dimensions (e.g. mindfulness-based emotion regulation, DBT distress tolerance, peer-led groups) (Smith et al. 2019; Thomas et al. 2016) may most effectively boost confidence, coping, and adherence. Future research should evaluate these combined interventions in larger, longitudinal trials to determine whether gains in self-efficacy persist and translate into reduced relapse rates. Finally, embedding our RDoC-based assessment tool into routine clinical practice, and providing personalized feedback on emotional strengths and support networks, may further reinforce self-efficacy and guide tailored, recovery-oriented treatment plans.

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Contribution of individual authors:

Avigaille Amory wrote the manuscript.

Simon Van Haverbeke collected the data and contributed to the study design.

Philippe de Timary supervised the project, reviewed the manuscript, and conceived the study.

Géraldine Petit conducted the data analysis, wrote the methodology and results sections, wrote and also supervised the overall manuscript.

All authors approved the final manuscript.

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