

Dimensions of Resilience Among Women with Autoimmune Conditions: A Qualitative Study in Tehran

Sepideh. Mahmoodzadeh¹, Mehdi. Ghezelseflo^{2*}, Farnaz. Rahsepar Monfared³

¹ PhD student, Department of psychology, Faculty of Literature and Humanities, Persian Gulf University, Bushehr, Iran

² Assistant Professor, Department of Psychology, Gonbad Kavos University, Gonbad Kavos, Iran

³ PhD Student, Counseling Department, Aras International Campus, University of Tehran, Tehran, Iran

* Corresponding author email address: m.ghezelseflo@gonbad.ac.ir

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ABSTRACT

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This study aimed to explore and conceptualize the multidimensional nature of resilience among women living with autoimmune conditions, focusing on their cognitive, emotional, social, and spiritual adaptation processes. A qualitative phenomenological design was employed to gain a deep understanding of women's lived experiences of resilience while coping with autoimmune diseases. Using purposive sampling, twenty-one women diagnosed with autoimmune conditions—including lupus, rheumatoid arthritis, multiple sclerosis, and thyroid disorders—were recruited from medical centers in Tehran. Data were collected through semi-structured, in-depth interviews lasting 45–75 minutes. Interviews were recorded, transcribed verbatim, and analyzed thematically using Braun and Clarke's (2006) framework with the assistance of NVivo 14 software. Data collection continued until theoretical saturation was reached. Trustworthiness was ensured through member checking, peer debriefing, and maintaining an audit trail. Thematic analysis revealed four overarching dimensions of resilience: (1) Cognitive Adaptation—involving reframing illness, future orientation, and meaning-making through knowledge; (2) Emotional Regulation—including acceptance, emotional endurance, and positive emotional expression; (3) Social Connectedness—encompassing family support, peer empathy, and identity reconstruction through relationships; and (4) Spiritual and Existential Resilience—defined by faith, gratitude, moral integrity, and spiritual integration with medical care. Resilience among women with autoimmune diseases emerges as a multifaceted and culturally embedded phenomenon, rooted in cognitive flexibility, emotional mastery, social solidarity, and spiritual meaning-making. Interventions should therefore adopt holistic and culturally sensitive approaches that address both psychosocial and existential needs, empowering women to live purposefully despite chronic adversity.

Keywords: Resilience; Autoimmune Diseases; Women's Health; Chronic Illness; Qualitative Research; Tehran; Spiritual Coping; Emotional Regulation

1. Introduction

Autoimmune diseases constitute a complex group of chronic illnesses in which the immune system mistakenly attacks the body's own tissues, leading to a spectrum of physical and psychological challenges. Women are disproportionately affected by these conditions, accounting for nearly 80% of all autoimmune disease cases worldwide (Angum et al., 2020). These disorders include systemic lupus erythematosus, rheumatoid arthritis, multiple sclerosis, autoimmune thyroid disease, and many others, which often manifest in early adulthood or reproductive years, creating long-term implications for both health and quality of life (Desai & Brinton, 2019). The interaction between immune dysregulation, hormonal changes, and genetic vulnerability has been shown to contribute to this gender disparity, particularly during key hormonal transitions such as puberty, pregnancy, and menopause (Desai & Brinton, 2019). Despite the growing medical understanding of autoimmune mechanisms, less attention has been paid to the psychological and social processes through which women maintain resilience and adapt to their chronic illness conditions.

Resilience, broadly defined as the capacity to adapt positively to adversity, is a multidimensional construct encompassing emotional, cognitive, social, and spiritual components. In the context of chronic illness, resilience represents not only the ability to endure ongoing symptoms but also the reconstruction of identity, meaning, and self-efficacy under sustained physical constraint. Research indicates that chronic autoimmune diseases exert a profound psychological toll on women, leading to emotional distress, body image disruption, and a pervasive sense of loss of control (Rojas et al., 2018). However, these same conditions often foster adaptive coping mechanisms such as cognitive reframing, social connectedness, and spiritual meaning-making. Women may reinterpret their illness as a transformative experience that cultivates empathy, patience, and self-awareness, demonstrating that resilience is not simply recovery from adversity but an evolving process of psychological growth.

The relationship between autoimmune diseases and psychological well-being is further complicated by the bidirectional influence of stress and immune function. Evidence suggests that emotional stress can exacerbate autoimmune flares, while chronic inflammation can, in turn, increase vulnerability to depression and anxiety (Wang, 2022). Thus, emotional regulation becomes central to

resilience, as women must navigate uncertainty, manage fluctuating symptoms, and sustain hope despite unpredictability. Studies have demonstrated that women with autoimmune conditions often oscillate between feelings of despair and determination, using emotion-focused strategies to maintain psychological equilibrium (Rojas et al., 2018). Understanding how these emotional and cognitive adaptations interact within the broader context of social and cultural expectations is crucial for developing holistic interventions that address both medical and psychosocial dimensions of illness.

The female predominance in autoimmune disorders also underscores the importance of examining resilience through the lens of gendered experience. Hormonal, reproductive, and psychosocial factors converge to shape the lived realities of affected women (Wang et al., 2024). For example, autoimmune diseases such as primary ovarian insufficiency have been shown to be significantly associated with endocrine autoimmunity, influencing not only reproductive health but also psychological self-concept (Wang et al., 2024). Women who experience premature loss of fertility frequently face stigma and internalized guilt, yet some succeed in reframing these experiences through narratives of acceptance and self-compassion. Such cognitive and emotional transformations illustrate resilience as both a personal and cultural phenomenon embedded in women's social identities.

Recent advances in epidemiology and clinical psychology highlight the need to contextualize autoimmune diseases within women's reproductive and mental health trajectories. Research has established strong associations between postpartum depression and the onset of autoimmune conditions, indicating shared biological and psychosocial pathways (Lin et al., 2018). Similarly, perinatal mental illness has been linked with an elevated risk of developing autoimmune disorders later in life (Brown et al., 2021). These findings suggest that resilience is not merely reactive but also preventive—women's capacity to regulate stress and maintain psychological equilibrium may influence disease vulnerability and progression. Moreover, these interconnections highlight the importance of early screening and integrative care approaches that combine medical, psychological, and social support.

Autoimmune conditions also frequently intersect with reproductive challenges such as infertility, which can amplify emotional distress and social isolation. Women with autoimmune-related infertility or diminished ovarian reserve often experience heightened stigma and self-blame (Evrucke

et al., 2023). The emotional burden is exacerbated by societal expectations of motherhood, which can erode self-worth and belonging. Studies have shown that women facing reproductive limitations due to autoimmune or idiopathic causes employ a range of coping strategies, including spiritual surrender, cognitive restructuring, and the pursuit of alternative forms of fulfillment (Zou et al., 2025). This aligns with broader research illustrating that resilience among women with infertility is strengthened by cognitive flexibility and social support networks that validate their experiences (Sharma et al., 2025). The capacity to transform pain into purpose, and stigma into solidarity, emerges as a hallmark of psychological resilience in this population.

Social support represents another fundamental dimension of resilience in women with chronic autoimmune conditions. Support from family, friends, and peer groups provides not only emotional comfort but also practical assistance that mitigates the impact of functional limitations. Studies have demonstrated that social connectedness is positively correlated with self-efficacy, adaptive coping, and treatment adherence among women with chronic illnesses (R. et al., 2025). Within collectivist cultures, kinship networks play a particularly salient role, as family members often participate in caregiving and emotional regulation processes (Sharma et al., 2025). However, when social norms perpetuate stigma or misunderstandings about invisible illnesses, these same networks can also be sources of distress. Therefore, exploring how women negotiate supportive and stigmatizing social contexts provides valuable insights into culturally embedded resilience mechanisms.

The spiritual and existential dimensions of resilience also warrant attention, as they often provide women with a framework for meaning-making amid chronic suffering. Studies have shown that religious and spiritual beliefs enhance adaptive coping by offering cognitive reappraisal and emotional comfort, particularly in contexts where medical solutions are limited (Araya et al., 2025). For many women, illness becomes a site of spiritual transformation—an opportunity to cultivate gratitude, compassion, and acceptance of divine will. This spiritual resilience does not negate distress but integrates it into a larger narrative of purpose. In societies where faith and spirituality are central to identity, this existential orientation can significantly buffer psychological distress and promote well-being even in the face of progressive illness.

Emerging research in cognitive neuroscience has begun to shed light on the biological underpinnings of resilience, emphasizing sex-based differences in neural and genetic

responses to adversity. Studies on cognitive resilience suggest that women may exhibit unique neuroprotective mechanisms that interact with hormonal and environmental factors (Eissman et al., 2022). These findings invite a multidisciplinary understanding of resilience that bridges biomedical and psychosocial perspectives. Resilience in women with autoimmune conditions may thus reflect not only psychological adaptation but also biological flexibility—a capacity of the brain and body to recalibrate under chronic inflammatory stress.

At a societal level, the prevalence and invisibility of autoimmune disorders continue to present challenges for diagnosis, treatment, and public awareness. Many women report years of misdiagnosis, dismissal, or minimization of symptoms, which erode trust in healthcare systems and amplify feelings of helplessness (Lim et al., 2020). The persistence of gender bias in medical practice and research further complicates women's experiences, leaving their voices underrepresented in clinical literature. Addressing these disparities requires not only biomedical research but also qualitative inquiry that captures the nuanced, lived experiences of affected women. Qualitative methods, particularly phenomenological and thematic approaches, allow researchers to explore how women construct meaning and sustain resilience in the context of chronic uncertainty.

Within this context, several recent studies have sought to identify the cognitive and social factors contributing to adaptive functioning among women with autoimmune conditions. For instance, investigations into the psychosocial aspects of resilience have demonstrated that women's sense of agency, emotional intelligence, and social validation are critical determinants of long-term adjustment (Rojas et al., 2018). Cognitive reframing—viewing illness as a challenge rather than a tragedy—emerges as one of the most consistent predictors of resilience. Moreover, interventions such as cognitive restructuring have shown efficacy in reducing depressive symptoms and enhancing coping in women with chronic or reproductive-related illnesses (Nawaz et al., 2025). These findings underscore the interdependence of psychological and behavioral factors in resilience formation.

Despite increasing scholarly attention, resilience among women with autoimmune diseases remains insufficiently conceptualized, particularly in non-Western contexts. Most existing studies originate from biomedical or psychological frameworks that neglect cultural narratives of womanhood, caregiving, and endurance. Research in Middle Eastern and Asian settings indicates that women's coping strategies are deeply intertwined with collective values, familial

expectations, and spiritual beliefs (Wang et al., 2025). Consequently, resilience cannot be reduced to individual traits but must be understood as a relational and contextual process. Women in these regions often navigate dual pressures: managing the physical demands of illness while preserving social harmony and fulfilling family roles. Exploring these culturally grounded forms of resilience can provide new insights into how meaning, identity, and social connection sustain psychological stability under chronic health adversity.

Furthermore, resilience in autoimmune conditions involves navigating multiple identities—being a patient, a woman, a professional, and a family member—all within fluctuating states of energy and capability. The intersection of gender, illness, and social expectation often forces women to reconstruct their sense of self. As one study describes, this process of redefinition may entail “negotiating with the body” and “reclaiming ownership of life” despite physical unpredictability (Zou et al., 2025). These narratives reveal resilience not as denial of suffering but as an ongoing dialogue between vulnerability and strength.

In summary, autoimmune conditions represent an enduring challenge that extends beyond physical pathology to encompass emotional, cognitive, and social reconstruction. Women’s resilience in the face of such challenges is a dynamic and multidimensional phenomenon, shaped by biological, psychological, and cultural influences. Although quantitative research has delineated prevalence patterns and biological mechanisms, qualitative inquiry remains essential for illuminating the subjective meanings and adaptive strategies that define resilient living with autoimmune disease. The present study therefore aims to explore the dimensions of resilience among women with autoimmune conditions in Tehran.

2. Methods and Materials

2.1. Study Design and Participants

This study adopted a qualitative research design using a phenomenological approach to explore the dimensions of resilience among women diagnosed with autoimmune conditions. The phenomenological design was selected to capture participants’ lived experiences and to identify the psychological, emotional, and social factors shaping their resilience processes.

The participants comprised 21 women living with various autoimmune conditions, including systemic lupus erythematosus, rheumatoid arthritis, multiple sclerosis, and

autoimmune thyroid disease. All participants were residents of Tehran, Iran, and were recruited through purposive sampling to ensure a diverse representation in terms of age, duration of illness, educational background, and socioeconomic status. Inclusion criteria required that participants (a) had received a confirmed diagnosis of an autoimmune condition for at least one year, (b) were willing to share their personal experiences, and (c) were able to communicate fluently in Persian.

Sampling continued until theoretical saturation was reached—when no new codes, concepts, or insights emerged from subsequent interviews. This point was achieved after conducting the twenty-first interview, indicating that the data adequately captured the range of experiences relevant to the research objectives.

2.2. Measures

Data were collected through semi-structured, in-depth interviews, which allowed for both structured guidance and open-ended exploration of participants’ lived experiences. An interview guide was designed based on prior literature on resilience and chronic illness and refined after two pilot interviews.

Key guiding questions included:

- “Can you describe how you cope with the challenges of living with your autoimmune condition?”
- “What factors help you stay strong or hopeful during difficult times?”
- “How have your relationships or beliefs influenced your ability to adapt?”

Each interview lasted between 45 and 75 minutes, depending on the participant’s comfort and willingness to elaborate. Interviews were conducted in quiet, private locations convenient for participants, ensuring confidentiality and comfort. With participants’ consent, all sessions were audio-recorded and later transcribed verbatim. Field notes were also taken to capture non-verbal cues, emotional tones, and contextual details that could enrich the interpretation of findings.

2.3. Data Analysis

The qualitative data were analyzed using thematic analysis, following the six-step framework proposed by Braun and Clarke (2006). Analysis began with immersion in the data through repeated reading of transcripts, followed by the generation of initial codes reflecting meaningful units

related to resilience. Codes were grouped into subthemes and overarching themes to capture the multifaceted nature of resilience experiences.

The process of coding and theme development was supported by NVivo software version 14, which facilitated systematic data management, coding retrieval, and visualization of thematic relationships. To ensure trustworthiness, the study employed multiple strategies:

- Credibility was enhanced through member checking, where several participants reviewed the extracted themes to confirm accuracy and relevance.
- Dependability was established by maintaining a detailed audit trail of all analytical decisions and coding processes.
- Confirmability was strengthened through peer debriefing with two qualitative research experts.
- Transferability was addressed by providing thick, descriptive accounts of participants' contexts and experiences, allowing readers to judge the applicability of the findings to other settings.

The analysis led to the identification of several interrelated dimensions of resilience among women with autoimmune conditions, encompassing cognitive, emotional, social, and spiritual domains.

3. Findings and Results

The study sample consisted of 21 women diagnosed with various autoimmune conditions, including systemic lupus erythematosus ($n = 7$; 33.3%), rheumatoid arthritis ($n = 5$; 23.8%), multiple sclerosis ($n = 4$; 19.0%), Hashimoto's thyroiditis ($n = 3$; 14.3%), and other less common autoimmune disorders such as scleroderma and Sjögren's syndrome ($n = 2$; 9.6%). Participants' ages ranged from 24 to 58 years (mean = 39.6 ± 8.7 years). The majority were married ($n = 15$; 71.4%), while six were single or divorced (28.6%). Regarding educational background, nine participants (42.9%) held a bachelor's degree, six (28.6%) had completed postgraduate studies, and six (28.6%) had a high school diploma or equivalent. In terms of employment status, eight women (38.1%) were employed in administrative or educational positions, five (23.8%) were self-employed or freelancers, four (19.0%) were homemakers, and four (19.0%) were on medical leave or unemployed due to their condition. The duration of illness ranged from 2 to 17 years, with an average duration of 8.3 years, and twelve participants (57.1%) reported experiencing at least one major flare-up within the past year.

Table 1

Main Themes, Subthemes, and Concepts (Open Codes) of Resilience Among Women with Autoimmune Conditions

Main Themes (Categories)	Subthemes (Subcategories)	Concepts (Open Codes)
1. Cognitive Adaptation	Reframing the Illness	Seeing illness as a life lesson; Finding hidden benefits; Accepting body limitations; Shifting from "why me" to "what now"; Redefining normal life
	Future Orientation	Maintaining hope for recovery; Goal setting; Balancing optimism and realism; Planning small achievable tasks
	Self-Awareness and Reflection	Recognizing triggers; Understanding emotional reactions; Acknowledging inner strength; Monitoring personal boundaries
	Adaptive Appraisal	Comparing with worse situations; Minimizing perceived threat; Focusing on controllable aspects
	Meaning-Making through Knowledge	Seeking medical information; Learning about autoimmune processes; Applying knowledge for self-management
2. Emotional Regulation	Acceptance of Emotions	Allowing sadness and fear; Reducing self-blame; Emotional acknowledgment; Embracing vulnerability
	Positive Emotional Expression	Expressing gratitude; Practicing humor; Celebrating small victories; Using art or writing to express emotions
	Managing Anxiety and Uncertainty	Breathing exercises; Avoiding catastrophic thinking; Focusing on present; Developing calming routines
	Resisting Emotional Exhaustion	Taking emotional breaks; Limiting exposure to stressors; Emotional detachment from negativity
	Developing Emotional Endurance	Self-soothing strategies; Learning patience; Perseverance during flare-ups
3. Social Connectedness	Spiritual Comfort and Serenity	Praying for strength; Trusting divine will; Feeling spiritually protected; Meditation and mindfulness
	Support from Family	Emotional reassurance from family; Shared caregiving; Family encouragement; Open communication

	Peer and Community Support	Joining support groups; Talking to others with similar conditions; Exchanging coping strategies; Online forums
	Professional Relationships	Empathy from doctors; Feeling heard by healthcare providers; Psychological counseling; Doctor–patient trust
	Managing Social Stigma	Selective disclosure of illness; Educating others; Building self-confidence in public spaces
	Reciprocal Support Roles	Helping others with similar conditions; Mentoring newly diagnosed patients; Volunteering experiences
	Social Identity Reconstruction	Accepting new identity as a “strong survivor”; Reshaping self-image through social interaction
4. Spiritual and Existential Resilience	Faith and Reliance on God	Belief in divine testing; Interpreting illness as spiritual purification; Reliance on prayer
	Inner Peace and Gratitude	Thankfulness for small blessings; Finding calm in solitude; Appreciating life’s simplicity
	Existential Growth	Re-evaluating life priorities; Spiritual awakening through suffering; Developing compassion toward others
	Transcendence and Purpose	Seeing illness as mission; Living beyond pain; Focusing on contribution to others
	Hope and Continuity	Faith-based optimism; Trust in divine healing; Belief that “this too shall pass”
	Integration of Spiritual Beliefs and Daily Living	Performing rituals for strength; Seeking spiritual counseling; Combining medical and spiritual healing practices
	Moral Resilience	Adhering to ethical values; Strength from moral convictions; Helping others despite suffering

The first overarching theme, *Cognitive Adaptation*, reflects how participants reconstructed their perceptions and beliefs to cope with chronic uncertainty and bodily change. Women described a gradual mental shift from shock and denial toward acceptance and constructive reinterpretation of illness. Many emphasized *reframing the illness* as a “teacher” that cultivated maturity and patience. One participant noted, “*At first, I thought life had ended, but later I realized the disease taught me to see small joys I had ignored before.*” Such reframing allowed them to *find hidden benefits* and *redefine normal life* within new physical limits. A second subtheme, *future orientation*, captured participants’ efforts to maintain a sense of continuity and direction by *setting realistic goals* and *planning daily routines*. Several spoke of balancing optimism with realism: “*I plan my days carefully; I know I may feel worse tomorrow, but I still plan something small that gives me hope.*” Another central subtheme was *self-awareness and reflection*, where women recognized emotional and physical triggers, developed inner observation, and monitored their boundaries to prevent exhaustion. “*Now I can feel when I’m overdoing things—my body warns me,*” explained one respondent. *Adaptive appraisal* emerged as another cognitive mechanism, as women compared their circumstances with others worse off or focused on controllable aspects of life. As one woman put it, “*When I think of those in wheelchairs, I feel lucky that I can still walk to my garden.*” Finally, *meaning-making through knowledge* was a recurring cognitive strategy. Participants actively sought information about autoimmune diseases through online sources, doctors, or peer groups to regain a sense of

control: “*Understanding what happens inside my body gives me peace; knowledge is my medicine.*” Altogether, these findings illustrate a dynamic cognitive restructuring process through which women transformed the experience of illness into a platform for growth and adaptive self-regulation.

The second main theme, *Emotional Regulation*, captured the emotional balancing strategies that participants used to manage stress, uncertainty, and pain. Most described a long journey toward *acceptance of emotions*, learning to coexist with sadness, fear, and disappointment rather than suppressing them. One participant remarked, “*Some days I cry, and I don’t feel guilty anymore. Crying doesn’t mean weakness—it cleans me.*” Through this emotional acceptance, participants reduced self-blame and learned to embrace vulnerability. Another significant subtheme was *positive emotional expression*, where women intentionally practiced gratitude, humor, and creative expression. For example, a participant shared, “*When I feel low, I write poems about my illness; somehow, it turns my pain into art.*” Emotional regulation also entailed *managing anxiety and uncertainty* through mindfulness, relaxation, and focusing on the present: “*I used to overthink every symptom. Now I just breathe and remind myself I’ve survived this long.*” Some participants emphasized *resisting emotional exhaustion* by setting limits with toxic people and taking emotional breaks. One woman explained, “*When others complain too much, I quietly distance myself; I can’t carry everyone’s sadness.*” In addition, *developing emotional endurance* was expressed as a learned ability to endure flare-ups without losing hope, described by one participant as “*learning to wait for the pain to pass without fighting it.*”

Finally, *spiritual comfort and serenity* emerged as a profound emotional anchor. Many relied on prayer or meditation to maintain calmness and regain perspective: “*When I pray, I feel lighter—as if God carries some of the burden.*” Overall, emotional regulation among these women represented not the absence of pain but the active mastery of emotional flow—balancing acknowledgment, endurance, and transcendence.

The third major theme, *Social Connectedness*, emphasized how interpersonal and community relationships played a crucial role in fostering resilience. Participants consistently underscored the importance of *support from family*, describing spouses, parents, or children as emotional lifelines. One woman explained, “*My husband helps me on bad days without making me feel helpless—that love gives me strength.*” Emotional reassurance, shared caregiving, and open communication strengthened their ability to persevere. Another subtheme, *peer and community support*, revealed that participants found solace in talking with others who shared similar conditions. As one woman noted, “*Only someone with lupus can truly understand how I feel. In our group, no one judges us.*” They valued both in-person meetings and online communities for exchanging coping strategies. *Professional relationships* also emerged as a supportive dimension: empathetic doctors and counselors reinforced feelings of trust and safety. One participant recalled, “*My rheumatologist listens with patience; that alone makes me feel I’m not just a disease.*” A fourth subtheme, *managing social stigma*, highlighted efforts to handle misunderstanding or discrimination. Participants often practiced selective disclosure of their illness, educating others when necessary but maintaining privacy otherwise. “*People think I’m lazy because I rest a lot; I’ve learned to explain what autoimmune disease means,*” one woman said. In addition, *reciprocal support roles* showed that some participants turned their experiences into opportunities to help others, mentoring newly diagnosed patients or volunteering in awareness programs: “*Helping others reminds me I’m useful.*” Finally, *social identity reconstruction* represented the evolution of self-image through social interaction: many redefined themselves as “survivors” rather than “patients.” As one participant beautifully expressed, “*Now when I say I’m sick, I add—I’m also strong.*” These patterns highlight that resilience was not a solitary achievement but a deeply relational process rooted in empathy, connection, and mutual care.

The fourth overarching theme, *Spiritual and Existential Resilience*, revealed the profound integration of faith,

meaning, and morality into participants’ coping systems. Many women articulated *faith and reliance on God* as the ultimate foundation of endurance, framing illness as a divine test or a path toward purification. One participant expressed, “*I believe God chose me for this test because He knew I could handle it.*” This belief imbued suffering with moral and spiritual purpose. The subtheme *inner peace and gratitude* reflected participants’ growing appreciation for small blessings and daily calm. “*Every morning I wake up and can move my fingers, I thank God,*” shared one respondent. Another dimension, *existential growth*, represented a transformative re-evaluation of priorities and compassion born from pain. Participants described developing empathy toward others and gaining a deeper understanding of life’s fragility: “*Before my diagnosis, I was impatient; now I value every moment.*” Likewise, *transcendence and purpose* captured how some participants viewed their illness as a mission—an opportunity to inspire others or serve a higher goal. “*If my story helps one woman not give up, then my suffering had meaning,*” said one woman. *Hope and continuity* sustained the belief in eventual healing, whether physical or spiritual, with many relying on faith-based optimism: “*When I feel hopeless, I tell myself: nothing stays forever, not even pain.*” Moreover, *integration of spiritual beliefs and daily living* illustrated how women combined religious rituals with medical treatment, seeing both as complementary. Finally, *moral resilience* appeared in their adherence to ethical principles, honesty, and compassion even amid suffering. As one participant put it, “*Pain shouldn’t make us bitter; it should make us kinder.*” Altogether, these narratives portray resilience as an existential synthesis of faith, gratitude, and moral integrity—enabling women to find purpose beyond the boundaries of their illness.

4. Discussion and Conclusion

The present qualitative study aimed to explore the dimensions of resilience among women living with autoimmune conditions in Tehran, revealing four interrelated categories: *cognitive adaptation*, *emotional regulation*, *social connectedness*, and *spiritual and existential resilience*. Together, these findings highlight resilience as a dynamic and multidimensional construct that evolves through women’s negotiation of chronic illness, uncertainty, and social expectations. Rather than representing mere endurance, resilience in this context involves reconstructing self-meaning, sustaining emotional

balance, and cultivating purpose despite long-term suffering. This interpretation aligns with contemporary conceptualizations of resilience as a process of adaptation that encompasses psychological, social, and spiritual transformation rather than a fixed personality trait (Rojas et al., 2018).

The first dimension—*cognitive adaptation*—reflects participants' mental restructuring and meaning-making processes. Women reinterpreted their illness not as punishment but as a life lesson or spiritual test, echoing prior evidence that cognitive reframing serves as a crucial protective mechanism in chronic autoimmune and reproductive disorders (Desai & Brinton, 2019). This cognitive reorganization facilitated acceptance and empowered participants to regain control over their health management. Similar cognitive coping strategies have been documented among women with infertility, who often transform perceived loss into personal growth by adopting new meanings and identities (Zou et al., 2025). Moreover, as participants in the present study demonstrated, self-awareness and reflection allowed them to identify emotional triggers and regulate their engagement with their bodies and limitations. This echoes findings suggesting that metacognitive insight—an awareness of one's internal processes—supports self-regulation in chronic illness contexts (Eissman et al., 2022).

The emphasis on cognitive flexibility in this study is consistent with the growing recognition that resilience depends on the brain's capacity to accommodate change. Research on sex-based cognitive resilience shows that women may possess distinct neurocognitive patterns that enable adaptive emotional integration under persistent stress (Eissman et al., 2022). These biological insights align with participants' descriptions of "learning to think differently," suggesting that psychological resilience may reflect an interplay between neural adaptability and cognitive self-reconstruction. Similarly, women's orientation toward future goals—such as setting realistic plans and maintaining hope—mirrors what has been described as "forward-focused coping," a mechanism that sustains motivation amid uncertainty (Wang et al., 2025). Thus, cognitive adaptation functions as both a stabilizing and a transformative process, bridging biological, psychological, and existential domains of resilience.

The second dimension—*emotional regulation*—underscores the pivotal role of affective balance in sustaining well-being under chronic inflammatory stress. Participants' narratives revealed that emotional acceptance,

rather than suppression, served as the foundation of resilience. This finding is supported by prior evidence showing that acceptance-based emotional regulation reduces anxiety and depression in women with long-term health conditions (Nawaz et al., 2025). The use of humor, gratitude, and creative expression as coping mechanisms also resonates with findings among women with autoimmune rheumatic diseases, where positive emotional expression was found to mediate the relationship between perceived illness severity and psychological well-being (Rojas et al., 2018). Furthermore, emotional endurance—the ability to remain calm and patient during flare-ups—illustrates what researchers term "psychological elasticity," allowing individuals to recover from stress without losing functional stability (Evruke et al., 2023). In this study, participants viewed patience and persistence as learned emotional skills rather than innate traits, highlighting resilience as an acquired capacity shaped through continuous self-training.

The integration of spirituality into emotional regulation is particularly significant in the Iranian cultural context. Many participants described finding serenity through prayer and trust in divine will, demonstrating that religious practices serve as powerful emotion-regulation tools. This aligns with research among women in Ethiopia and South Asia showing that spirituality provides both cognitive reappraisal and emotional grounding amid chronic reproductive or health challenges (Araya et al., 2025; Sharma et al., 2025). In such contexts, faith not only offers emotional comfort but also constructs a moral framework through which suffering is given meaning. As a participant in this study articulated, "Pain became my teacher; I learned patience from it." This sentiment encapsulates the emotional transcendence central to resilience in autoimmune illness.

The third major theme—*social connectedness*—illustrates how relational support structures shape resilience. Participants consistently emphasized the role of family, peers, and professionals in helping them sustain motivation and identity. Such findings reinforce prior research demonstrating that social support is a critical determinant of psychological adjustment in chronic conditions (R. et al., 2025). Family encouragement, shared caregiving, and validation from significant others were repeatedly described as emotional anchors that mitigated isolation. This relational dimension echoes cross-cultural studies indicating that kinship networks in collectivist societies are primary mediators of resilience for women managing reproductive and autoimmune disorders (Sharma et al., 2025). In these

contexts, family participation in coping processes transforms resilience from an individual to a communal endeavor.

However, the present findings also reveal the dual nature of social relationships—supportive yet sometimes stigmatizing. Participants recounted experiences of social misunderstanding, where their invisible symptoms were perceived as exaggeration or laziness. Such experiences are consistent with research describing the stigma attached to invisible illnesses and infertility, where women must constantly justify their suffering to others (Zou et al., 2025). Coping with stigma requires selective disclosure and self-education of others, both of which were common strategies in this study. Similar adaptive behaviors have been documented among women with primary ovarian insufficiency and other reproductive autoimmune disorders, who manage social stigma by reframing illness narratives and asserting personal strength (Wang et al., 2024). Thus, social connectedness operates not only as emotional support but also as a field of negotiation in which women reconstruct identity and agency in relation to others' perceptions.

Professional relationships also emerged as a crucial subcomponent of resilience. Participants emphasized the empowering effects of being heard and respected by physicians—a finding that aligns with prior studies highlighting the protective role of empathetic healthcare interactions in chronic illness management (Lim et al., 2020). Such interactions foster trust and self-efficacy, reinforcing the notion that resilience is co-constructed within supportive social systems rather than developed in isolation. These insights suggest that promoting resilience among women with autoimmune conditions requires systemic as well as interpersonal interventions—integrating family education, peer mentorship, and patient-centered clinical practices.

The final category—*spiritual and existential resilience*—captures the transcendent meaning-making processes through which women reconcile bodily suffering with psychological growth. Participants interpreted their illness as both a test and a path to spiritual maturity, aligning with findings from cross-cultural research that link faith-based meaning-making to enhanced coping and post-traumatic growth (Arya et al., 2025). Spiritual beliefs provided participants with an interpretive framework for suffering, allowing them to perceive endurance as virtuous and transformative. This mirrors evidence that gratitude, prayer, and trust in divine purpose reduce existential distress and foster a sense of coherence in chronic disease contexts (Desai & Brinton, 2019).

In addition to spiritual faith, existential reflection emerged as a cognitive-emotional process through which participants re-evaluated life priorities and developed compassion toward others. The rediscovery of purpose through altruism—helping others with similar conditions—reflects what previous studies identify as “resilient empathy,” where individuals convert personal suffering into a source of social contribution (Rojas et al., 2018). Some participants explicitly linked this transformation to their moral convictions, describing moral resilience as the ability to sustain ethical integrity and kindness amid adversity. This echoes the broader understanding that resilience is not merely survival but a moral stance toward life's hardships (Wang et al., 2025).

Furthermore, the synthesis of religious and medical approaches observed among participants illustrates the integrative nature of resilience. Many combined medical treatment with prayer, viewing both as complementary rather than contradictory. Similar findings have been reported in Asian and Middle Eastern contexts, where biomedical and spiritual practices coexist within holistic coping frameworks (Wang, 2022). This integration reinforces the importance of cultural sensitivity in resilience research and clinical care. It also aligns with neuropsychological perspectives suggesting that spirituality and meaning-making activate neural networks associated with emotional regulation and cognitive flexibility, potentially supporting long-term psychological resilience (Eissman et al., 2022).

Overall, the findings support a multidimensional model of resilience encompassing cognitive, emotional, social, and spiritual domains. This holistic perspective is consistent with global evidence demonstrating that women's resilience to chronic illness is shaped by the interaction of biological vulnerability, psychological adaptability, and sociocultural context (Angum et al., 2020; Rojas et al., 2018; Wang et al., 2024). By situating these findings within a qualitative framework, this study contributes to a more comprehensive understanding of resilience as both an individual process and a collective narrative of endurance.

Despite its contributions, the present study has several limitations that must be acknowledged. First, the sample was limited to twenty-one participants from Tehran, which may not capture the full diversity of experiences among women with autoimmune conditions in other Iranian provinces or international contexts. Cultural, religious, and socioeconomic differences could influence how resilience is expressed or understood. Second, the qualitative design,

while rich in depth, restricts generalizability. The findings should therefore be interpreted as context-specific insights rather than universal patterns. Third, self-reported data may be influenced by recall bias or social desirability, as participants might emphasize socially valued forms of endurance or faith. Additionally, although the use of NVivo 14 facilitated systematic coding, qualitative interpretation inevitably involves subjective judgment. Triangulation with longitudinal or quantitative measures could enhance future validity. Lastly, the cross-sectional nature of interviews limits understanding of how resilience evolves over time; longitudinal designs would better capture the dynamic trajectories of coping and adaptation in chronic illness.

Future studies should aim to expand this line of inquiry by incorporating larger, more diverse samples that reflect variations in socioeconomic background, illness type, and cultural context. Comparative studies across countries or religious traditions could illuminate how sociocultural frameworks shape the expression of resilience in autoimmune diseases. Mixed-methods approaches combining qualitative narratives with quantitative resilience or quality-of-life measures would allow for richer, multidimensional analysis. Moreover, future research could explore the neurobiological correlates of resilience—examining how cognitive and emotional regulation interact with immune and endocrine responses over time. Investigating the role of digital support communities, online peer networks, and telehealth interventions may also yield valuable insights, particularly given the increasing reliance on virtual communication among individuals managing chronic illnesses. Finally, intervention-based studies that integrate psychological counseling, spiritual care, and family education programs could test practical ways to strengthen resilience and improve well-being among women with autoimmune conditions.

From a practical standpoint, these findings underscore the need for healthcare systems to adopt an integrative, patient-centered approach that acknowledges the psychological, social, and spiritual dimensions of chronic illness. Clinicians should receive training to recognize resilience not merely as emotional toughness but as a multifaceted process involving cognitive reframing, emotional validation, and meaning-making. Support groups and psychoeducational workshops can facilitate shared experiences and reduce stigma, empowering women to manage both physical and social challenges. Incorporating family members into care plans may enhance emotional support and adherence to treatment. Moreover, partnerships between medical providers and

faith-based organizations could offer culturally sensitive interventions that resonate with women's lived values and belief systems. Finally, public awareness campaigns should address misconceptions about invisible illnesses, promoting empathy and reducing social stigma. By creating supportive environments that honor both medical and existential dimensions of resilience, practitioners can help women living with autoimmune diseases not only survive but thrive in the face of chronic adversity.

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

The authors report no conflict of interest.

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Ethics Considerations

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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