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INTERNAL-EXTERNAL STRESS, DYADIC COPING BASED GRATITUDE, AND EMOTIONAL REGULATION IN PATIENTS WITH CHRONIC CORONARY HEART DISEASE AND THEIR PARTNERS: A DYADIC PERSPECTIVE

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ABSTRACT

The chronic coronary heart disease (CHD) imposes significant psychological and relationship burdens on couples, which highlights the significance of learning to manage stress, coping based gratitude, and emotional control as mutually supporting dyadic mechanisms. This paper analyzed the relationships between individual and dyadic stresses in CHD patients and their partners in terms of predicting emotional regulation outcomes and the effect of dyadic coping-based gratitude on these relationships. Standardized measures of stress, gratitude and emotion regulation were used to collect data on patient-partner dyads recruited in cardiac hospitals. The results of correlation showed a significant negative correlation between internal and external stress and emotional regulation as well as a positive correlation between gratitude and the emotional regulation. Direct and indirect effects were studied by using Amos. Structural equation models were used to examine mediation effects. The results of mediation indicated that stress compromises emotional regulation by means of decreased gratitude. The results demonstrate the systemic approach to emotional adjustment in CHD and underscore the importance of dyadic coping-based gratitude as sources of relationship resources that encourage resiliency among patient-partner dyads.

Keywords: *Chronic coronary heart disease, Internal-external stress, Gratitude, Emotional regulation, APIM, Mediation analysis*

INTRODUCTION

Chronic coronary heart disease is the most prevalent cause of morbidity and death in the world. It also has serious psychological and relational consequences. The psychological burden of illness in Pakistan is not only on the ill individual but also on the spouse or partner because the family systems are deeply integrated, and many individuals are expected to take care of the patient (Rana et al., 2020). Chronic diseases, like CHD, not only impair physical functioning but also cause great amounts of emotional suffering, an increase in stress levels, emotional dysregulation, and poor interpersonal relationships in couples (Khan and Ahmed, 2019). With the expanding need to address psychosocial management in the face of the rising health outcomes, there is an emerging need to examine how couples navigate the emotional and cognitive demands of chronic illness in the dyadic context. The adoption of dyadic research highlights the fact that chronic illness is a we-disease, as opposed to a me-disease, in collectivist societies as is the case with Pakistan. Self-blame, the fear of becoming disabled or losing his or her identity, and external stresses due to financial barriers, stigma, and pressures linked to treatment can be considered internal and external stressors, respectively, among patients with CHD (Iqbal et al., 2021).

Also, the existence or lack of emotional regulation and gratitude in such relationships may be a critical factor in determining the psychological resilience of both dyadic partners. The concept of dyadic emotional regulation is

the joint capability of the partners to control, decode, and calm each other down (Revenson et al., 2005). Appreciation, particularly when it is exchanged and sensed in coping interactions has proven to reinforce mutual support, enhance communication and minimise stress (Algoe, 2012).

Internal and External Stress: Definitions and Contextual Relevance

In its general use, stress refers to the emotional and physiological response of a person to circumstances or conditions that seem to be bigger than the capacity to cope with the circumstance by the same person. (Lazarus & Folkman, 1984). This stress in chronic illness such as coronary heart disease (CHD) has multifaceted manifestations and in most instances transgress into the relationship arenas especially among couples. Internal stress originates from the patient's own emotional landscape, including fear of death, bodily limitations, self-doubt, and role strain. In contrast, the external stressor can be perceived and can be more objective such as increase in medical bills, the inability to receive cardiac rehabilitation services, caregiver burnout, and cultural norms concerning the roles of the opposite sex all add to the mental burden of both spouses (Iqbal et al., 2021). External stress in Pakistani families, where an extended family structure frequently comes into effect, can also entail conflicting care-giving roles, the inability to make decisions independently, and unmet emotional demands in the marital relationship (Rana et al., 2020).

Dyadic Coping-Based Gratitude

The process of coping, when it is seen through the prism of a dyadic relationship goes beyond an individual endeavor to cope with stress; it encompasses common coping mechanisms in which couples go through the stress and practical obstacles jointly. Some of the behaviors involved in dyadic coping are joint problem solving, emotional support to one another, and emotional response in a certain direction in times of difficulty (Bodenmann, 2005).

A very effective coping tool that has received growing interest is gratitude- in particular those that are made by the couples in response to care giving, emotional work or companionship in illness. Dyadic coping-based gratitude is a certain type of gratitude which occurs when one of two partners acknowledges and values the emotional and instrumental support of the other in dealing with stress common to them (Algoe, 2012).

Emotional Dysregulation in Health-Challenged Dyads

Emotional dysregulation refers to the challenge of regulating emotional reactions in adaptive or socially fitting ways. Among the forms of emotional dysregulation in dyads with chronic health issues like CHD, there may be increased irritability, withheld emotions, withdrawal and reactive outbursts. They tend not to be limited to the individual but end up affecting the relationship and partner (Butler and Randall, 2013).

The culture of Pakistani families, particularly in men, can support stoicism and endurance, which result in the lack of emotional control but regulation. In addition, emotional dysregulation in a dyadic relationship is not just the consequence of personal stress but also a process of relationships. The theories of co-regulation suggest that emotions are controlled by the interaction of social life and partners tend to be external control of the emotional states of other people (Reis and Shaver, 1988).

Literature review

Internal stress refers to the psychological and emotional responses that originate within an individual, often stemming from self-perception, internal conflict, expectations, or unresolved emotional experiences. Illness uncertainty is one of the major sources of uncertainty that surrounds the prognosis, treatment outcomes and future abilities (Mishel, 1988). **Transactional Model of Stress and Coping** (Lazarus and Folkman, 1984) gives a theoretical approach to internalizing Goal Cognition of stress. Based on this model, it is not only about the events that are taking place, but also the meaning that an individual attributes to them and his or her perceived capabilities to deal with the situation at hand that causes stress. The other theoretical perspective that can be applied is the **Cognitive Appraisal Theory** that states that people make interpretations of experiences using subjective views that are influenced by previous experiences, personality and belief

systems (Smith and Lazarus, 1993). This theory is the reason why two individuals with the same diagnosis can be having dissimilar levels of internal stress. **The Self-Determination Theory** (Ryan and Deci, 2000) also provides a brief on the effect on internal stress due to frustrated psychological needs of autonomy, competence and relatedness. The unmet needs lead to stress and emotional disequilibrium when the chronic illness alters the capacity of an individual to act independently, feel effective and meaningful connections. The implementation of this theory to CHD patients refers to the fact that internal stress is the reaction to the illness but also to the larger imbalance in the psychological base and the surrounding world.

External stress can be described as the demands on a person that are made by the external sources, whether environmental, situational, or interpersonal. External stress can be acute or chronic in nature. Acute stressors, such as sudden hospitalizations or job loss, can trigger immediate psychological distress and overwhelm existing coping mechanisms (McEwen and Stellar, 1993).

The **Environmental Stress Theory** is based on the assumption that the outside pressures surpassing the individual coping mechanisms lead to psychological tension and adaptation failures (Lazarus and Folkman, 1984). This model focuses on the contribution of situational forces including financial and caregiving overloads or healthcare barriers including triggers of emotional distress.

The other significant theoretical perspective is the **Allostatic Load Model** that is used in explaining how long-time exposure to external stressors results in wear and tear on the body and mind (McEwen and Seeman, 1999). This model is especially applicable in the context of CHD because not only emotional dysregulation occurs due to prolonged exposure to socioeconomic hardship, the stress of caring, or the stress of a workplace, but also physiological consequences, such as a higher blood pressure and hormonal dysregulation. It strengthens the two-way interaction between external stress and decline in physical health.

Finally, **the Role Strain Theory** (Goode, 1960) assists in putting other theories into perspective, i.e., how the conflicting demands of multiple social roles (e.g., worker, caregiver, spouse) can cause cumulating stress. The theory would be particularly practical in interpreting the partners of CHD patients who usually balance several responsibilities at the same time. The use of this theory can be used to understand external stress as a systemic problem instead of individual inability to cope.

The most valid theoretical framework that can be applied in explaining the concept of gratitude-based dyadic coping is **Systemic-Transactional Model of Dyadic Coping by Bodenmann** (1995, 2005). The theoretical framework of this model captures the issue of stress as an ordinary phenomenon in a romantic relationship and highlights how couples can be able to employ the supportive behaviors to manage the individual and the couple stressors. The gratitude as an emotional enhancer also plays its role in this model, contributes to better relational bond, and completes the cycle of positive coping.

Fredrickson also contributes to the understanding of gratitude in dyadic coping with the **Broaden-and-Build Theory of Positive Emotions** (2001). The appreciative impacts of this theory expand thought-action repertoires of people and help them to create sustainable personal and relational capitals. In terms of coping in couples, gratitude increases psychological elasticity, optimism, and more intimate social relationship. The theory that is applicable in the case under consideration is the **Relational Maintenance Theory**, where the sustainability of the relationships in romance is based on the sustenance of assurance, positivity, and support (Canary and Stafford, 1992). Gratitude is a habit which is naturally positioned in this system because it is a relational maintenance behavior which denotes the contribution of feeling and recognition.

The emotional regulation refers to the procedure that involves an individual having the ability to regulate the type of emotional experiences that a person experiences, the timing of the emotional experiences and how they are regulated or controlled (Gross, 1998). The attachment pattern and early life experience is one of the principal factors that affect the control of emotions (Mikulincer and Shaver, 2007). One of the main systems of explaining how we regulate the way we feel is the **Process Model of Emotion regulation by Gross** (1998). This model assumes a cascade-like sequence of

regulatory plans that take place at various steps in the emotion generative process, situation selection, situation modification, attention deployment, cognitive change (e.g., reappraisal) and response modulation (e.g., suppression). Reappraisal is viewed to be adaptive, whereas suppression is identified with psychological strain, and the model is helpful in explaining both the healthy and the maladaptive responses of the emotions.

The second significant theory is **Cognitive-Motivational-Relational Theory of Emotion** by Lazarus (1991) that emphasizes the role of appraisal in emotional experience and regulation. It posits that individuals judge the situations in terms of their usefulness to personal goals and resources which leads to the type and intensity of emotion felt. It is afterwards a process of regulation involving the modulation of these appraisals as a form of emotion control. Last theory is the **Attachment Theory** (Bowlby, 1969; Mikulincer and Shaver, 2007) offering a relational perspective on emotional regulation. It suggests that experiences of caregiving during childhood are internalized in the form of internal working models that stipulate how individuals use them to manage emotions within adult relationships. Safely attached individuals tend to develop adaptive emotion regulation strategies and need other individuals to offer support when distressed. In contrast, anxious- or avoidantly attached individuals are likely to be hyperactivated or deactivated, respectively.

Rationale for Focusing on CHD Couples in Pakistan

Chronic coronary heart disease (CHD) is one of the leading causes of morbidity and mortality in Pakistan that is prevalent at about 30.00 of all non-communicable deaths. (WHO, 2022). Although CHD is highly prevalent, it is not properly diagnosed and treated, particularly in rural communities and low-income urban residents. The long-lasting and life-changing character of CHD does not only impact the victim, it impacts the spouse or the primary caregiver too deeply since they are emotionally, financially, and physically involved in coping with the illness. The psychological condition of the partner in the Pakistani sociocultural context is critically associated with the recovery and emotional state of a patient because his or her marriage is usually interdependent and long-lasting (Khan & Ahmed, 2019).

The families in Pakistan, namely women bear the burden of caregiving with little emotional backing, as per the gender norms, which place emotional work under the femininity and frown upon the display of emotions among men (Malik and Qureshi, 2018).

In Pakistan, marriage and family organizations are strictly based on collectivist cultural beliefs where the roles of the spouse are well established and interdependence is one of the most important relationship values. In this sociocultural context, a dyadic approach is even more applicable since it recognizes the role of societal expectation, gender roles, and family structure towards the experience of a couple in illness togetherness (Khawaja and Duncanson, 2008).

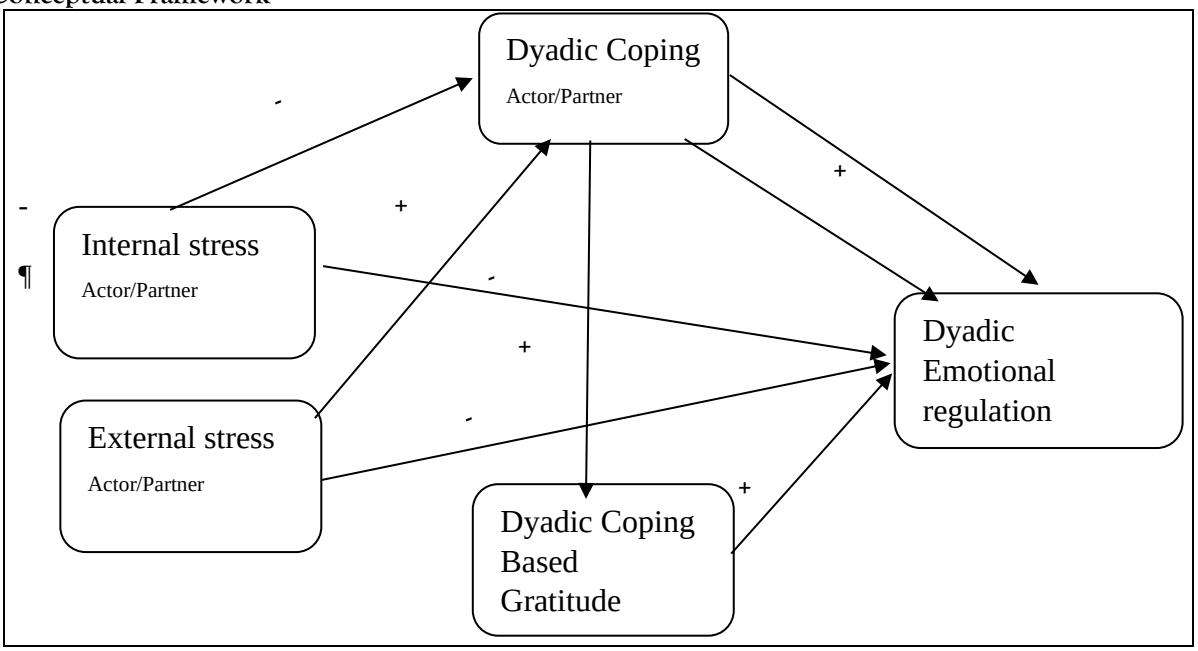
Objectives

1. To investigate the relationship between dyadic internal-external stress and dyadic emotional regulation in patients with chronic coronary heart disease (CHD) and their partners.
2. Identifying predictive strength of internal-external stress on emotional regulation in patients with CHD and their partners.
3. Testing the serial mediation for the relationship between internal-external stress and dyadic regulation in patients with CHD and their partners.

Hypothesis

- **H1**: Dyadic internal-external stress will be significantly and negatively associated with dyadic emotional regulation in patients with CHD and their partners.
- **H2:** Dyadic coping will positively impact dyadic emotional regulation in patients with CHD and their partners.
- **H3:** Dyadic coping-based gratitude will serially mediate the relationship between internal-external stressors and dyadic emotional regulation, indicating that stress affects gratitude, which in turn affects emotional regulation in patients with CHD and their partners.

Conceptual Framework



Methodology

In this research we experimented on how internal and external stressors influence emotional regulation among chronic coronary heart disease (CHD) patients. We examined the implications of dyadic coping-based gratitude in patients with chronic CHD and their chronic CHD-free partners as well. This study attempted to outline the interactions between these variables in order to gain more insight about dyadic regulation between couples and patients.

Research Design

The research design that was used in this study was a reference-based one. A convenient and intentional sub-sampling approach was also used as we contacted chronically affected patients of coronary heart disease directly. In an effort to recruit the participants, we sought the services of classmates, relatives, and colleagues who referred people who met our research qualification.

Sample

To achieve the research objectives, the researcher will use an Actor-Partner Independent research design to interview 103 patients who have been diagnosed with chronic coronary heart disease (CHD) having partners who are not chronically affected with CHD. The criteria of inclusion imply that eligible patients should have lived with their condition at least five years and that they had a partner that did not have chronic CHD. Also in the study are partners of such patients who may not have chronic CHD. The exclusion criteria include patients with no partner and a diagnosis of chronic CHD of less than five years and partners with chronic CHD themselves.

Measures

Multi-Dimensional Stress Questionnaire of the couple (Bodenmann, 2000)

The following questionnaire is used to measure stress, coping and relationship dynamics among couples. It has 30 items. It is self-report instrument for evaluating intimate relationship stress. Using a Likert scale, it assesses stress according to its duration (acute for recent events or chronic for longer-term problems) and source (internal within the relationship or external from the outside).

Questionnaire The Emotional Regulation Questionnaire (ERQ; Gross and John, 2003)

ERQ is a 10- item questionnaire that evaluates relative emotional regulation strategies based on the 7-point Likert scale (1-7). It has two subscales, which are Emotional Expression (5 items), and Emotional Suppression (5 items).

Dyadic Coping Based Gratitude Questionnaire (DC-GQ; Sultan Shujja, 2022).

Sixteen item questionnaire This questionnaire uses a 5-point Likert scale to assess the extent to

which the partners expressed their gratitude to each other in response to each other in situations of stress.

Procedure

First, we used an appropriate sample in our research; we gathered information in the hospitals that treat coronary heart disease. Our target was to get one hundred couples and administer each couple the questionnaires separately. Questionnaires were used in an Urdu version. We investigated the existence of an internal-to-external stress relationship with dyadic emotional regulation. Moreover, we have tested effects of dyadic coping-based gratitude as mediating variable between internal-external stress and dyadic emotional regulation.

Ethical Consideration

This research focuses high on the well-being, rights and dignity of the participants, and follows the stringent ethical requirements. All the participants will give informed consent by having all the information on the purpose of the study and the effects, risks and benefits associated with the study. The confidentiality of the participants will be assured and their data will be profoundly handled and stored in order to preserve the effect of making the identifiable information anonymous. Our principles will be respect, autonomy, and cultural sensitivity, in which the participants will have the right to withdraw at any point without any penalty.

Results

Table 1: *Descriptive Statistics of the Study (N=103 Dyads)*

	Patients	Partners		
Variables	**M(SD)**	**M(SD)**	**α** $_{Patients}$	**α** $_{Partners}$
Multidimensional Stress				
Internal-Stress	2.13(.62)	2.15(.64)	.90	.91
External-Stress	2.02(.44)	2.02(.48)	.79	.81
Coping Based Gratitude				
Coping Based Gratitude-Self	2.85(1.03)	2.85(1.03)	.94	.93
Coping Based Gratitude-Partner	2.45(.98)	2.50(.98)	.94	.93
Emotional Regulation				
Cognitive Reappraisal	3.68(1.48)	3.65(1.49)	.88	.87
Expressive Suppression	4.00(1.25)	3.91(1.16	.84	.80

Table 1 shows means, standard deviations, and alpha of Cronbach of study variables in patients and partners. With good reliability, patients and partners registered similar scores in terms of internal stress and external stress. Patients and partners had found that coping based gratitude on self was no different whereas gratitude on the partner was slightly higher on partners; all had high levels of reliability. In terms of emotional regulation, similar scores were reported by patients and partners in cognitive reappraisal but the patients scored slightly higher in expressive suppression. All scales had acceptable to excellent internal consistencies.

Table 2 *Correlation Metrices showing associations among study variables between the Patients and Partners (N=103 Dyads)*

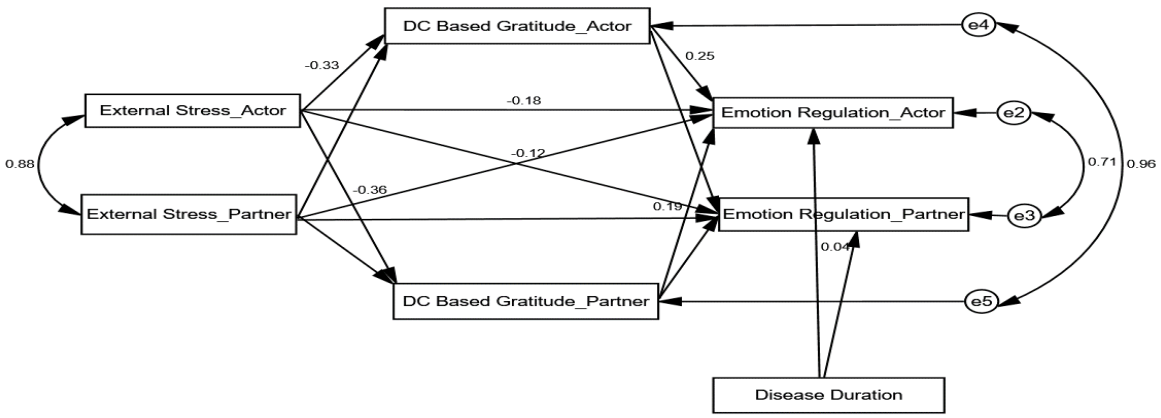
Patients			***Partners***			
Variables	*1*	*2*	*3*	*4*	*5*	*6*
Multidimensional Stress						
1.Internal-Stress	.92**	.75**	-.76**	-.80**	-.83**	.47**
2. External-Stress	.77**	.88**	-.62**	-.65**	-.67**	.38**
Dyadic Coping Gratitude						
3.Coping Gratitude-Self	-.74**	-.60**	94**	89**	70**	-.46**

4.Coping Gratitude-Partner	-.84**	-.68**	.90**	.95**	.80**	-.53**
Emotion Regulation						
5.Cognitive Reappraisal	-.86**	-.68**	.73**	.79**	.94**	-.62**
6.Expressive Suppression	.58**	.50**	-.52**	-.60**	-.70**	.89**

Note. *p < .01 (**)*

Table 2 shows the bivariate correlations between the study variables among patients and partners. As anticipated, internal and external stress were highly positively related. Both stress measures correlated negatively with coping-based gratitude, which showed that the higher the stress, the lower the coping-based gratitude. Cognitive reappraisal was also negatively correlated with stress whereas expressive suppression was positively correlated with stress. Lastly, the relation between cognitive reappraisal and coping-based gratitude, and expressive suppression were strongly positively and negatively correlated, respectively. Expressive suppression demonstrated the converse, as it was positively related to stress, and negatively related to dyadic coping-based gratitude and reappraisal.

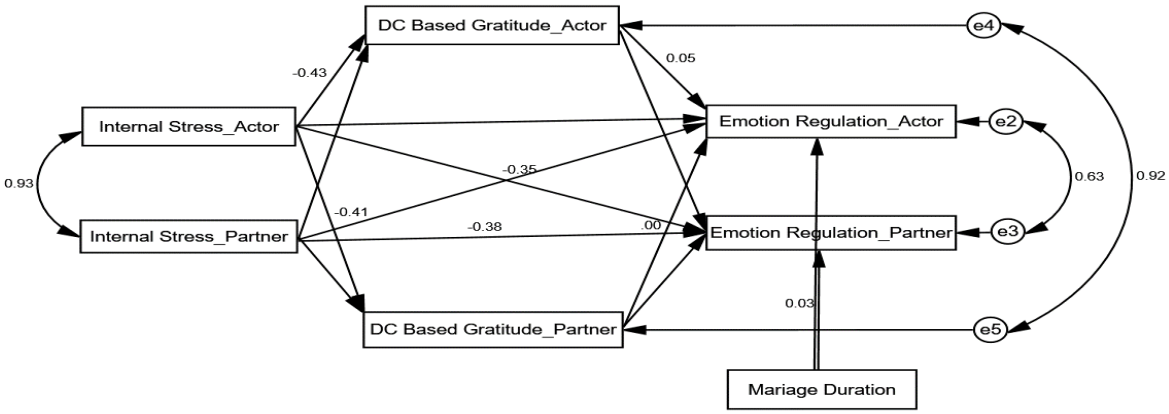
Figure 1: Structural equation model illustrating the mediating role of dyadic coping-based gratitude between external stress and emotion regulation in patients and partners



Note: X^2/df= 2.38, GFI=.98, CFI= .99, REMSEA=.082, SRMR=.07
**p < .01, *p < .001.*

Figure 2 Path diagram showing the mediating effect of dyadic coping-based gratitude (DC-G) in the relationship between external stress and emotion regulation between patients and partners with the length of the disease as a covariate. The external stress was negatively related to the actor and partner DC-G, as well as the emotion regulation. Actor DC-G was positively correlated with partner external stress. Both actor and partner emotion regulation, in turn, were positively related with actor DC-G. There was a positive relationship between disease duration and partner DC-G. The actor and partner emotion regulation residuals were positively related.

Figure 2: Structural equation model illustrating the mediating role of dyadic coping-based gratitude between internal stress and emotion regulation in patients and partners



Note: X^2/df= 2.96, GFI=.98, CFI= .99, REMSEA=.098, SRMR=.09
*$p < .01$, *$p < .001$.

Figure 3 There was a negative association between internal stress and both actor and partner DC-G, as well as a negative correlation between internal stress and emotion regulation. Partner internal stress was positively related to actor DC-G. Actor DC-G, in its turn, was positively correlated with the emotion regulation of the actors, whereas the relationships with the emotion regulation of the partners were rather weak. There was a positive relationship between marriage length and partner DC-G. There was a positive correlation between the residuals of the emotion regulation of actors and partners.

Table 3: Specific Indirect effects considering couples' external and internal stress as predictors, dyadic coping-based gratitude and dyadic coping as a mediator, and emotion regulation as the outcome variable (N = 206).

Paths	B	*p*	95%Cl
Mediating role of dyadic coping-based gratitude between external stress and emotion regulation			
External Stress $_A$ →DC-Based Gratitude $_A$ →Emotion Regulation $_A$	-.153	.004	-.26 – (-.54)
External Stress $_A$ →DC-Based Gratitude $_A$ →Emotion Regulation $_P$	-.155	.004	-.26 – (-.52)
External Stress $_A$ →DC-Based Gratitude $_P$ →Emotion Regulation $_A$	-.153	.004	-.26 – (-.54)
External Stress $_A$ →DC-Based Gratitude $_P$ →Emotion Regulation $_P$	-.155	.004	-.26 – (-.52)
Mediating role of dyadic coping-based gratitude between internal stress and emotion regulation			
Internal Stress $_A$ →DC-Based Gratitude $_A$ →Emotion Regulation $_A$	-.022	.53	-.94 – (-.58)
Internal Stress $_A$ →DC-Based Gratitude $_A$ →Emotion Regulation $_P$	-.020	.51	-.89 – (-.54)
Internal Stress $_A$ →DC-Based Gratitude $_P$ →Emotion Regulation $_A$	-.022	.53	-.94 – (-.58)
Internal Stress $_A$ →DC-Based Gratitude $_P$ →Emotion Regulation $_P$	-.020	.51	-.89 – (-.54)

Testing the Indirect Effects of Couples' External and Internal Stress on Emotion Regulation through Dyadic Coping-Based Gratitude

Table 3 presents the specific indirect effects of these associations. The findings indicated that both external and internal stress were indirectly related to emotion regulation through the mediating mechanisms of dyadic coping-based gratitude among patients and their partners.

Specifically, higher external stress predicted lower levels of emotion regulation in both patients and partners through its negative association with dyadic coping-based gratitude. This pattern suggests that when individuals experience elevated external stress, their ability to engage in dyadic coping-based gratitude decreases, which in turn hampers emotional regulation within the couple. Conversely, the indirect effects of internal stress through dyadic coping-based gratitude were not pronounced.

Discussion

This paper set out to understand the predictive and relational relationships of internal and external stress, coping mechanisms, dyadic coping through gratitude, and the emotional regulation of patients with chronic coronary heart disease (CHD) and their partners. To begin with, the descriptive data showed that participants had moderate levels of internal and external stress when they reported relatively high levels of involvement in coping strategies and dyadic gratitude-based responses.

The outcomes of correlations showed that stress variables have a significant negative relationship with emotion regulation. This is a validation of the theoretical hypothesis that stress interferes with emotional flexibility whereas adaptive coping supports. The Actor-Partner Interdependence Model (APIM) analysis further contributed to these findings by showing that the pattern of stress and coping based gratitude as well as the patterns of emotional regulation of individuals (actor effects) plays a major role in the overall emotional regulation of the individuals (partner effects). These patterns are interdependent and indicate the reciprocal and systemic quality of emotional dynamics between patients and their partners in a dyad. These results correspond to the tenets of the family systems theory, which postulates that emotional consequences of chronic illness situations are not merely intrapersonal in nature but also relational in their form and impact.

As per the findings dyadic emotional regulation were significantly and negatively connected to dyadic internal-external stress among CHD patients and their partners. The third hypothesis that suggested dyadic emotional regulation would be positively foretold by dyadic coping was also established. This result demonstrates the importance of common coping behaviors to promote the creation of emotional stability and adaptive regulation in the partners managing CHD. The fifth and most integrative hypothesis suggested the serial mediation model, where dyadic coping and dyadic coping-based gratitude intermediately relate to the relationship that exists between the dyadic internal-external stress and emotional regulation. The present serial mediation route demonstrates a significant psychosocial process: successful coping leads to appreciation and gratitude between partners, which, in turn, culminates in emotional regulation and psychological adaptation.

Theoretical and Practical Implications.

The findings provide theoretical confirmation on the positive psychology constructs, especially gratitude, as a component of emotional resilience in chronic illness. Whereas in the past literature has tended to underline the importance of individual gratitude in the well-being (Emmons and McCullough, 2003). It also confirms the broaden and build theory (Fredrickson, 2001) according to which positive emotions like gratitude broaden behavioral and cognitive repertoires allowing people and couples to form more adaptive coping strategies to adversity.

As a clinical implication, the findings have practical implications on clinical interventions and health care practices to be administered to patients with chronic coronary heart disease. Conventional cardiac rehabilitation programs tend to concentrate on biomedical and personal psychological outcomes, whereas the study indicates that inclusion of partners and relational emotional regulation were of primary concern in PS care. Studies indicate that like this relationally oriented intervention enhances not only the emotional but also the physiological health including blood pressure, immune systems and cardiac recovery rates (Martire and Schulz, 2007).

Limitations

In spite of the significant findings and contributions of the study, there exist a number of limitations that should be noted to put the results into perspective and inform the future research. To begin with, the cross-sectional design does not allow making causal inferences. These relationships should be evaluated in longitudinal studies, specifically, in case of chronic coronary heart disease, not only emotional but also relational processes are prone to change during the course of the illness.

Second, the research was based on self-report instruments solely, and this fact could lead to the response bias of social desirability and self-perception fallacies. Third, there is the

limitation in terms of sample size and demographics. Despite the fact that the sample comprised of equal proportions of patient-partner dyads, the sample was based on a small geographical and clinical sample, which might not be generalizable.

Future Research Directions

Based on the current results of the research, it is possible to outline several possible directions of future research to broaden the scope of knowledge on stress, coping, and emotional regulation in the context of dyadic health. To begin with, longitudinal research is necessary to be able to elucidate the temporal and causal links between the variables of the study. The chronic coronary heart disease (CHD) is a condition that changes over time, future research needs to study how external and internal stressors vary in various stages of illness progression and impact on the dyadic coping process and emotional regulation over months or years. Longitudinal designs would also enable study on feedback loops-how empowerment uncontrolled can in turn be the cause of stress or affect coping reaction during the period.

Conclusion

The findings were found to have good empirical evidence to support the role of an individual and partner factors in the regulation of emotions. It was observed that internal and external pressure had a significant negative effect on emotional regulation, which indicates the harmful psychological cost of uncontrolled stressors in each of the partners. On the other hand, dyadic coping based on gratitude became a potent predictor in ensuring improved emotional regulation not only to the individuals who employ such strategies but also to their partners. Such results support the idea that emotional well-being has to be conceptualized as a relational process, but not as an individual outcome.

To sum up, this research is a part of an expanding body of knowledge regarding the strong interconnection between emotional regulation and stress exposure, coping, and the relationship processes that do occur in the context of chronic illnesses. It proposes a more caring, systemic, and relational approach to the research and clinical practice to enhance the psychological wellbeing of couples who have to be taken through the process of overcoming the challenges of chronic coronary disease.

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