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PhD. THESIS

PSYCHOLOGICAL ADJUSTMENT AND MENTAL HEALTH IN THE CONTEXT OF THE COVID-19 PANDEMIC

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CLUJ-NAPOCA 2025

Table of Contents

CHAPTER I. THEORETICAL FRAMEWORK

1. Introduction

1.1. The COVID-19 Pandemic: A Global Health Crisis

In December 2019, a novel coronavirus emerged in Wuhan, China, identified as SARS-CoV-2, causing COVID-19 (Hsiang et al., 2020; Zhu et al., 2020). The virus shared approximately 79% genetic similarity with SARS-CoV and 96% with bat coronaviruses, suggesting zoonotic origins (Zhou et al., 2020). By March 11, 2020, with over 118,000 cases across 114 countries, World Health Organization [WHO] declared COVID-19 a pandemic (WHO, 2020a).

SARS-CoV-2 demonstrated exceptional transmissibility through presymptomatic and asymptomatic transmission, complicating containment efforts (He et al., 2020). Countries implemented non-pharmaceutical interventions including border restrictions, physical distancing, and lockdowns, affecting approximately 4.5 billion people (Hale et al., 2020; UNESCO, 2020).

The pandemic catalyzed accelerated vaccine development, compressing typical 10-15 year timelines to approximately 11 months through innovative trial designs and regulatory adaptations (Krammer, 2020; Slaoui & Hepburn, 2020). By late 2020, several vaccines achieved emergency authorization with efficacy ranging from 70% to 95% (Polack et al., 2020; Voysey et al., 2021).

Viral evolution complicated the pandemic trajectory, with variants including Alpha, Beta, Gamma, Delta, and Omicron demonstrating increased transmissibility and potential immune

escape properties (Vöhringer et al., 2021; Viana et al., 2022). These dynamics necessitated continuous refinement of containment strategies and vaccination approaches.

The pandemic's consequences extended beyond direct health impacts. Healthcare systems experienced unprecedented strain, disrupting essential services in approximately 90% of countries (WHO, 2020b). Global GDP contracted by 3.5% in 2020, substantially exceeding the 2008-2009 financial crisis (IMF, 2021). Labor markets lost the equivalent of 255 million full-time jobs, disproportionately affecting vulnerable groups (ILO, 2021). School closures potentially reduced affected students' lifetime earnings by 5% while widening educational disparities (World Bank, 2020). By March 2023, official deaths exceeded 6.9 million, with excess mortality estimates suggesting the true impact may be 2-3 times higher (Msemburi et al., 2024).

1.2. Psychological Impact of Pandemics

1.2.1. Acute Psychological Responses to the COVID-19 Pandemic

The acute pandemic phase prompted psychological distress, constituting what researchers named a parallel pandemic (Pfefferbaum & North, 2020). Early studies documented psychiatric outcomes, with 14-35% of participants reporting moderate to severe psychological symptoms (Li et al., 2020). A comprehensive study that included 78 countries documented reports of moderate to severe depressive symptoms from 26.3% of the participants, 31.9% reporting anxiety, and 32.8% stress (Alzueta et al., 2021). Fear and health anxiety emerged as predominant responses, with 71.3% of participants in a multinational study reporting COVID-19-related fear (Mertens et al., 2020). Uncertainty and perceived loss of control contributed significantly to psychological distress (Taha et al., 2020). Intolerance of uncertainty specifically predicted higher anxiety and depression (Rettie & Daniels, 2021). Quarantine and

isolation measures produced adverse psychological effects including post-traumatic stress symptoms, confusion, anger, and emotional exhaustion (Brooks et al., 2020). Sleep disturbances affected 35.7% of participants across 13 countries during the first pandemic year (Jahrami et al., 2021).

1.2.2. Long-term Psychological Adjustment to COVID-19

Longitudinal studies revealed different adjustment patterns. Four distinct trajectories were identified: consistently high distress (8%), increasing symptoms (17%), resilience after deterioration (15%), and stable mental health (60%) (Riehm et al., 2021).

Post-traumatic stress symptoms emerged particularly among healthcare workers and COVID-19 survivors, with prevalence rates of approximately 22% (Cénat et al., 2021). Pre-existing mental health conditions, young adult status, female gender, financial strain, and job insecurity predicted chronic or worsening distress (Batterham et al., 2021; Wright et al., 2021).

Evidence of post-traumatic growth also emerged, with individuals reporting enhanced appreciation for relationships, development of personal strengths, and deeper life appreciation (Waters et al., 2022).

1.2.3. Vulnerable Populations and Differential Psychological Impacts

Healthcare professionals experienced extraordinary challenges, with meta-analyses documenting 34.4% anxiety, 31.8% depression, and 29.9% insomnia prevalence (Santabárbara et al., 2021). Moral injury became prominent among clinicians facing system constraints (Borges et al., 2022).

COVID-19 survivors experienced acute psychological impact including fear, isolation-related distress, and direct neuropsychiatric effects (Rogers et al., 2020). Post-COVID syndrome

documented persistent neuropsychiatric symptoms including cognitive dysfunction, anxiety, depression, and post-traumatic stress six months post-infection (Badenoch et al., 2022).

Youth experienced unique challenges, with meta-analyses showing doubled depression and anxiety rates compared to pre-pandemic estimates (Racine et al., 2021). Older adults generally demonstrated greater psychological resilience than younger populations (González-Sanguino et al., 2020) except those with cognitive impairment and nursing home residents who faced severe consequences (O'Caoimh et al., 2020).

1.3. Health Behavior Theories and Pandemic Response

Health behavior theories provided conceptual frameworks for understanding protective behavior adoption during COVID-19 (Bish & Michie, 2010). The Health Belief Model demonstrated that perceived severity and benefits consistently predicted adherence to health beahviours, while perceived barriers showed negative associations (Limbu et al., 2022). Protection Motivation Theory revealed that coping appraisal components, particularly response efficacy and self-efficacy, strongly predicted protective behaviors (Prasetyo et al., 2020).

Theoretical limitations emerged during COVID-19. Traditional models often assumed rational decision-making with adequate deliberation time, yet pandemic context involved decisions under uncertainty, emotional distress, and time pressure (van Bavel et al., 2020). The protracted pandemic highlighted limitations in theories designed for initial adoption rather than long-term behavioral maintenance, underscoring challenges such as pandemic fatigue (WHO, 2020c; Michie et al., 2021).

1.4. Psychological Mechanisms Influencing Health Behaviors during the Pandemic

Risk perception emerged as fundamental, with emotional components often exerting stronger influences than cognitive assessments, particularly under uncertainty (Loewenstein et al., 2001). Longitudinal studies found risk perception peaked during infection surges but demonstrated threat habituation during extended high-risk periods (Siegrist & Bearth, 2021).

Trust in scientific and public health authorities consistently predicted greater adherence to protective measures (Han et al., 2021). However, trust fluctuated throughout the pandemic in response to changing guidance and political polarization (Eichengreen et al., 2023).

Information processing patterns significantly shaped behaviors. Confirmation bias contributed to polarized responses (Conway et al., 2021), while the infodemic created information overload and decision paralysis (Vraga et al., 2023). Tolerance for uncertainty significantly predicted both psychological adjustment and adherence during shifting scientific consensus (Rettie & Daniels, 2021).

Emotional responses played multifaceted roles. Studies documented inverted U-shaped relationships between fear and protective behaviors, with moderate anxiety promoting optimal adherence (Harper et al., 2020). Prosocial motivation consistently predicted compliance with protective measures, with collectivistic orientations predicting resilience against pandemic fatigue (Campos-Mercade et al., 2021).

Social norms strongly predicted adherence across diverse contexts (Goldberg et al., 2020). Family belief systems significantly influenced vaccination decisions, with family encouragement emerging as a strong predictor of vaccine uptake (Gong et al., 2023).

Vaccination decision-making represented a complex process impacted by multiple factors including perceived risk, vaccine confidence, conspiracy beliefs, trust, constraints, and collective responsibility (Lazarus et al., 2021; Campos-Mercade et al., 2021).

1.5. Psychological Mechanisms Influencing Mental Health during the Pandemic

Uncertainty intolerance demonstrated strong associations with elevated anxiety, depression, and distress (Rettie & Daniels, 2021) through pathways including rumination, perceived threat, and catastrophic interpretations (Satici et al., 2020).

Cognitive appraisal processes predicted elevated symptoms, while control-self appraisal and active emotional coping was associated with lower stress (Ali et al., 2022). Individuals interpreting the pandemic as a shared challenge rather than personal threat showed improved mental health and post-traumatic growth (Vazquez et al., 2021).

Adaptive coping strategies including positive reinterpretation and acceptance predicted better mental health, while avoidant coping consistently predicted poorer outcomes including emotional suffering and depression (Prati & Mancini, 2021). Psychological flexibility emerged as particularly adaptive, predicting better wellbeing and lower distress (Dawson et al., 2020).

Social connection mechanisms significantly influenced trajectories, with perceived social support proving protective despite physical distancing (Nitschke et al., 2021). Loneliness emerged as both consequence and powerful predictor of depression and anxiety (Williams et al., 2020).

Media consumption patterns influenced mental health, with extended social media use associated with greater distress (Riehm et al., 2020). Multiple resilience factors operated at

individual (positive emotion, meaning-making, cognitive flexibility), relational (social support, community identification), and structural levels (economic resources, healthcare access) (Killgore et al., 2023).

CHAPTER II. METHODOLOGY

1. Aims and Objectives of Research

Despite extensive pandemic research, significant gaps remain in understanding psychological adjustment mechanisms, particularly regarding how individuals maintain mental health across varying pandemic stress contexts. This thesis investigates psychological adjustment and growth mechanisms during COVID-19, following a progressive framework from general population stress adaptation through health decision-making under adversity, to post-traumatic growth following severe illness.

The research addresses four key questions: (1) How do coping strategies, psychological flexibility, and stress interact to impact mental health? (2) Which psychosocial factors predict vaccination intentions during prolonged stress? (3) How do severe COVID-19 survivors psychologically process experiences and achieve post-traumatic growth? (4) What factors impact vaccination decision-making among survivors?

Study 1 develops and tests a psychological adaptation model examining relationships between stress, psychological flexibility, coping mechanisms, and mental health outcomes. Study 2 examines how psychological resources and psychosocial factors predict vaccination intentions

during initial lockdown. Study 3 explores the psychological COVID-19 severe illness experience, examining the traumatic dimension of the illness and post-traumatic growth pathways. Study 4 investigates vaccination decision-making among survivors, examining how illness experiences shaped health decisions.

2. Research Methods

This thesis integrates quantitative and qualitative paradigms. Studies 1 and 2 utilize quantitative measures testing specific hypotheses, while Studies 3 and 4 employ qualitative methods exploring individual experiences. This sequential design establishes foundational frameworks through quantitative analysis, then explores mechanisms in greater depth qualitatively (Demkowicz et al., 2025).

2.1. Survey

Studies 1 and 2 employed cross-sectional online surveys utilizing secondary data from the international COVID-19 IMPACT project. Data were collected from Romanian participants between April-June 2020, coinciding with Romania's first lockdown. This approach maximized scientific value of existing data while avoiding participant burden during stressful periods (Kelly et al., 2024).

Study 1 examined psychological adaptation mechanisms through mediation and moderation analyses. Study 2 investigated vaccination intention predictors using validated measures of health beliefs, perceived stress, and social support. Inclusion criteria required participants aged ≥18 years with Romanian language capability. Data collection through secure Google Forms required approximately 20 minutes, with multi-channel distribution through university networks, professional associations, social media, and medical institutions.

2.2. Mediation and Moderation Analysis

Study 1 employed Hayes' PROCESS macro Model 4 for mediation analysis with 10,000 bootstrap samples to assess indirect effects (Hayes, 2017). Hierarchical multiple regression tested moderating effects of emotion-focused and problem-focused coping, with variables mean-centered and interaction terms added sequentially (Tabachnick & Fidell, 2019).

Study 2 utilized hierarchical multiple regression as primary analysis, entering predictor variables in specified blocks to evaluate relative contributions to vaccination intentions variance (Tabachnick & Fidell, 2019).

2.3. Thematic analysis

Studies 3 and 4 employed thematic analysis for theoretical flexibility and capacity to identify experiential nuances (Braun & Clarke, 2021). Both studies utilized combined inductive and deductive approaches, allowing data-driven insights while incorporating theoretical constructs (Roberts et al., 2019).

Analysis followed Braun and Clarke's (2021) six-phase framework: familiarization, systematic coding, collating codes into themes, reviewing themes, defining themes, and producing final analysis.

Inclusion criteria required participants aged ≥18 years with severe COVID-19 hospitalization history. Purposive sampling recruited participants through social media, personal contacts, and healthcare provider referrals. Semi-structured phone interviews conducted in Romanian (November 2022-April 2023) lasted approximately 40 minutes.

All studies adhered to 1964 Helsinki Declaration principles. Studies 1-2 received ethical approval from Cyprus's National Bioethics Committee (EEBK EP2020.01.60) and Babeș-Bolyai University. Studies 3-4 received approval from the Institute for Population and Human Studies Ethical Committee, Bulgarian Academy of Science (PD-2-140/15.08.22). Informed consent procedures ensured voluntary participation across all studies. Confidentiality protocols maintained data security through encrypted platforms, secure storage with anonymization, and compliance with data protection regulations.

CHAPTER III. ORIGINAL RESEARCH

1. Stress and Mental Health During COVID-19 Lockdown: A Mediation and Moderation Model Examining Psychological Flexibility and Coping Strategies

Introduction

The COVID-19 pandemic profoundly impacted mental health globally (Brooks et al., 2020). Evidence suggests individuals developed various adaptive responses to pandemic stress (Cholankeril et al., 2023). Research examining COVID-19 survivors revealed adaptation involves complex psychological processes (Shekriladze et al., 2021).

Psychological flexibility, involving skills for adjusting thoughts and behaviors to changing demands while focusing on meaningful life domains, represents a key mechanism in stress

adaptation (Kashdan & Rottenberg, 2010). Research shows psychological flexibility functions as both personal resource and adaptive response mechanism (Dawson & Golijani-Moghaddam, 2020).

Avoidant coping strategies prove particularly detrimental during crises (Fluharty et al., 2021; Rettie & Daniels, 2021). Studies document that stress-mental health relationships are mediated by avoidant coping, with higher stress predicting greater avoidance, subsequently predicting increased anxiety, depression, and distress (Leonti et al., 2024).

Emotion-focused coping strategies including positive reinterpretation, acceptance, and humor associate with better psychological adaptation (Folkman & Moskowitz, 2004). Evidence suggests adaptive emotion-focused coping may buffer against avoidance coping under stress (Aldao et al., 2010). Problem-focused coping supports better psychological functioning under stress, consistent with behavioral flexibility components (Cheng et al., 2014).

Despite understanding individual relationships, how different coping types work together remains unclear. This study investigates psychological mechanisms through which perceived stress influences mental well-being during Romania's initial pandemic phase, testing mediation and moderation models. Based on the existing literature and theoretical considerations, we formulated the following hypotheses:

H1: Psychological flexibility mediates the relationship between perceived stress and mental health outcomes, with higher perceived stress predicting lower psychological flexibility, that following predicts diminished mental health results.

H2: Avoidance coping mediates the relationship between perceived stress and mental health outcomes, with higher perceived stress predicting greater avoidance coping, that following predicts diminished mental health results.

H3: Emotion-focused coping moderates the associations between perceived stress and avoidance coping, specifically individuals with higher emotion-focused coping will demonstrate a weaker association in the perceived stress and avoidance coping relationship.

H4: Emotion-focused coping moderates the relationship between perceived stress and psychological flexibility, specifically that individuals with higher emotion-focused coping will demonstrate a weaker negative link in the perceived stress - psychological flexibility relationship.

H5: Problem-focused coping moderates the relationship between perceived stress and psychological flexibility, such that individuals with higher problem-focused coping will demonstrate a weaker negative link in the perceived stress - psychological flexibility relationship.

Method

Participants: 413 Romanian adults (M age = 28.2, SD = 9.51), 71.7% female.

Measures: Perceived Stress Scale ($\alpha = 0.90$), Mental Health Continuum Short Form ($\alpha = 0.92$), Brief COPE Scale (avoidance $\alpha = 0.72$, problem-focused $\alpha = 0.74$, emotion-focused $\alpha = 0.61$, social support $\alpha = 0.86$), and Psy-Flex Scale ($\alpha = 0.86$).

Data Analysis: Hayes' PROCESS macro Model 4 tested mediation with 10,000 bootstrap samples (Hayes, 2017). Hierarchical multiple regression tested moderation with mean-centered variables (Tabachnick & Fidell, 2019).

Results

Participants reported moderate perceived stress (M = 17.39, SD = 7.64), relatively high psychological flexibility (M = 33.62, SD = 5.87), and moderate mental health (M = 40.57, SD = 15.37).

Mediation: Psychological flexibility fully mediated stress-mental health relationship (indirect effect ab = -0.478, 95% CI [-0.629, -0.327], 83.4% of total effect). Avoidance coping partially mediated stress-mental health relationship (indirect effect ab = -0.273, 95% CI [-0.383, -0.193], 47.9% of total effect). The results of the mediation analyses are being presented in Table 3.

Table 3

Mediation Analysis Results: Direct, Indirect, and Total Effects

Hypothesis/Path	B	SE	95% CI	t/z	p	% Mediated
H1:PS → PF → MH						
Total effect (c)	-0.574	0.110	[-0.790, -0.358]	-5.196	< .001	—
PS → PF (a_1)	-0.461	0.069	[-0.597, -0.325]	-6.682	< .001	—
PF → MH (b_1)	1.038	0.060	[0.920, 1.156]	17.246	< .001	—
Direct effect (c')	-0.095	0.089	[-0.270, 0.079]	-1.077	.282	—
Indirect effect (a_1b_1)	-0.478	0.077	[-0.629, -0.327]	-6.230[b]	< .001	83.4
H2: PS → AC → MH						
Total effect (c)	-0.574	0.110	[-0.790, -0.358]	-5.196	< .001	—

PS → AC (a_2)	0.402	0.046	[0.312, 0.492]	8.827	< .001	—
AC → MH (b_2)	-0.679	0.115	[-0.905, -0.453]	-5.907	< .001	—
Direct effect (c')	-0.301	0.116	[-0.529, -0.073]	-2.599	.010	—
Indirect effect (a_2b_2)	-0.273	0.056	[-0.383, -0.193]	-4.909[b]	< .001	47.9

Note N = 413. PS = Perceived Stress, PF = Psychological Flexibility, AC = Avoidance Coping, MH = Mental Health. Bootstrap confidence intervals based on 10,000 resamples. Controlling for the predictor. Sobel test z-value.

Moderation: Emotion-focused coping significantly moderated stress-avoidance coping relationships (B = -0.195, SE = 0.093, p = .037), with weaker associations at high emotion-focused coping levels. Problem-focused coping moderated stress-psychological flexibility relationships (B = 0.220, SE = 0.098, p = .025), buffering against stress-related flexibility decreases. Emotion-focused coping did not moderate stress-psychological flexibility relationships (B = 0.141, SE = 0.146, p = .335). Moderation results are presented in Table 4.

Table 4

Hierarchical Regression Analysis: Main Moderation Effects and Interactions

Model/Variable	B	SE	β	*t*	*p*	R^2	ΔR^2	95% CI
H3: EFC moderates PS → AC								
Step 1						.166***		
PS	0.373	0.046	.371	8.109	< .001			[0.283, 0.463]
EFC	0.089	0.044	.093	2.023	.044			[0.002, 0.175]
Step 2						.175***	.009*	
PS × EFC	-0.195	0.093	-.092	-2.097	.037			[-0.378, -0.012]
Simple slopes:								
Low EFC (-1 SD)	0.465	0.065	—	7.154	< .001			[0.337, 0.592]
High EFC (+1 SD)	0.280	0.066	—	4.242	< .001			[0.150, 0.410]
H4: EFC moderates PS → PF								
Step 1						.100***	—	
PS	-0.444	0.069	-.302	-6.435	< .001			[-0.580, -0.308]
EFC	-0.013	0.065	-.009	-0.200	.842			[-0.141, 0.115]

Step 2						.102***	.002	
PS × EFC	0.141	0.146	.044	0.966	.335			[-0.146, 0.428]
H5: PFC moderates PS → PF								
Step 1						.100***		
PS	-0.447	0.070	-.304	-6.386	< .001			[-0.585, -0.309]
PFC	-0.020	0.047	-.020	-0.426	.670			[-0.112, 0.072]
Step 2						.111***	.011*	
PS × PFC	0.220	0.098	.103	2.245	.025			[0.028, 0.412]
Simple slopes:								
Low PFC (-1 SD)	-0.592	0.100	—	-5.920	< .001			[-0.789, -0.395]
High PFC (+1 SD)	-0.301	0.098	—	-3.071	.002			[-0.494, -0.108]

Note. N = 413. PS = Perceived Stress, AC = Avoidance Coping, PF = Psychological Flexibility, EFC = Emotion-Focused Coping, PFC = Problem-Focused Coping. All continuous variables were mean centred prior to analysis. *p < .05. ***p < .001.

Discussion

Results strongly support psychological flexibility as core stress adaptation mechanism (Kashdan & Rottenberg, 2010), with complete mediation suggesting stress primarily affects mental health through it's impact on the ability of remaining open to experiences while acting according to values (Hayes et al., 2006). Partial avoidance coping mediation indicates multiple pathways contribute to stress-mental health relationships (Lazarus & Folkman, 1984).

Emotion-focused coping's moderating role demonstrates emotional regulation strategies reduce reliance on avoidant coping (Aldao et al., 2010). Problem-focused coping's moderation shows active problem-solving maintains psychological flexibility under stress (Troy & Mauss, 2011). Differential moderation patterns suggest coping strategies have specific rather than general protective functions.

Findings suggest interventions based on Acceptance and Commitment Therapy principles targeting psychological flexibility may prove particularly effective during crises (Hayes et al.,

2006). Cognitive-behavioral approaches addressing avoidant behaviors could complement flexibility-focused interventions.

2. Psychosocial Predictors of COVID-19 Vaccination Intentions

Introduction

During the pandemic's initial period, high uncertainty and strict measures fundamentally changed daily lives (Brooks et al., 2020). Preventive health behaviors became crucial for limiting disease spread, yet adoption proved challenging (Verity et al., 2020).

The Health Belief Model and Protection Motivation Theory emphasize perceived susceptibility and severity as key predictive factors during epidemiological threats (Becker & Rosenstock, 1987; Rogers, 1975). Meta-analyses confirmed these variables' predictive power for vaccination intentions (Sheeran & Webb, 2016).

General vaccination attitudes represent stable evaluative beliefs formed through medical system experiences (Dubé et al., 2013), acting as filters for assessing new vaccine information (Betsch et al., 2018; Suciu & Baban, 2024a). During emerging threats with limited information, pre-existing attitudes decisively influence vaccination intentions (MacDonald & SAGE, 2015).

Social support plays crucial roles in preventive health behavior adoption (Cohen, 2004). During pandemic restrictions limiting social interaction, perceived support likely played greater roles in health decisions (Lazarus & Folkman, 1984).

The objectives of this research are to examine the predictive role of perceived susceptibility, perceived severity, general attitude toward vaccination, social support and perceived stress on COVID-19 vaccination intention.

Methods

Participants: 206 Romanian adults (M age = 29.9, SD = 9.50) participated, with 72.3% female.

Measures: Perceived COVID-19 severity and susceptibility to infection Scale based on Health Belief Model (severity $\alpha = 0.69$, susceptibility $\alpha = 0.73$), Perceived Stress Scale ($\alpha = 0.9$), Oslo Social Support Scale ($\alpha = 0.57$), single-item measures for general vaccination attitude and vaccination intention.

Data Analysis: Hierarchical multiple regression examined predictor contributions with socio-demographic controls (Tabachnick & Fidell, 2019).

Results

Participants reported moderate-to-high general vaccination attitudes (M = 4.46, SD = 0.90), moderate vaccination intentions (M = 3.94, SD = 1.16), moderate perceived susceptibility (M = 8.30, SD = 3.61) and severity (M = 11.28, SD = 3.68), moderate perceived stress (M = 17.90, SD = 7.63), and social support (M = 9.68, SD = 2.08).

Socio-demographic variables (gender, age) did not significantly predict vaccination intentions ($R^2 = .00$). General vaccination attitude showed strongest associations with vaccination intentions (B = .81, 95% CI [.67, .96], $R^2 = .38$, $p < .05$), followed by perceived severity (B = .097, 95% CI [.05, .13], $R^2 = .09$, $p < .05$) and perceived susceptibility (B = .06, 95% CI [.015, .10], $R^2 = .03$, $p < .05$). Social support (B = -.007, 95% CI [-.08, .07]) and perceived stress (B

= .006, 95% CI [-.001, 0.73]) did not significantly predict vaccination intentions. The results of multiple regression analyses for predicting vaccination intention are presented in Table 3. The predictive relationships between psychosocial variables and COVID-19 vaccination intention are illustrated in Figure 1, which shows the standardized regression coefficients and overall model fit (R^2 = .38).

Table 3

Results of Multiple Regression Analysis for Predicting Vaccination Intention

Category	B	β	CI (95 %)	R^2	adjusted R^2
Intercept	3.9		[3.26;.4.54]		
Gender	.002 (.009)	-.01	[-.4; .33]	.00	.00
Age	-.032 (.187)	.01	[-.01;.01]	.00	.00
Social Support	-.007 (.04)	-0.12	[-.08; .07]	.00	.01
Perceived Stress	.006 (.11)	.13	[-.001; 0.73]	.01	.00
Perceived Susceptibility	.06* (.023)	.18	[.015; .10]	.03	.02
Perceived Severity	.097* (.021)	.30	[.05; .13]	.09	.08
General Attitude toward Vaccination	.81* (.7)	.63	[.67; .96]	.38	.37

Note. *N = 206. B = Unstandardized regression coefficients (standard error). β = Standardized regression coefficients. CI = Confidence Interval. *p < .05.

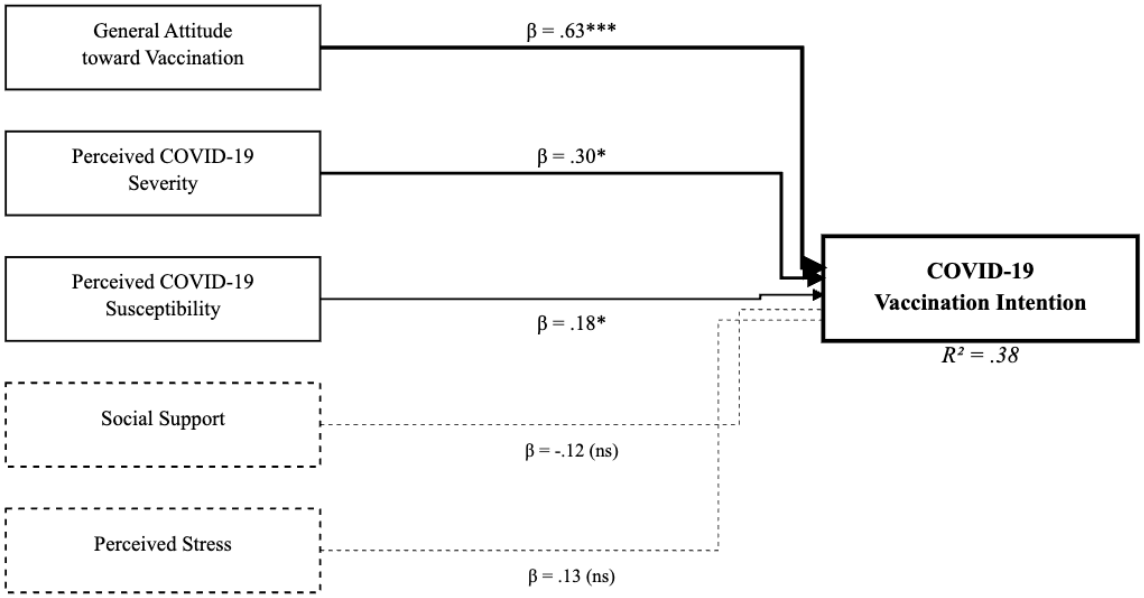

Figure 1. Predictive Model of COVID-19 Vaccination Intention

Standardized regression coefficients (β) are shown for each pathway. Solid lines represent significant relationships; dashed lines represent non-significant relationships. Line thickness corresponds to effect size magnitude. R^2 indicates total variance explained in vaccination intention. *p < .05, ***p < .001.

Discussion

General vaccination attitudes showed strongest associations with COVID-19 vaccination intentions, confirming pre-existing attitudes act as cognitive filters for new vaccine evaluation (Betsch et al., 2018). During significant first-phase uncertainty, general attitudes decisively influenced specific behavioral intentions.

Health Belief Model and Protection Motivation Theory hypotheses were confirmed, with perceived severity and susceptibility significantly predicting intentions (Becker & Rosenstock, 1987; Rogers, 1975), consistent with previous meta-analyses (Sheeran & Webb, 2016).

Social support and perceived stress lacked significant effects, potentially because during the first wave these factors more strongly associated with immediate coping strategies rather than medium-term preventive decisions (Taylor et al., 2008). Severe mobility and interaction

restrictions may have fundamentally altered social support's functioning for health decisions (Cohen, 2004) as well as the dynamics of interpersonal relationships (SteelFisher et al., 2012; Williams et al., 2020).

Findings suggest specific intervention directions: (1) addressing general vaccination attitudes through education and evidence-based communication, (2) providing clear information about disease severity using validated epidemiological data, and (3) developing personalized messages considering individual susceptibility perceptions and risk factors.

3. The severe COVID-19 Illness Experience and Long-Term Mental Health Outcomes[1]

Introduction

Over 700 million individuals worldwide contracted SARS-CoV-2, with 7 million deaths and over 675 million recoveries (WHO, 2024d). Research documented significant psychological consequences including post-traumatic stress, depression, anxiety, poor sleep, and diminished well-being (Vindegaard & Benros, 2020). Long-term studies highlighted severe illness associations with multiple physical consequences (Bowe et al., 2023).

For some survivors, the illness experience fostered positive psychological changes including post-traumatic growth (PTG), encompassing life appreciation, deeper relationships, heightened personal strength perception, new possibilities, and spiritual growth (Tedeschi & Calhoun,

[1] Sections of this manuscript overlap with this published book chapter: Suciu, G. A., & Baban, A. (2024c). Thriving after trauma: Uncovering pathways to posttraumatic growth effects in COVID-19 survivors. In C. Pracana & M. Wang (Eds.), *Psychological applications and developments X. Advances in Psychology and psychological trends series (pp.29-38).* inScience Press. https://inpact-psychologyconference.org/wp-content/uploads/2024/05/202401VP117.pdf

2004; Suciu & Baban, 2024b). Factors facilitating positive outcomes included coping strategies, inner strengths, resilience, and social support (Qie & Onn, 2023).

Despite psychiatric outcome studies (Raihan, 2021), few examined PTG specifically, with psychological mechanisms underlying recovery and growth remaining insufficiently understood. This study explored psychological experiences of severe COVID-19 former patients, investigating challenges and potential for high mental health and post-traumatic growth.

Method

Participants: 30 Romanian adults (ages 35-83, 50% female) hospitalized for severe COVID-19. Medium hospital stay was 17 days, with 24% being hospitalized in Intensive Care Units.

Data Collection: Semi-structured interviews explored illness experiences, perceptions, challenges, coping mechanisms, personal characteristics, and positive transformations.

Data Analysis: Interviews were transcribed verbatim, coded, and analyzed for themes related to acute experiences, evolving perceptions, difficulties and coping, psychological growth, and personal characteristics/support influences.

Results

Five main themes emerged:

1. A Distant Threat: Many initially dismissed mild symptoms, attributing them to common colds. Delayed diagnoses and false-negative self-tests furthered doubts. Participants expressed disbelief COVID-19 would seriously impact them, with perceived good health fostering unrealistic optimism and mild concerns. As symptoms persisted, worry and self-isolation

behaviors increased from minimum contagion fears. Participants either received mild medication for presumed colds or self-administered such medication without a prescription, justifying this behavior due to the perceived non-severity and lack of diagnosis.

2. The Tipping Point: Symptom deterioration necessitating hospitalization escalated fear. Initial safety feelings were replaced by vulnerability realization. Intense symptoms such as spiking fevers, breathing difficulties, plummeting oxygen prompted urgent hospitalization. The initial sense of safety or denial of the virus's seriousness was replaced by a realization of vulnerability upon positive diagnosis and severe symptoms manifestations. Psychological symptoms including severe anxiety, panic, despair emerged. For many, symptoms persisted for days despite medication, and desperation grew while enduring this mental and physical toll. Isolation from loved ones, dehumanizing protective gear, and witnessing roommate deaths intensified ordeals. Coping responses included seeking doctor reassurance, turning to faith, and social support strategies.

3. The Turning Point: As intense symptoms faded, hope appeared. Participants actively sought tangible recovery proof, like increasing appetite, reduced sweating or better breathing and described a clear moment when they just knew they had beaten COVID-19. Symptom subsidence over varying timelines brought composure and recovery confidence. Despite extensive lung damage on scans, lack of overt symptoms provided reassurance. Compassionate care from medical staff and family emotional support proved crucial.

4. Readjustment: Discharge prompted happiness contrasted by lasting fear, anxiety, and physical symptoms. Physical symptoms (i.e. fatigue, pulmonary incapacity, sleep disturbances) and psychological symptoms persisted for weeks or months. Some self-consciously limited social interactions from reinfection fears. Problem-focused coping strategies included planning, seeking information, self-care activities, and finding alternative rewards. Inner

strengths, particularly trust in handling challenges, perseverance, determination or optimism enabled constructive adjustment.

5. Post-Traumatic Growth: For some of the participants, the traumatic experience of COVID-19 catalyzed existential contemplation and life perspective shifts. Individuals reevaluated social circles, prioritizing meaningful connections. Many reported gains in self-understanding, empathy, compassion, and altruistic motivation. Commitment to proactive health behaviors emerged, including regular check-ups and vaccination. Psychological flexibility heightened, with greater life and health appreciation, and present-moment gratitude. Some of the narratives highlighted a deeper understanding of shared human experiences.

Discussion

Narratives highlighted pervasive COVID-19 severity underestimation during initial stages, reflecting optimism bias (Roozenbeek et al., 2020). Rapid symptom deterioration profoundly challenged mental well-being, highlighting emotional turmoil and existential distress from life-threatening conditions (Carenzo et al., 2021).

Compassionate care from medical staff and loved ones' emotional support proved crucial during critical phases, aligning with literature on empathetic care and social support's therapeutic value (Lown et al., 2011). Discharge brought joy but lingering physical symptoms, fear, and hesitance persisted, highlighting complex physical, emotional, and social challenges (Bellan et al., 2021).

Profound psychological and existential transformations emerged. Heightened mortality awareness fostered life appreciation and priority recalibration toward family, well-being, and meaningful relationships. Participants reported gains in self-understanding, empathy,

compassion, and prosocial behaviors, reflecting deeper human condition connection (Qie & Onn, 2023). Psychological flexibility heightened with present-moment gratitude. These shifts, relating with compassion, establishing priorities, appreciating life, exemplify PTG core tenets (Tedeschi et al., 2004).

Diverse coping strategies alongside inner strengths like optimism, determination, and independence facilitated constructive trauma confrontation. Social support, problem-focused and emotion-focused coping aided practical improvement and emotional processing. Findings demonstrate remarkable capacity for growth despite challenges.

Results have practical implications for healthcare professionals and policymakers. Recognizing PTG potential and facilitating factors enables holistic approaches addressing not only physical recovery but psychological and emotional well-being. Supporting survivors in processing trauma, leveraging strengths, and cultivating gratitude, compassion, and purpose may facilitate thriving.

4. Vaccination Decision-Making Process Among Severe COVID-19 Survivors[2]

Introduction

Mass vaccination efforts critically reduced severe illness and death during COVID-19 (WHO, 2022e). Substantial country differences exist in vaccination rates. Portugal achieved among

[2] Sections of this manuscript overlap with this published article: Suciu, G. A., & Baban, A. (2024d). Vaccine decision-making influences – Insights from severe COVID-19 survivors: A qualitative study. *Medical and Clinical Research*, *9*(1), 8. https://doi.org/10.33140/MCR.09.052

Europe's highest rates (>95 per 100 population), while Romania had the second-lowest (approximately 43 per 100) (WHO, 2023f). Romania's lagging coverage highlights exploring factors shaping vaccine decision-making importance.

Research explored vaccination intentions, finding factors like perceived COVID-19 risk, disease fear, and vaccine profit concerns influencing uptake intentions (Caycho-Rodríguez et al., 2021). Nevertheless, intentions don't always predict behavior, evidenced by disparities between intended and actual influenza vaccine acceptance (Ren et al., 2021).

COVID-19 poses severe long-term health risks, particularly concerning for survivors (Ruiz & Bell, 2021). High vaccination rates were expected due to virus lethality, however vaccine hesitancy emerged as key challenge. The study explores how perceptions and beliefs formed or modified through this extreme experience (the COVID-19 severe illness), interact to influence decisions related to vaccination in this high-risk population, through semi-structured interviews and thematic analysis.

Method

Participants: 30 Romanian adults (50% female) previously hospitalized for severe COVID-19 participated. Before infection, 26.6% accepted vaccination; 50% accepted post-discharge. Participants categorized as "prior-infection acceptance," "post-infection acceptance," or "hesitating" (consistent with vaccine hesitancy definitions) (Butler & MacDonald, 2015).

Data Collection: Semi-structured interviews covered COVID-19 experiences, general and COVID-19 vaccination perceptions, decision-making processes, and vaccination intentions.

Data Analysis: Interviews were transcribed verbatim, coded, and analyzed for themes related to the rationale for vaccination decisions, evolving perceptions, barriers/facilitators, perception changes, and societal context views.

Results

Four main themes emerged:

1. Perceived Severity and Susceptibility as Catalysts: Many participants' severe illness experiences and reinfection fears shaped vaccination decisions and behaviors. Uncertainties surrounding virus dynamics upon subsequent infection fueled apprehension, resulting in cautious social interaction approaches and vaccination decisions. Participants emphasized perceived benefits, protection against severe illness, immunity boosting, maintaining daily activities in high-risk environments. Lengths participants went to obtain vaccines, including traveling long distances, reflected consensus on perceived potential benefits and motivation in overcoming barriers.

2. Vaccine Adverse Reactions Fueling Hesitancy: Hesitant participants avoided COVID-19 vaccination primarily due to severe prolonged reactions from prior flu vaccinations. This intense physical response, coupled with beliefs vaccines didn't prevent illness, resulted in steadfast abstention decisions. Several articulated declining subsequent COVID-19 doses based on intense side effects from previous doses. Reluctant participants highlighted vaccine skepticism and perceived risks, mentioning vaccinated individuals contracting severe COVID-19 or associating vaccination with exacerbated health conditions. Some attributed contracting COVID-19 directly to vaccine administration. Reservations about rapid vaccine development were expressed.

3. Social Support in Decisions: Many cited primary care physician advice as key factors deciding vaccination, underscoring medical professional trust. Some initially hesitating participants experienced attitude shifts after physician counsel post-hospitalization, highlighting the trustworthy doctor-patient relationship's persuasive role. Some participants who chose COVID-19 vaccination reported routinely getting annual influenza vaccinations, underlying a positive attitude towards general vaccination. Many vaccinated participants described receiving doses alongside family members, influenced by close relative advice. Family members witnessing COVID-19 severity first-hand emphasized vaccination importance. Conversely, some unvaccinated participants described collective familial perspectives with minimal COVID-19 severity concerns. Narratives underscore family attitudes are shared regardless of supportive or opposing decisions towards vaccination.

4. General Disbelief and Conspiracy Theories: Unvaccinated participants shaped vaccine perceptions from various non-expert sources, unfavorable articles, anti-vaccine television commentary, acquaintance adverse symptom accounts. Others sought trusted friend advice in foreign countries. Some were influenced by acquaintances linking negative health effects to vaccination. The prevailing belief amongst all participants was that external forces orchestrated the pandemic for commercial interests. However, for accepting participants, reinfection fear overcame these perceptions' importance.

Discussion

Primary vaccination motivators were reinfection fears stemming from severe illness experiences and intense perceived consequences, consistent with research linking previous severe COVID-19 and disease fear to positive vaccine decisions (Caycho-Rodríguez et al., 2022; Suciu & Baban, 2024e).

Trust in health professionals, routine vaccination behaviors, and perceiving COVID-19 vaccination benefits facilitated positive decisions, echoing findings that healthcare provider trust, prior vaccination history, and perceived benefits increase acceptance (Paul et al., 2022).

Perceived risks including reported adverse events bred hesitation, consistent with studies identifying vaccine safety concerns as barriers (Lockyer et al., 2021). Uniquely, severe reactions to prior vaccinations decisively deterred COVID-19 vaccination.

Vaccine skepticism was fueled by misinformation from unofficial sources, aligning with research linking negative vaccination stories and misinformation to hesitancy (Lockyer et al., 2021). Vaccine attitudes were often collectively held within families, whether accepting or hesitant, underscoring intra-family shared attitudes and social support roles (Garcia et al., 2021).

Conspiracy beliefs represented barriers exclusively among hesitating participants. Severe COVID-19 experiences overcame these beliefs for accepting participants, contrasting with research positioning conspiracy beliefs as broad vaccination barriers (Williams & Dienes, 2021).

Implications for improving vaccination strategies include: (1) supporting doctor-patient relationships through improved communication addressing concerns and prior adverse reactions; (2) accurately conveying COVID-19 risks countering misinformation; (3) investigating drivers of hesitancy from intense prior vaccination reactions; and (4) examining family-level dynamics and shared vaccine beliefs to inform public health communication.

CHAPTER IV. CONCLUSIONS

1. General conclusions

This thesis investigated COVID-19 pandemic psychological effects through four studies examining stress-mental health mechanisms, vaccination intention predictors, severe illness experiences, and vaccination decision-making among Romanian participants using mixed methodologies.

Study 1 identified psychological flexibility as the primary mediator (83.4%) and avoidant coping as partial mediator (47.9%) in stress-mental health relationships. Emotion-focused coping moderated stress-avoidant coping pathway, while problem-focused coping moderated stress-psychological flexibility relationship.

Study 2 confirmed general vaccination attitudes as the strongest vaccination intention predictor, followed by perceived severity and susceptibility, aligning with Health Belief Model and Protection Motivation Theory. Perceived stress and social support did not directly predict intentions.

Study 3 revealed five themes in severe COVID-19 experiences: A distant threat (initial denial), The tipping point (hospitalization trauma), The turning point (symptom improvement), Readjustment (managing lasting effects), and Post-traumatic growth (life perspective transformation through coping strategies and inner strengths).

Study 4 identified severe illness experiences as primary vaccine acceptance catalysts, while adverse reaction histories and conspiracy theories fueled hesitancy. Family dynamics and healthcare provider trust significantly influenced decisions.

This thesis contributes: (1) a nuanced stress-mental health model highlighting psychological flexibility's protective effects; (2) understanding of vaccination decision factors, particularly how severe illness overcomes hesitancy; (3) insights into health trauma-decision-making interplay; (4) post-traumatic growth pathways informing interventions for COVID-19 survivors.

2. Specific key conclusions

2.1. Stress and Mental Health During COVID-19 Lockdown: A Mediation and Moderation Model Examining Psychological Flexibility and Coping Strategies

This secondary data analysis tested mediation and moderation models examining perceived stress-mental health relationships, focusing on coping strategies' potential roles and psychological flexibility's mediating role among 413 Romanian participants during first pandemic lockdown. Psychological flexibility showed negative associations with perceived stress ($r = -.59$, $p < .01$) and positive associations with mental health ($r = .67$, $p < .01$), while avoidant coping showed positive correlations with stress ($r = .45$, $p < .01$) and negative correlations with mental health ($r = -.34$, $p < .01$). The model showed significant mediation via psychological flexibility and partial mediation via avoidant coping. Important moderation effects emerged, with emotion-focused coping moderating stress-avoidance coping relationship while not moderating stress-psychological flexibility relationship. Problem-

focused coping moderated stress-psychological flexibility pathway. Age showed protective qualities, correlating negatively with stress ($r = -.24$, $p < .01$) and positively with mental health ($r = .26$, $p < .01$). Psychological flexibility emerges as the primary mechanism through which stress positively affects mental health, while avoidance coping serves as additional maladaptive pathway. Different positive effects of emotion-focused and problem-focused coping suggest they operate through different mechanisms, emphasizing diverse adaptive strategy development importance.

This research extends stress-health relationship understanding by validating a complex model highlighting interplay between perceived stress, coping strategies, psychological flexibility, and mental health outcomes. Unlike previous research examining these factors in isolation, this model demonstrates dynamic pathways through which perceived stress impacts mental health. Specifically, psychological flexibility and avoidant coping serve as key mediating mechanisms, while emotion-focused and problem-focused coping strategies function as critical moderators buffering or amplifying stress effects.

The study presents limits that must be considered when interpreting the findings: cross-sectional design precludes causal inferences; self-report measures may introduce bias.

Future research would benefit from using longitudinal designs tracking relationship evolution; experimental interventions testing psychological flexibility enhancement; cross-cultural comparisons; integrating biological stress markers.

2.2. Psychosocial Predictors of COVID-19 Vaccination Intentions

This cross-sectional secondary data analysis assessed perceived susceptibility, perceived severity, and general vaccination attitudes' predictive roles, analyzing social support and

perceived stress influences on COVID-19 vaccination intentions among 206 Romanian participants. Several psychosocial variables positively associated with vaccination intentions (general vaccination attitude, perceived susceptibility, perceived severity). Perceived stress showed positive correlations with perceived susceptibility and severity. Social support correlated negatively with perceived stress. Multiple regression analyses revealed general vaccination attitude had the most significant vaccination intention association, followed by perceived severity and susceptibility. Social support and perceived stress did not significantly predict intentions. General vaccination attitudes emerge as the most important cognitive factor predicting vaccination intentions during highly stressful periods, alongside perceived disease susceptibility and severity, demonstrating central roles these cognitive factors play in shaping preventive health behaviors while highlighting that immediate psychological states may influence risk perception without directly affecting vaccination decisions.

This study confirms general vaccination attitudes and perceptions regarding severity and susceptibility's central roles in forming vaccination intentions according to classical health psychology theoretical models. During highly uncertain initial pandemic waves, general attitudes decisively shaped specific behavioral intentions, aligning with research on attitude influence during emerging threats. Second, does not confirm social support and perceived stress associations with vaccination intentions, contrasting with previous findings on their preventive health behavior adoption influence. Their absence may be attributed to stronger associations with immediate crisis adaptation mechanisms rather than medium-term preventive decisions like vaccination.

This research has its limitations. Cross-sectional design limits causal inference; sampling method may affect generalizability.

Future research should use longitudinal designs to examine predictor evolution across pandemic phases; to investigate mechanisms through which general attitudes influence information processing; to examine social support and stress transitions from immediate crisis responses to long-term preventive decisions.

2.3. The Severe COVID-19 Illness Experience and Long-Term Mental Health Outcomes

This qualitative research provides an understanding of psychological experiences of individuals hospitalized for severe COVID-19 in Romania, emphasizing illness's multifaceted impact and positive post-trauma transformation. Using semi-structured interviews and thematic analysis, five main themes emerged: (1) *A distant threat* illustrates pervasive initial COVID-19 severity underestimation, underscoring increased awareness and prompt diagnosis needs; (2) *The tipping point* underlines profound psychological and existential toll of grappling with potential mortality, highlighting critical illness mental health support importance; (3) *The turning point* highlights hope emergence when subjective symptoms abated; (4) *Readjustment* highlights how participants managed lasting effects while selectively resuming activities; (5) *Post-traumatic growth* highlights how severe illness can prompt life reflection and life reconceptualization, with increases in moral purpose, altruism motivation, empathy, compassion, care and helping behaviors, leading to personal growth for some former patients.

The severe COVID-19 experience had significant traumatic physical and mental health impacts. Diverse coping strategy use, alongside inner strengths like optimism, actively living life, and past experience strengths, allowed trauma adjustment and fostered constructive illness approaches. Complex physical, emotional, and social challenge interplay from illness to recovery emphasized comprehensive support system needs. Empathetic care and emotional

support from healthcare professionals and loved ones' therapeutic value in shaping positive experiences and fostering adjustment is emphasized. Findings suggest that following traumatic events, psychological growth is possible, with adaptive coping strategies and inner strengths contributing to PTG.

This research presented in-depth investigation of perspectives, emotions, and psychological experiences of individuals hospitalized with severe COVID-19. This research contributes to deeper understanding of holistic recovery's multidimensional aspects and transformative human nature capacity in overcoming adversity.

Some of the limitations of this study are: romanian cultural context specificity; potential selection and recall bias from retrospective design.

Future research would benefit from long-term trajectory studies; cross-cultural comparisons; developing and evaluating targeted survivor interventions.

2.4. Vaccination Decision-Making Process Among Severe COVID-19 Survivors

This qualitative study provides better understanding of vaccination decision-making processes among individuals suffering severe COVID-19 illness. For many interviewed participants, confronting this illness was deeply disruptive. First theme (*Perceived Severity and Susceptibility as Catalysts*) emphasizes that for numerous interviewees, confronting severe illness significantly spurred vaccine readiness, surmounting prior doubts or challenges. Fear prompted by traumatic health events was the primary reason driving active trustworthy information pursuit, conspiracy theory dismissal, and recommended safety behavior commitment. Second theme (*Vaccine Adverse Reactions Fueling Hesitancy*) highlights how

strong physical reactions to previous vaccines led to vaccine avoidance, with hesitancy extending to all vaccine types within personal histories. Third theme (*Social Support in Vaccination Decisions*) emphasizes strong healthcare provider relationship's impact. Trusted doctors helped alleviate vaccination concerns, clarified benefits, and addressed questions, leading to acceptance. This theme also highlights collective family perspectives' roles regarding health behaviors. Family dynamics significantly influenced vaccination choices, with most family members expressing comparable opinions regardless of whether choices involved agreement or hesitancy. Fourth theme (*General Disbelief and Conspiracy Theories*) underscores general skepticism among all participants. Hesitant individuals relied on informal information sources, resulting in inaccurate medical understanding. Widespread authority distrust and conspiracy theory beliefs acted as major vaccine acceptance barriers. However, for accepting participants, reinfection fear outweighed these doubts.

This research presented an exploration into COVID-19 vaccine acceptance or declining decision-making processes among Romanian survivors, examining key influencing factors. A broad range of perspectives, trust levels, contextual influences, and personal experiences shaping vaccination decisions were identified. Within this complex landscape, severe personal experiences, medical recommendations, and family dynamics played particularly significant roles. Multiple interconnected factors shaped individual vaccination decisions, providing cognitive frameworks guiding choices.

Some of the limitations of this study are the potential selection bias, the retrospective nature of the interviews which may have incomplete recollection.

Future research could explore long-term vaccine attitude evolution studies, family unit decision-making processes, culturally tailored communication strategies addressing conspiracy

theories, and interventions rebuilding trust or addressing concerns for those with negative vaccination experiences.

This doctoral thesis investigates psychological adjustment to pandemic stress and health decision-making among Romanians through four studies using mixed methodologies. Study 1 identifies psychological flexibility as the primary protective mechanism mediating stress-mental health relationships, while avoidant coping serves as a maladaptive pathway, with emotion-focused and problem-focused coping providing differential moderation. Study 2 confirms general vaccination attitudes, perceived severity, and susceptibility as strongest vaccination intention predictors. Study 3 highlights how severe COVID-19 survivors demonstrate post-traumatic growth through psychological flexibility, diverse coping strategies, and inner strengths, facilitated by supportive healthcare and family relationships. Study 4 shows severe illness experiences overcome vaccine hesitancy through reinfection fear, though adverse reactions and conspiracy theories fuel hesitancy, with family dynamics and healthcare provider trust critically influencing decisions. Findings provide evidence-based intervention pathways: enhancing psychological flexibility, promoting adaptive coping, and leveraging trusted relationships to support mental health and preventive behaviors during pandemics.

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