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Identifying Core Personality Predictors of Psychophysiological Health Outcomes

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A B S T R A C T

This study aimed to explore how stable personality traits, particularly conscientiousness and neuroticism, influence psychophysiological health outcomes through emotional regulation, behavioral patterns, and cognitive–affective integration among adults in Canada. This qualitative study employed a descriptive–exploratory design to examine the lived experiences of individuals regarding the interaction between personality and psychophysiological well-being. Twenty-one adult participants (11 women, 10 men) aged 25–55 from various provinces in Canada were selected using purposive sampling. Data were collected through semi-structured interviews, each lasting 60–90 minutes, and analyzed using thematic analysis in NVivo 14 software. Sampling continued until theoretical saturation was achieved. The analytic process followed Braun and Clarke's six-step framework, including open and axial coding to derive major themes. Credibility was ensured through member checking and peer debriefing. Three major themes emerged from the data: (1) Emotional Regulation and Stress Reactivity, capturing the link between personality traits, emotion control, and physiological stress responses; (2) Personality Dispositions Influencing Health Behavior, emphasizing conscientiousness and neuroticism as primary determinants of health-promoting or risk behaviors; and (3) Cognitive–Affective Integration and Meaning Construction, illustrating how mindfulness, meaning in life, and self-reflection mediate personality's effect on physiological well-being. Participants high in conscientiousness reported adaptive coping, lower stress reactivity, and greater resilience, while those with high neuroticism experienced more psychosomatic symptoms but sometimes converted anxiety into health vigilance—reflecting the "healthy neuroticism" effect. Personality traits, particularly conscientiousness and neuroticism, are central predictors of psychophysiological health. Their interaction shapes emotional regulation, behavioral consistency, and physiological adaptation.

Keywords: *Personality traits; Conscientiousness; Neuroticism; Psychophysiological health; Emotional regulation; Healthy neuroticism*

1. Introduction

Personality psychology has long recognized the profound impact of enduring personality traits on physical and psychological health outcomes. Over the past two decades, research in behavioral medicine and health psychology has emphasized that personality is not only a psychological construct but also a biological determinant influencing psychophysiological functioning, disease vulnerability, and longevity (Thomas et al., 2021; Turiano et al., 2020). Individuals differ in how they perceive, respond to, and regulate stress, which in turn affects their cardiovascular, immune, and metabolic health. Among the Big Five personality dimensions—neuroticism, conscientiousness, extraversion, agreeableness, and openness—conscientiousness and neuroticism have consistently emerged as the most influential predictors of health-related outcomes (Hill et al., 2024; Pedersen et al., 2025). These traits interact in complex ways, sometimes producing paradoxical results, such as the phenomenon of "healthy neuroticism," wherein anxiety-prone individuals engage in preventive health behaviors due to heightened vigilance toward potential threats (Arend & Yuen, 2025; Turiano et al., 2020).

Recent studies have demonstrated that conscientiousness is a robust protective factor, predicting lower cardiometabolic risk, healthier lifestyle choices, and increased longevity (O'Súilleabháin et al., 2020; Thomas et al., 2021). Individuals high in conscientiousness typically exhibit greater self-regulation, responsibility, and persistence, which contribute to consistent engagement in health-promoting behaviors such as exercise, healthy eating, and medical adherence (Chopik & Lee, 2022; Yang et al., 2025). Hill and colleagues (Hill et al., 2024) revealed that conscientiousness interacts with a sense of purpose in life to uniquely predict better health and psychological adjustment. Similarly, research by Gerhardt et al. (Gerhardt et al., 2021) found that early parental warmth can indirectly reduce adult depression and obesity through the mediating effect of conscientiousness. Such findings reinforce the health behavior model of personality, which posits that personality traits shape health outcomes primarily through behavioral mechanisms (Buczek & Tomaszek, 2022; Milad & Bogg, 2020).

In contrast, neuroticism—characterized by emotional instability, anxiety, and self-consciousness—has traditionally been associated with poorer health outcomes and higher allostatic load (Jokela et al., 2024; Rozhkova, 2024). Individuals high in neuroticism may experience chronic activation of stress pathways, resulting in heightened cortisol secretion, inflammation, and susceptibility to cardiovascular disease (Jokela et al., 2024). However, contemporary evidence reveals a more nuanced picture. When paired with high conscientiousness, neurotic tendencies can lead to proactive self-monitoring and early detection of illness—a combination referred to as "healthy neuroticism" (Arend & Yuen, 2025; Pedersen et al., 2025). This adaptive pattern suggests that the health implications of neuroticism depend largely on its interaction with self-control and goal-directed behavior (Singh, 2022).

Cross-cultural investigations have further underscored the universality of these associations while highlighting contextual moderators such as social support, meaning in life, and health values. For instance, Liao et al. (Liao et al., 2025) showed that social support mediates the relationship between personality trait patterns and mental health in older Chinese adults. Likewise, Hu and Lü (Hu & Lü, 2022) reported that conscientiousness moderates the association between meaning in life and health behavior habits, particularly during crises such as the COVID-19 pandemic. These findings reveal that personality exerts both direct and indirect effects on health by shaping cognitive, emotional, and social processes that sustain well-being.

Several studies have examined the behavioral mechanisms underlying the personality–health relationship. Chopik and Lee (Chopik & Lee, 2022) found that conscientiousness predicted healthy behavior patterns over time, while Liu et al. (Liu et al., 2022) demonstrated that dispositional mindfulness mediates the link between conscientiousness and mental health issues among adolescents. Similarly, Li et al. (Li et al., 2022) showed that conscientious and agreeable workers in the mining industry were more likely to adhere to safety regulations, reflecting the predictive value of personality in occupational health contexts. The mediating role of self-regulatory constructs such as mindfulness, health values, and prosocial behavior has also been established (Hu & Lü, 2022; Patitsa et al., 2022). These psychological factors translate dispositional traits into concrete behavioral outcomes, supporting an integrative model of personality and psychophysiological functioning.

The role of conscientiousness extends beyond physical health to encompass social and cognitive dimensions. Tan et al. (Tan et al., 2023) found that conscientiousness predicts leadership emergence through functional behaviors that enhance interpersonal effectiveness and emotional control.

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Similarly, Mousavi and Ebrahimi (Mousavi & Ebrahimi, 2023) demonstrated that conscientiousness mediates the link between psychological capital and innovative teaching behavior. Within the domain of family and child development, Harsiwi et al. (Harsiwi et al., 2022) observed that maternal personality traits influence the caregiving quality and health-promoting behaviors of mothers raising autistic children. These findings reinforce the view that personality shapes a broad range of adaptive processes, from health maintenance to social functioning.

Complementing these findings, research has increasingly emphasized the role of neuroticism as a complex, multifaceted construct. Arend and Yuen (Arend & Yuen, 2024) reported that specific neurotic traits, when balanced with conscientious tendencies, could lead to more cautious dietary habits and better health monitoring behaviors. Their subsequent analysis (Arend & Yuen, 2025) confirmed that healthy neuroticism predicts more consistent engagement in healthy eating behaviors, aligning with the emerging perspective that emotional sensitivity can enhance, rather than hinder, health consciousness when channeled constructively. Similarly, Walters (Walters, 2023) showed that low conscientiousness and low agreeableness contribute to maladaptive behavioral outcomes such as delinquency and defiance, suggesting that personality influences health indirectly through broader behavioral regulation systems.

International evidence suggests that personality-health dynamics are cross-culturally robust yet modulated by cultural norms and social conditions. Rozhkova (Rozhkova, 2024) found that non-cognitive skills such as conscientiousness and self-efficacy significantly predicted health behaviors and longevity in Russia, while Floricica et al. (Floricica et al., 2025) demonstrated similar links between personality and lifestyle patterns in Romanian adults. Moreover, Yang et al. (Yang et al., 2025) showed that personality traits influence exercise behavior through the mediating roles of self-efficacy and motivation among Chinese college students. These studies collectively indicate that personality traits interact with motivational and cognitive mediators across diverse populations, shaping both psychological and physiological adaptation.

Emerging research also integrates biological and behavioral indicators of health. O'Súilleabháin et al. (O'Súilleabháin et al., 2020) discovered that conscientiousness is linked to lower inflammation markers, such as interleukin-6, thereby providing physiological evidence of the personality–health pathway. Milad and Bogg (Milad & Bogg, 2020) similarly revealed that conscientiousness indirectly reduces allostatic load through health-related behaviors and coping strategies over a ten-year period. Jokela et al. (Jokela et al., 2024) confirmed that personality, particularly conscientiousness and neuroticism, predicts cardiovascular mortality across multiple cohorts, even among individuals with pre-existing disease. These longitudinal insights affirm that personality traits exert durable effects on psychophysiological systems over the lifespan.

Moreover, personality interacts with cognitive and affective mechanisms such as meaning-making, self-efficacy, and mindfulness in predicting health. Zhang et al. (Zhang et al., 2024) found that family communication and self-efficacy mediate the relationship between Big Five traits and health literacy in elderly patients with chronic conditions, emphasizing interpersonal and cognitive channels. Similarly, Zhu et al. (Zhu et al., 2022) demonstrated that personality shapes information adoption behaviors in online health communities, suggesting that digital contexts also reflect personality-linked health engagement. Research by Matha et al. (Matha et al., 2022) further highlighted the influence of personality on behavioral intention and decision-making, illustrating that individual differences extend into economic and risk-related behaviors affecting health indirectly.

Within the growing body of personality-health literature, conscientiousness consistently emerges as a predictor of adaptive, organized, and health-sustaining behavior, while neuroticism contributes both risks and opportunities depending on the moderating influences of other traits and environmental supports. Vellamdehi et al. (Vellamdehi et al., 2020) emphasized that personality factors predict adherence to COVID-19 health considerations, illustrating the importance of dispositional traits in global health crises. Similarly, Singh (Singh, 2022) found that conscientiousness buffers the negative effects of neuroticism on health-risk behaviors in adolescents, confirming the protective function of this trait. Collectively, these studies converge on the notion that personality traits form a psychobiological framework influencing behavioral regulation, emotional resilience, and long-term physiological adaptation.

In summary, the literature demonstrates that personality traits—particularly conscientiousness and neuroticism—serve as central psychological predictors of psychophysiological health outcomes across diverse populations and contexts. Their interplay affects biological markers, behavioral choices, and social relationships that contribute to overall well-being (Buczek & Tomaszek, 2022;

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Turiano et al., 2020). Despite extensive research, however, there remains a need for qualitative insight into how individuals subjectively experience these personality–health linkages. Quantitative evidence explains the statistical strength of such associations but does not capture the lived processes through which personality traits manifest in daily emotional, cognitive, and physiological experiences. Therefore, the present study adopts a qualitative approach to *identify core personality predictors of psychophysiological health outcomes*

2. Methods and Materials

2.1. Study Design and Participants

This study employed a qualitative research design using a descriptive–exploratory approach to identify core personality predictors of psychophysiological health outcomes. The focus was on exploring participants' lived experiences and subjective interpretations of how stable personality traits influence physiological and psychological health mechanisms. The study used purposive sampling to select participants who could provide rich, in-depth data relevant to the research objective. A total of 21 participants (11 women and 10 men) from different provinces across Canada were included. Participants were adults aged between 25 and 55 years, representing diverse occupational, educational, and socioeconomic backgrounds. Eligibility criteria included being physically healthy at the time of participation and having no diagnosed psychiatric or neurological disorders, as self-reported during screening. Recruitment was carried out through online calls for participation distributed via academic networks, mental health communities, and social media platforms. Sampling continued until theoretical saturation was achieved—that is, the point at which no new concepts or themes emerged from the data, ensuring conceptual completeness and depth of understanding.

2.2. Measures

Data were collected through semi-structured interviews designed to explore the participants' perceptions, attitudes, and personal experiences regarding the relationship between their personality tendencies and psychophysiological health. Each interview lasted approximately 60–90 minutes and was conducted either face-to-face or via secure video conferencing platforms, depending on participants' preferences and geographical accessibility. The interview guide included open-ended questions such as: "How do you think your personality affects your physical reactions during stress?", "Can you describe a situation where your emotional traits influenced your bodily responses?", and "How do you perceive the link between your temperament and your overall well-being?" Probing questions were used to deepen responses and clarify emerging ideas. All interviews were audio-recorded with participants' informed consent and subsequently transcribed verbatim. To ensure ethical integrity, all participants were briefed on the study purpose, confidentiality measures, and their right to withdraw at any time. Anonymity was maintained by assigning numerical codes to transcripts.

2.3. Data Analysis

The transcribed data were analyzed using thematic analysis based on Braun and Clarke's six-phase framework, with the support of NVivo 14 software to facilitate systematic coding and categorization. Initially, transcripts were read multiple times to ensure immersion and familiarity with the content. Open coding was performed to identify key phrases, statements, and meanings related to personality–health interactions. These codes were then clustered into subthemes and broader themes through axial coding, allowing relationships between psychological constructs and health outcomes to emerge. Theoretical memoing was applied to document analytic reflections throughout the process, helping to maintain transparency and reflexivity. The final themes represented the conceptual patterns underlying how individual personality dimensions, such as neuroticism, conscientiousness, or emotional stability, manifest in physiological health indicators like stress reactivity, sleep quality, and immune functioning. To enhance the credibility and trustworthiness of findings, member checking was conducted with several participants, and peer debriefing among two external qualitative researchers ensured analytic rigor and reliability.

3. Findings and Results

The study sample consisted of 21 adult participants residing across different provinces in Canada, selected purposefully to ensure diversity in background and experience. The participants included 11 women (52.4%) and 10 men (47.6%), ranging in age from 25 to 55 years, with a mean age of 38.6 years. In terms of educational attainment, 9 participants (42.8%) held undergraduate degrees, 8 (38.1%) had completed postgraduate studies

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(Master's or PhD), and 4 (19.1%) had college-level diplomas. Regarding occupational status, 7 participants (33.3%) were employed in healthcare or psychology-related professions, 6 (28.6%) worked in education or academia, 5 (23.8%) were in business or administrative roles, and 3 (14.3%) were freelancers or self-employed. Participants reported varying levels of perceived health: 10 (47.6%) described their health as "very good," 8 (38.1%) as "good," and 3 (14.3%) as "moderate." The geographical distribution covered multiple provinces—Ontario (n=8, 38.1%), British Columbia (n=5, 23.8%), Quebec (n=4, 19.1%), and Alberta (n=4, 19.1%)—reflecting a diverse Canadian sample. This demographic diversity provided a balanced foundation for exploring variations in personality traits, stress perception, and psychophysiological health across different social and occupational contexts.

Table 1

Themes, Subthemes, and Concepts Extracted from Qualitative Analysis

Category (Main Theme)	Subcategory	Concepts (Open Codes)
1. Emotional Regulation and Stress Reactivity	1.1 Adaptive Emotional Awareness	Recognizing bodily signals; Naming emotions accurately; Differentiating stress vs. anxiety; Emotional labeling; Monitoring tension in the body
	1.2 Maladaptive Coping Patterns	Rumination; Avoidance behaviors; Emotional suppression; Denial of stress; Over-analysis of problems; Catastrophic interpretation
	1.3 Physiological Stress Responses	Rapid heartbeat during conflict; Muscle tension in shoulders; Sleep disturbances under stress; Headaches and fatigue; Shallow breathing patterns
	1.4 Trait Anxiety and Reactivity Threshold	Sensitivity to minor stressors; Startle reactivity; Difficulty calming down; Persistent worry about control; Physical agitation
	1.5 Mindfulness and Recovery Capacity	Deep breathing awareness; Self-soothing techniques; Cognitive reframing; Acceptance of transient emotions
	1.6 Resilience in Stressful Situations	Positive reframing of failure; Growth through adversity; Internal locus of control; Self-efficacy in coping
	1.7 Psychosomatic Manifestations	Stomach pain under emotional strain; Back pain during pressure; Palpitations before deadlines; Fatigue after arguments
2. Personality Dispositions Influencing Health Behavior	2.1 Conscientiousness and Health Discipline	Following exercise routines; Dietary regulation; Time management for rest; Regular medical checkups
	2.2 Neuroticism and Health Vulnerability	Over-worry about illness; Sleep dysregulation; Somatic symptom amplification; Self-criticism
	2.3 Extraversion and Social Buffering	Emotional support seeking; Group exercise motivation; Talking to friends about stress; Optimism in setbacks
	2.4 Agreeableness and Interpersonal Harmony	Avoiding conflict to protect calm; Compassion toward others; Emotional contagion from stress; Cooperative stress management
	2.5 Openness to Experience and Adaptive Flexibility	Trying alternative health practices; Reflective thinking about body–mind link; Curiosity about meditation; Creative stress solutions; Integrative self-expression
	2.6 Perfectionism and Psychophysiological Strain	Unrealistic self-standards; Fear of failure; Overcontrol of routines; Fatigue from mental overexertion; Physical exhaustion from striving
3. Cognitive–Affective Integration and Meaning Construction	3.1 Self-Reflection and Insight	Questioning internal motives; Journaling about feelings; Awareness of thought–body connection; Observing stress triggers
	3.2 Cognitive Appraisal of Stress	Evaluating threat vs. challenge; Anticipatory worry; Overgeneralizing failure; Positive reappraisal; Meaning-focused reinterpretation
	3.3 Emotional Intelligence in Health Contexts	Empathic attunement; Managing frustration; Emotion–body feedback awareness; Regulating others' emotions; Social adaptability
	3.4 Existential Meaning and Life Coherence	Searching for purpose; Acceptance of uncertainty; Spiritual interpretation of illness; Balancing work and inner peace
	3.5 Self-Compassion and Acceptance	Non-judgmental self-talk; Forgiving mistakes; Releasing control; Relaxation through acceptance
	3.6 Mind–Body Synchrony Awareness	Recognizing bodily feedback to emotions; Awareness of muscle tension with anger; Adjusting breathing consciously; Feeling harmony after emotional release
	3.7 Cognitive Flexibility and Adaptation	Switching perspectives; Tolerating ambiguity; Adjusting routines under stress; Letting go of rigid beliefs

Theme 1: Emotional Regulation and Stress Reactivity

The first major theme, *Emotional Regulation and Stress Reactivity*, reflected how participants experienced and managed stress through emotional awareness and physiological responses. Many individuals emphasized that recognizing and naming their emotions was essential for maintaining balance between mind and body. As one participant explained, *"When I can label what I'm feeling—*

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whether it's frustration or fear—I notice my heart rate slows down." This adaptive emotional awareness appeared as a protective factor that mitigated stress reactivity. In contrast, maladaptive coping patterns such as rumination, suppression, and avoidance often intensified bodily tension and prolonged recovery time after stressful events. A participant described this process vividly: *"I try not to think about my problems, but they come back at night as stomach pain."* Physiological responses, including muscle stiffness, palpitations, and sleep disturbance, were commonly associated with chronic stress exposure and emotional dysregulation. Moreover, individuals with high trait anxiety displayed lower thresholds for reactivity and often reported difficulty calming their bodies after minor stressors. Conversely, those demonstrating mindfulness and self-regulatory strategies, such as deep breathing, positive reframing, and emotional acceptance, exhibited faster recovery and fewer psychosomatic complaints. Participants who viewed stress as an opportunity for growth and maintained an internal locus of control displayed higher resilience. As one interviewee put it, *"I've learned to see challenges as a signal to pause, not panic."* Psychosomatic manifestations—such as fatigue, headaches, or gastrointestinal discomfort—were recurrently mentioned, illustrating the tangible physiological consequences of poor emotional regulation.

Theme 2: Personality Dispositions Influencing Health Behavior

The second theme, *Personality Dispositions Influencing Health Behavior*, highlighted the role of stable personality traits in shaping individuals' health-related decisions and physiological well-being. Conscientious participants tended to adopt structured routines, showing consistency in exercise, nutrition, and sleep hygiene, which corresponded to lower stress levels and improved recovery. One participant shared, *"Keeping a strict schedule helps me feel calmer and physically lighter."* Conversely, high neuroticism was consistently linked with health vulnerability, excessive worry, and somatic symptom amplification. Such individuals often reported over-focusing on physical sensations, leading to heightened physiological arousal and fatigue. Extraverted participants, on the other hand, emphasized the buffering role of social interaction, stating that emotional support and community engagement served as protective resources during stressful periods. *"Just talking to my friends makes my body relax,"* one participant noted, underscoring the psychosocial dimension of health regulation. Agreeableness also emerged as a double-edged factor—while fostering harmony and reducing interpersonal stress, it sometimes encouraged emotional suppression to avoid conflict, leading to subtle physiological tension. Openness to experience correlated with adaptive flexibility; participants described experimenting with mindfulness, meditation, or holistic practices to maintain psychophysiological equilibrium. In contrast, perfectionistic tendencies were associated with chronic tension and overcontrol, often resulting in exhaustion. As one perfectionistic participant confessed, *"I can't rest until everything feels right, but my body pays the price."* Overall, personality dispositions shaped health-promoting or health-damaging behaviors through habitual emotional and behavioral patterns, providing insight into personality-based predictors of physical well-being.

Theme 3: Cognitive–Affective Integration and Meaning Construction

The third theme, *Cognitive–Affective Integration and Meaning Construction*, illuminated how individuals cognitively interpret emotional and bodily experiences to create coherence between mind and body. Participants demonstrated varying degrees of self-reflection and insight into how thoughts influence physiological states. Journaling, introspection, and conscious observation of emotional triggers were recurrent strategies for understanding the body's responses. *"When I write down what's stressing me, I can literally feel my shoulders relax,"* one participant remarked. Cognitive appraisal processes—how individuals interpret stress as a threat or challenge—significantly influenced physiological outcomes. Those capable of positive reappraisal or meaning-focused reinterpretation reported lower anxiety and muscle tension. Emotional intelligence further emerged as a pivotal construct; participants with higher empathy and regulation skills were better able to modulate both emotional and somatic reactions. For some, health was linked to existential meaning and life coherence—spiritual or philosophical reflection fostered acceptance of uncertainty and promoted a sense of inner peace. One participant shared, *"When I see illness as part of my journey, I feel calmer and stronger."* Self-compassion and non-judgmental acceptance were frequently mentioned as healing mechanisms that encouraged relaxation and recovery. Mind–body synchrony awareness was evident when participants noticed physiological shifts (like breathing and heartbeat) aligning with emotional states, demonstrating the integration of awareness and embodiment. Cognitive flexibility also emerged as a resilience factor, with participants highlighting the value of

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"letting go" and "switching perspectives" to manage stress effectively. This theme underscored that meaning-making, emotional understanding, and cognitive adaptability collectively sustain psychophysiological health and reduce the long-term impact of stress.

4. Discussion and Conclusion

The qualitative analysis of participants' narratives revealed three interrelated themes that collectively describe how stable personality traits influence psychophysiological health outcomes: *emotional regulation and stress reactivity*, *personality dispositions influencing health behavior*, and *cognitive–affective integration and meaning construction*. The findings demonstrated that personality not only shapes emotional and behavioral tendencies but also regulates physiological responses to stress through self-awareness, social connection, and health-oriented motivation. In particular, conscientiousness and neuroticism emerged as the most salient predictors of health-related outcomes, echoing decades of empirical research linking these traits to both adaptive and maladaptive physiological functioning (Hill et al., 2024; Thomas et al., 2021). Participants who described themselves as highly organized, goal-directed, and self-disciplined exhibited lower stress reactivity, stronger health motivation, and greater resilience, aligning with the health behavior model of personality (Milad & Bogg, 2020). Conversely, those with heightened emotional sensitivity or chronic anxiety (traits typical of neuroticism) reported more frequent psychosomatic symptoms such as fatigue, muscle tension, and sleep disruption, confirming that personality directly modulates the psychophysiological stress system (Jokela et al., 2024).

The interviews also highlighted that some participants experienced what they perceived as a paradoxical combination of anxiety and health vigilance—consistent with the notion of "healthy neuroticism" (Arend & Yuen, 2025; Turiano et al., 2020). These individuals acknowledged their tendency to worry but noted that their concern often motivated them to maintain healthier routines, monitor bodily changes, and engage in preventive medical behaviors. This dual dynamic mirrors Pedersen et al.'s (Pedersen et al., 2025) findings that conscientiousness moderates the negative effects of neuroticism on body mass index and health behavior. Similarly, Singh (Singh, 2022) found that conscientiousness buffers the influence of neuroticism on health-risk behaviors among adolescents, emphasizing that the interaction between these two traits determines overall health direction. In the present study, participants described this interplay in practical terms—for instance, feeling compelled to double-check health information, maintain structured schedules, and avoid overindulgence, behaviors that ultimately supported better well-being. This adaptive vigilance represents an important psychophysiological mechanism where emotional instability becomes health-promotive through self-regulation and conscientious monitoring.

Participants' accounts further revealed that emotional regulation capacity played a critical role in mediating the relationship between personality and physiological well-being. Those who practiced mindfulness, reflection, or cognitive reframing described improved sleep quality and fewer stress-related bodily complaints. This pattern aligns with Liu et al. (Liu et al., 2022), who found that dispositional mindfulness mediates the link between conscientiousness and mental health among adolescents. Moreover, consistent with Hu and Lü's (Hu & Lü, 2022) work, individuals who expressed a strong sense of meaning in life or purpose in health behaviors exhibited greater consistency in healthy habits and less susceptibility to psychosomatic distress. The ability to reinterpret stress meaningfully appeared to enhance emotional coherence and reduce physiological strain, confirming that cognitive–affective integration serves as a key pathway through which personality impacts physical health. Similarly, Hill et al. (Hill et al., 2024) demonstrated that conscientiousness and sense of purpose uniquely predict better health outcomes, highlighting the importance of intentionality and self-regulation across diverse populations.

Social relationships and environmental context also shaped how personality translated into psychophysiological patterns. Many participants described the moderating influence of social support in buffering stress responses, resonating with Liao et al. (Liao et al., 2025), who identified social support as a mediator between personality and mental health in older adults. Extraverted and agreeable individuals often reported relying on close relationships to manage emotional tension, while those low in social engagement experienced more physiological dysregulation during stress. Zhang et al. (Zhang et al., 2024) similarly observed that family communication and self-efficacy mediate the relationship between personality and health literacy, reinforcing the interconnectedness of interpersonal processes and health regulation. In this study, participants who reported positive social environments also described reduced muscle tension and fatigue, suggesting that social

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connection may moderate the body's stress response through emotional buffering mechanisms.

The findings additionally revealed how conscientiousness influenced structured health-related behavior. Participants high in conscientiousness described organized exercise routines, balanced diets, and regular medical checkups—behaviors linked to reduced physiological stress markers. This observation supports previous findings by Chopik and Lee (Chopik & Lee, 2022), who showed that conscientiousness predicts consistent health behaviors over time, and Thomas et al. (Thomas et al., 2021), who verified the association between conscientiousness and cardiometabolic health through structural equation modeling. Likewise, Yang et al. (Yang et al., 2025) found that personality traits, particularly conscientiousness, predict exercise behavior via self-efficacy and motivation. The present participants echoed these mechanisms in their narratives, frequently describing exercise and structured routines as tools for emotional regulation and body–mind synchronization.

Neuroticism, by contrast, was linked to increased physiological reactivity, yet its effects varied based on individual differences in self-awareness and coping style. Participants who lacked adaptive coping strategies reported headaches, gastrointestinal tension, and sleep disturbances—symptoms reflecting heightened stress physiology. These results support Jokela et al. (Jokela et al., 2024), who demonstrated that neuroticism predicts cardiovascular mortality, and Rozhkova (Rozhkova, 2024), who found that non-cognitive traits influence health and longevity in Russian populations. However, the qualitative accounts also aligned with Arend and Yuen (Arend & Yuen, 2024), who proposed that "healthy neuroticism" fosters protective behavior through heightened self-monitoring. Several participants even reported viewing their anxiety as a "signal to pay attention," transforming emotional reactivity into preventive health behavior—a phenomenon that reveals the nuanced role of neuroticism in psychophysiological regulation.

Cultural and contextual influences were evident in participants' emphasis on self-reflection and meaning-making, reflecting cognitive–affective integration. Similar processes have been identified by Floricica et al. (Floricica et al., 2025), who showed that personality traits shape lifestyle through self-awareness and values, and by Zhu et al. (Zhu et al., 2022), who found that personality influences health information adoption in online communities. Participants who articulated a coherent personal philosophy about health—viewing the body as responsive to emotional states—demonstrated lower perceived stress and greater body–mind harmony. This finding parallels the argument of Hu and Lü (Hu & Lü, 2022) that conscientiousness strengthens the relationship between meaning in life and health behavior habits. The emphasis on internal consistency and reflection thus appears to serve as a psychological anchor stabilizing physiological responses during stress.

Participants' reflections also confirmed the mediating role of prosocial tendencies and conscientious regulation. Those who valued social responsibility and care for others displayed lower stress symptoms and healthier lifestyles, echoing Patitsa et al. (Patitsa et al., 2022), who found that prosocial behavior mediates the relationship between personality and compliance with public health measures. Similarly, Walters (Walters, 2023) demonstrated that low agreeableness and low conscientiousness predict maladaptive behavioral outcomes, supporting the idea that social and moral self-regulation mechanisms translate personality into health behaviors. The narratives of participants in this study repeatedly highlighted "responsibility," "discipline," and "awareness" as core protective factors, aligning closely with these behavioral pathways.

Biological interpretations of personality-health associations also align with the present findings. Participants describing consistent regulation and low impulsivity tended to report fewer psychosomatic manifestations, corresponding to evidence that conscientiousness lowers inflammatory responses such as interleukin-6 levels (O'Súilleabháin et al., 2020). The observation that chronic stress and emotional suppression were linked to fatigue and muscle tension parallels the physiological patterns reported in neuroticism–health research (Jokela et al., 2024; Milad & Bogg, 2020). In contrast, participants emphasizing acceptance, mindfulness, and flexibility described better energy regulation—consistent with evidence that these cognitive–affective skills mediate the relationship between conscientiousness and psychophysiological resilience (Liu et al., 2022).

Finally, this study contributes to the growing understanding that personality traits function as dynamic systems interacting with environment, cognition, and emotion. The qualitative evidence supports integrative models suggesting that personality influences health through multiple converging mechanisms—behavioral regulation, cognitive meaning-making, and physiological modulation (Buczek & Tomaszek, 2022; Turiano et al., 2020).

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Participants' narratives provided vivid examples of how self-reflection, purpose, and conscientious regulation transform emotional reactivity into adaptive behavior. Moreover, the findings extend previous quantitative evidence (Tan et al., 2023; Vellamdehi et al., 2020) by demonstrating that personality influences not only observable health actions but also the underlying psychophysiological experience of stress. The qualitative patterns uncovered here resonate with emerging cross-cultural findings (Asim et al., 2025; Mousavi & Ebrahimi, 2023; Taherian et al., 2022), reinforcing the universal role of personality as a core determinant of both psychological and physical well-being.

Overall, the study's results converge with prior research demonstrating that conscientiousness supports self-regulation and resilience, while neuroticism, though often detrimental, may facilitate adaptive vigilance when balanced with control and reflection. These findings contribute to a more integrative understanding of the psychophysiological mechanisms through which personality exerts its influence on health and highlight the potential for personality-informed health interventions.

Despite its depth, the present study has several limitations. First, the qualitative design and relatively small sample size (21 participants) limit generalizability beyond the Canadian population studied. Although theoretical saturation was achieved, future replication across different cultures, age groups, and clinical populations would strengthen external validity. Second, the reliance on self-reported data introduces subjectivity, as participants may have overemphasized socially desirable behaviors or underreported maladaptive tendencies. Third, while the use of NVivo 14 software enhanced analytic rigor, qualitative coding is inherently interpretive, and subtle researcher bias may have influenced theme categorization. Additionally, the cross-sectional design prevents inferences about causality or the directionality of relationships between personality and psychophysiological outcomes. Finally, physiological data (e.g., cortisol or heart rate variability) were not collected, limiting the ability to triangulate subjective experiences with biological measures.

Future studies should integrate mixed-method approaches combining qualitative narratives with quantitative or physiological indicators to capture the multidimensional nature of personality–health interactions. Longitudinal research could clarify how personality-related self-regulation evolves over time and predicts health trajectories. Further exploration of "healthy neuroticism" may reveal important individual differences in adaptive vigilance and stress reactivity. Cross-cultural comparisons would enrich understanding of contextual moderators such as social norms, family structure, and health values. Additionally, the incorporation of digital ethnography—examining personality expression and health behavior in online spaces—could illuminate new behavioral pathways linking psychological traits and modern lifestyle stressors. Finally, neurobiological methods, such as brain imaging or biomarker analysis, could empirically substantiate the physiological correlates of personality-based self-regulation identified in this qualitative study.

The findings suggest several practical implications for mental health professionals, health educators, and policy makers. Clinicians could tailor interventions to personality profiles by reinforcing conscientious self-regulation skills and helping neurotic individuals channel anxiety into proactive health monitoring rather than avoidance. Health educators might integrate personality-based motivational strategies in wellness programs to encourage adherence and resilience. Organizations could use personality-informed frameworks to design stress management training, emphasizing mindfulness and emotional awareness. Public health initiatives might also consider personality diversity when promoting health campaigns, ensuring that both reflective and emotionally sensitive individuals receive strategies compatible with their coping styles. Overall, recognizing personality as a core predictor of psychophysiological health can lead to more personalized, effective, and sustainable approaches to well-being promotion.

Authors' Contributions

Authors contributed equally to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

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The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

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