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Exploring Life Satisfaction's Impact on Prosocial Feelings and Self-Regulation: The Role of Empathy and Peer Influence

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This study examines the inter-relationship of life satisfaction, self-regulation, and prosocial feelings, with the mediating role of state empathy and the moderating role of peer group influence. This study would help to understand more precisely how life satisfaction translates into psychological and social behaviors in workplace contexts A cross-sectional survey among 252 employees working in different companies operating throughout the Kingdom of Saudi Arabia has been conducted. Using standard scales for measuring life satisfaction, state empathy, peer group influence, self-regulation, and prosocial feelings, data were collected and further processed for analysis using ADANCO to be used for Structural Equation Modeling (SEM) assessment of the measurement as well as structural models. The results confirmed that life satisfaction significantly influences both self-regulation and prosocial feelings. State empathy was found to mediate these relationships, emphasizing the pivotal role it plays in psychological processes. In addition, peer group influence moderated the effects of life satisfaction, highlighting the significance of social contexts. The findings offer robust empirical support for theoretical frameworks such as the broaden-and-build theory and social learning theory. By combining social and emotional constructs into a thorough model, this study adds to the body of literature and provides useful advice for promoting wellbeing and prosocial behaviour in work environments. It draws attention to the ways that social dynamics,

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empathy, and personal fulfilment interact, providing opportunities for focused interventions.

Keywords: Life satisfaction, State empathy, Peer group influence, Self-regulation, Prosocial feelings.

Introduction

Psychological and behavioral sciences have been of much attention on interaction between psychological well-being, self-regulation, and prosocial feelings. These constructs represent human functioning outlining individual and social development, thus remaining core topics in understanding individual and group behavior (Abdul Kadir, 2024). Life satisfaction measures subjective well-being by asking individuals to describe their lives in terms of fulfillment and happiness (Al Ghanam, 2024). It is increasingly found to be a determinant for many psychological outcomes and constitutes self-regulation and prosocial tendency (Hastings et al., 2024). Self-regulation is the ability with which a person governs his or her thoughts, emotions, and behaviors relative to individual's aims, it is very critical in achieving long-run well-being and navigating complex social settings (Oliveira et al., 2024). Similarly, prosocial feelings that include empathy, compassion, and altruism are essential for building and maintaining positive relationships. Even though these have been recognized as significant, the pathways linking life satisfaction to self-regulation and prosocial behavior are under-researched (Hastings et al., 2024). Recent studies suggest that state empathy and peer group influence can mediate or moderate how life satisfaction impacts self-regulatory capacities and prosocial tendencies (Walker, 2024). This paper develops the extant frameworks of these constructs to discuss their theoretical and empirical implications of filling in the gaps of understanding the dynamic interconnections between them.

Psychological well-being has identified life satisfaction as an integral aspect that affects self-regulation and positive prosocial emotions (Price-Mitchell & Clay, 2024). Empirical analyses demonstrate that people are better at regulating their emotions where the higher life satisfaction is, boosting self-regulatory strength (Cover et al., 2024). Such an observation is also supported longitudinally; it has proven that life satisfaction predicts both stronger goal adjustment and impulse suppression through time (Su-Russell et al., 2024). Fredrickson's broaden-and-build theory further explains how positive

emotions ascribed to life satisfaction expands cognitive and behavioral resources based on which regulatory capacities are cultivated (Guerra et al., 2024). Moreover, satisfied individuals report lower levels of stress and negative affect, factors commonly known to impair self-regulation (Ren et al., 2024).

Within the prosocial behavior domain, there has been evidence that linked life satisfaction with greater empathy and altruism (Zhang et al., 2024). In this study, Salvo-Garrido et al. (2024) identified that happier individuals are likely to help others as well as come with more empathetic responses when placed in a social setting. State empathy is a highly meaningful but rather short-term construct that bridges this relation by making other people's feelings more sensitive (Tsai, 2024). For instance, studies have revealed that life satisfaction is positively related to the emotional connection with others, which directly promotes prosocial behavior (Cheng et al., 2024). Peer group influence also comes out as a critical determinant of self-regulation and prosociality. As research has shown, favorable peer environments enhance the effect of life satisfaction by promoting constructive behaviors and altruistic tendencies (Lasota, 2024). However, negative peer influences might dampen these effects by the poor peer relation, which is associated with lower levels of regulation and prosocial capacity as indicated by Tee et al. (2023).

Despite the numerous studies on life satisfaction, self-regulation, and prosocial feelings, much still remains to be filled (ÖZcan & GÜNgÖR Aytar, 2023). For example, although the direct linkage of life satisfaction with self-regulation is well established, only scarce attention has been placed on the mechanisms that mediate or moderate this relationship (Bartolo et al., 2023). Concepts like state empathy and influence by peer group, theoretically speaking, are plausible mediators and moderators but empirically, they have not received significant attention (Arango-Tobón et al., 2023). Most literature is cross-sectional, not capable of capturing the dynamic nature of these relationships and is static in design. This kind of research would call for longitudinal studies that explore the dynamics of life satisfaction changes as they evolve with self-regulatory and prosocial tendencies (Schütz & Koglin, 2022).

Another important gap is in the exploration of contextual factors, such as cultural and social influences that may shape these relationships (Guo et al., 2023). For example, there is an underexplored role of peer group dynamics in moderating the effects of life satisfaction on prosocial behavior, especially in diverse sociocultural contexts (Lee & Lee, 2020). However, empathy was found

to be one of the potential mediation candidates; its specific pathways with its interactions with life satisfaction and prosociality are left to be studied (Salazar Kämpf et al., 2023). Such gaps could open ways for better understanding of the overall relationship between life satisfaction with self-regulation and prosocial feelings thereby opening possible interventions.

The study aims to examine the associations of life satisfaction with self-regulation and prosocial feelings, with special attention drawn to the mediating effect of state empathy and to the moderating role of peer group influence. Specifically, this study will try to answer questions such as:

1. To what extent does life satisfaction influence self-regulation and prosocial feelings?
2. How does state empathy mediate the relationships between life satisfaction and self-regulation, as well as life satisfaction and prosocial feelings?
3. In what ways does peer group influence moderate the effects of life satisfaction on self-regulation and prosocial feelings?
4. What theoretical mechanisms underlie these relationships, and how can they be explained in diverse sociocultural contexts?

The study addresses these questions, filling some of the critical gaps in the literature and giving empirical evidence to support dynamic interconnections between psychological well-being and regulatory processes vis-à-vis social behavior. This study advances the theoretical understanding and practical applications of psychology and behavioral science. This is because the mechanism explaining how life satisfaction relates to self-regulation and prosocial feelings is linked to a deeper understanding of human behavior and well-being (Brandon, 2023). This provides it actionable insight to help design interventions into improving emotional regulation and practicing altruistic behavior through strategies to enhance empathy and positive peer-related interactions (Toh & Kirschner, 2023). Its implications were for mental health, education, and social policy on life satisfaction as a central underpinning of personal and societal welfare.

Established psychological theories form the basis for relationships considered in this research. Self-Determination Theory offers a comprehensive understanding of how life satisfaction as a marker of psychological well-being pushes people towards self-regulation and prosocial behavior by satisfying fundamental psychological needs for autonomy, competence, and relatedness (Bartolo et al., 2023). Similarly, Fredrickson's broaden-and-build theory explains how positive emotional states that relate to life satisfaction enlarge

cognitive resources and lead to better regulation and further social bonding (Shoshani et al, 2022). Empathy, therefore as a mediator would thus resonate with theories stating that emotional resonance is a pre-requisite for both prosocial and regulatory behavior. Also supporting the moderating role of peer group influence are Bandura's Social Learning Theory which points out that social norms and behaviors within peer environments deeply influence individual outcomes (Yang et al., 2023). These theoretical insights guide the study toward the research objectives and integrate these constructs into an explanatory model of life satisfaction with self-regulation and prosocial feelings, state empathy, and influences of a peer group. The gap is hereby filled in terms of a thorough understanding of the psychological process at play within the interrelated categories.

Literature Review

Prosocial feelings, or empathy, sympathy, and responsibility towards others, determine the nature of human relations and social integration (Sezgin et al., 2023). These feelings often motivate behaviors that benefit others, thus promoting altruism and cooperation. Number of research demonstrates that prosocial tendencies have deep biological roots in humans and are influenced by various psychological, social, and environmental factors (Zhu et al., 2022). These neuroscientific studies have demonstrated activity in certain brain areas, such as the anterior cingulate cortex and amygdala, during experiences of empathy or the observation of another's distress (Gajda et al., 2022). This underlines the inherent component of prosociality in human development but, its expression is far from uniform and is subject to myriad influences - individual differences, situational contexts, and cultural norms (Berti & Cigala, 2020). For example, self-regulatory processes are such that control impulses and make behavior congenial to the individual's or social's goal, and also it exerts immense influence on the amount and effectiveness of prosocial actions (Gajda et al., 2022). Self-regulation or ability that controls thoughts, emotions, and behaviors is very much associated with prosocial feelings. Effective regulation or management of conflicting desires, giving priority to others' needs, and overcoming immediate self-interest characterize prosocial feelings (Romero-Ayuso et al., 2022). This capacity is particularly important when applied in chronically demanding circumstances, such as caregiving or community service. Research suggests that self-regulation increases prosocial behaviors by contributing to emotional resilience and the development of

cognitive flexibility (Gál et al., 2021). In addition, interventions designed to strengthen self-regulatory abilities-perhaps using mindfulness practice or cognitive behavioral techniques-were found to make individuals more prosocial because they enhance conscious awareness of emotion and reduce subjective levels of stress (Modl, 2022). On the other hand, low self-regulation is associated with little or no prosocial behavior and impulsiveness, leading to selfish behaviors (Karnaze et al., 2022). The dynamic cross-interaction between prosocial feelings and self-regulation may therefore increasingly promote more personal well-being and more positive social relationships, making it central for psychological and societal constructs.

Theory to explain the research relationships and model

The proposed relationships are theoretically based on Self-Determination Theory that focuses on psychological well-being and social functioning (Abdul Kadir, 2024). SDT asserts that life satisfaction derived from basic psychological needs like autonomy, competence, and relatedness leads to optimal self-regulation and prosocial behavior (Hodge, 2024). Life satisfaction as a dimension of subjective well-being sustains optimal positive emotional states, which enhance regulatory processes, and promote other-centered motivations such as empathy and altruism (Hastings et al., 2024). Since empathy is such an important construct in prosocial dynamics, it could mediate the translation of life satisfaction into adequate regulation and prosocial feelings based on increased emotional attunance to others' experiences (Price-Mitchell & Clay, 2024). Finally, influence by the peer group fits within Bandura's Social Learning Theory, which describes the creation or change of behavior and attitudes via interaction with models in social settings (Ren et al., 2024). The moderating effect of peer influence underlines, therefore, how external social norms and support systems can amplify or diminish the internal processes catalyzed by life satisfaction (Su-Russell et al., 2024). Together, these theoretical perspectives provide a robust framework (Figure 1) for understanding the interplay of life satisfaction, self-regulation, empathy, and prosocial feelings in varied social and emotional contexts.

Hypotheses

Life satisfaction, as an overall appraisal of the cognitive and affective experience of one's life, has been a widely used concept in research related to self-regulation (Salvo-Garrido et al., 2024). Consistent results from previous

studies have indicated that higher levels of life satisfaction are associated with better self-control, emotional regulation, and goal-directed behaviors (Cheng et al., 2024). As noted by Tee et al. (2023), for example, life satisfaction is directly related to psychological resilience, a fundamental aspect of self-regulation. High life satisfaction can be maintained with emotional equilibrium even during negative conditions, leading to better decision-making and inhibitory control (Bartolo et al., 2023). Similarly, in his positive psychology study, Schütz and Koglin (2022) found that satisfied people were more likely to exhibit conscious and long-term goal setting, indicating effective self-regulation mechanisms. On the neurobiological level, broaden-and-build theory describes how positive emotional states linked with life satisfaction expand cognitive and behavioral repertoires (Lee & Lee, 2020), wherein people prepare to better deal with challenging self-regulatory tasks. Empirical studies continue to support this connection in the findings that impulsive behaviour and poor regulations are at a greater rate among individuals with poor levels of life satisfaction, potentially leading to maladaptive outcomes, such as substance abuse or procrastination (Brandon, 2023). Together, these findings emphasize the role of life satisfaction in self-regulatory abilities.

The dynamic interplay between emotional stability and available cognitive resources may explain well the positive association between life satisfaction and self-regulation (Lisá & Valachová, 2023). High-life-satisfied individuals are inclined to have a stable emotional state that is supportive of their impulse control and congruence with long-term behavioral goals (Yang et al., 2023). Such claims receive empirical backing from longitudinal data, suggesting that life satisfaction predicts improved capacities for self-regulation over time (Zhu et al., 2022). In addition, satisfied people often possess a proactive orientation toward problem-solving-an indicator of good selfregulation. The development of mindfulness, which often accompanies higher life satisfaction, also promotes regulatory behavior by increasing conscious presence in the present and dampening other default responses (Berti & Cigala, 2020). These mechanisms indicate a causal pathway in which life satisfaction serves as a foundational psychological resource that supports self-regulation (Romero-Ayuso et al., 2022). Life satisfaction promotes positive affect but also reduces stress; by strengthening, rather than undermining, factors potentially counterbalancing regulatory processes, such as anxiety and burnout.

H1. Life satisfaction significantly influences the self-regulation.

Life satisfaction has been very much associated with prosocial emotions (Modl, 2022). The latter include empathical, compassionate nature, and the degree to which a person feels responsible for the feelings of other people (Karnaze et al., 2022). According to the studies, people who report highly on their life tend to experience emotions that are positive, thereby resulting in a greater tendency of prosocial behaviours (Gál et al., 2021). For instance, research studies by Gajda et al. (2022) reported that happy people tend to execute positive acts and behave with increased kindness towards others. This relation can be understood by the broaden-and-build theory, which finds that positive emotions, often as a fruit of life satisfaction, widen the scope of thought in an individual's mind, and therefore make them grasp social relationships more firmly and work for others' welfare (Li et al., 2022). Empirical research also indicates that increased interpersonal sensitivity covaries with life satisfaction, which is strongly associated with prosocial tendencies. For instance, a study by Sezgin et al. (2023) found that satisfied individuals tend to comprehend other people's emotional state more effectively and respond appropriately to it, enhancing empathy. Conversely, low life satisfaction has been linked to limited emotional accessibility as well as a reduced concern for others that would, in turn, result in reduced prosocial tendencies (Shoshani et al, 2022).

The influence of life satisfaction can be understood as a kind of cascading effect on prosocial feelings, where positive life evaluations produce greater emotional well-being that creates a fertile ground for empathy and compassion (Toh & Kirschner, 2023). The empirical evidence underlines that life satisfaction increases the ability to relate to others emotionally by reducing negative emotions like anger and frustration, commonly interfering with prosocial behaviors (Salazar Kämpf et al., 2023). Guo et al. (2023) longitudinal studies also revealed that life satisfaction would predict sustained prosocial engagement over time, which indicates that it's a steady relationship. The life satisfaction even elicits gratitude, and gratitude was shown to magnify prosocial tendencies when urging people to direct their attention to others' wellbeing (Arango-Tobón et al., 2023). This observation underlines the thought that happy people are not only happier but also more likely to serve the happiness and welfare of people around them, thereby prosocial feelings being the natural extension of their positive emotional states.

H2. Life satisfaction significantly influences the prosocial feelings.

Empathy, in the temporary and context-specific sense of sharing and understanding another's emotions, is a key mediator of psychological process (ÖZcan & GÜNgÖR Aytar, 2023). It has been shown that empathy facilitates the process of emotional regulation by increasing conscious awareness of self-directed and other-directed emotions. According to Lasota (2024), people with high empathy are able to better regulate their own emotions and behavior, especially socially demanding situations. In terms of life satisfaction, positive affective states often promote greater empathy and thus enhance self-control. For example, Tsai (2024) research on empathy and altruism showed that empathetic individuals have greater self-control to act in the best interest of others. Furthermore, Zhang et al. (2024) demonstrated that empathy is associated with activity in those regions responsible for emotional regulation, including the prefrontal cortex, thus providing a neurobiological underpinning to the relationship between these constructs.

State empathy is an emotional bridge connecting well-being with regulatory capacities, mediating the relationship among life satisfaction and self-regulation (Guerra et al., 2024). Positive well-being in lives enhances emotional availability and reduces stress, making people get attuned more deeply with others' emotions (Cover et al., 2024). This empathetic engagement leads to self-regulation due to encouraging reflective thinking and increasing impulses for behavior. Empirical evidence also indicates that interventions that enhance life satisfaction also enhance empathy, which leads to better self-regulatory results (Walker, 2024). Thus, the mediating role of state empathy underscores its significance as a psychological pathway through which life satisfaction influences self-regulation.

H3. State empathy significantly mediates the relationship of life satisfaction and self-regulation.

State empathy has been highly linked to prosocial behaviors, being an activator of compassion, altruism, and cooperation (Oliveira et al., 2024). Many studies show that the relationship between the level of increase in empathy and prosocial behaviors increases; for example, people share other's needs at the emotional level (Al Ghanam, 2024). As can be shown from the Abdul Kadir (2024) work, empathetic concern was a relatively often used enhancing agent of helping behaviors in situations of perceived need. Furthermore, life satisfaction has been said to support the development of state empathy through elimination of negative emotional states and a positive attitude toward life that favors empathetic participation (Oliveira et al., 2024). In this respect, Price-

Mitchell and Clay (2024) concluded that, in life-satisfied individuals, increased sensitivity to the emotional state of others develops, which is highly correlated with high prosociality. These studies are essential in supporting a mediating role for state empathy in the relationship between life satisfaction and prosocial feelings.

State empathy mediates between life satisfaction and prosocial feelings. Its amplifying effect goes towards the emotional resonance and concern for others that is entailed in dealing with life satisfaction (Guerra et al., 2024). Psychological abundance created by life satisfaction forms a fertile ground for empathy, which further enhances prosocial feelings of an individual as his or her emotional states are adjusted to the emotional states of others (Salvo-Garrido et al., 2024). Empirical study by Lasota (2024) indicate that more empathetic individuals are also more likely to respond to prosocial urges, especially when the context requires affective attunement. Interventions, which grew life satisfaction-for example, through gratitude practice-were also demonstrated to grow as simultaneously with empathy and prosocial orientation while, of course, providing additional support for this mediational pathway (Bartolo et al., 2023). This means that state empathy represents an important pathway through which the life satisfaction of an individual modifies prosociality.

H4. State empathy significantly mediates the relationship of life satisfaction and prosocial feelings.

Indeed, however, it becomes rather critical in relation to questions of self-regulatory behaviors, a period of adolescence and early adulthood (Guo et al., 2023). The background research connected to the dynamics of peers often forms a framework in building up the model for self-control, emotional regulation, and goal-oriented behavior. For example, Brandon (2023) showed how peer groups act like social reinforcers to encourage or discourage certain behaviors, which often comprise self-regulatory practices. Positive peer influence is associated with better decision-making and emotional regulation, while negative influences are associated with impulsivity and poor regulation (Shoshani et al, 2022). Life satisfaction is a significant determinant of psychological well-being and will likely interact with the dynamics of one's peer group because people tend to adopt behaviors that are prevalent in their social circles (Zhu et al., 2022). Empirical evidence by Gajda et al. (2022) suggests that peer approval and shared goals quite often improve self-regulatory behaviors especially among the life-satisfied persons because they are more sensitive to

constructive social cues. The interaction suggests further that peer group influence is critical in modifying how life satisfaction is translated into effective self-regulation (Modl, 2022).

The motivation for a moderating effect of peer group influence over the relationship between life satisfaction and self-regulation can be found in the argument that social context determines the expression of internal psychological traits (Al Ghanam, 2024). People holding high life satisfaction are likely to thrive in such positive peer environments that foster self-regulating behaviors by shared values and collective goals (Hastings et al., 2024). On the other hand, while life satisfaction may positively influence self-regulation in poor peer environments, it leads to reduced benefits because maladaptive behaviors are normalized or even encouraged (Cover et al., 2024). Studies done by Ren et al. (2024) actually provided the empirical evidence for this moderation model where it is shown that these peer influences highly alter pathways through which psychological wellness impacts behavior. Influences from peer groups in this respect seem to act as significant moderators whose amplitude either magnifies or dampens the effect of life satisfaction on self-regulation depending upon the quality of peer relations (Tsai, 2024).

H5. Peer group influence significantly moderates the relationship of life satisfaction and self-regulation.

Peer influence is well-documented, suggesting that social norms, shared values, and group dynamics bring out more altruistic tendencies in most people (Tee et al., 2023). For instance, people who are described as being satisfied with their lives tend to foster mutual understanding, compassion, and cooperation among their colleagues. Arango-Tobón et al. (2023) suggests that prosocial peer groups involve adolescents in increased levels of altruism and emotional sensitivity, implying that peer norms deeply influence the expression of prosocial feelings. Given that life satisfaction is a catalyst for positive emotional states, this interplay dovetails with these peer dynamics to enhance an individual's responsiveness to social cues and his inclination toward prosocial action as well (Lee & Lee, 2020). On the other hand, negative peer influences may undermine prosocial tendencies by socializing selfish or competitive behaviors (Toh & Kirschner, 2023). Empirical evidence obtained from studies on peer conformity, for instance, Yang et al. (2023) reveals that not all peer contacts predict prosocial consequences, but that their quality determines life satisfaction's possibility to be translated into prosocial outcomes.

Social reinforcement mechanisms inherent in peer interactions explain why the influence of the peer group moderates the relationship between life satisfaction and prosocial feelings (Li et al., 2022). High life satisfaction enhances the tendency of an individual to act in prosocial ways but actualisation of such potential depends on the nature of the peer group to which an individual belongs (Romero-Ayuso et al., 2022). Supportive and prosocial norms of positive peer groups enhance the prosocial influence of life satisfaction by creating warm soil on which empathy and cooperation can bloom (Karnaze et al., 2022). Negative peer groups may act as suppressors of these tendencies, and self-interest or competitive behaviors may become salient. Schütz and Koglin (2022) found support for such a moderation model, as it becomes clear that the pathways through which emotional well-being has an effect on prosociality are significantly influenced by peer norms. In addition, interventions targeted to increase positive peer environments have been applied to strengthen the prosocial effects of life satisfaction and draw attention of the group influence of peers in order to determine moderation in this relationship (Brandon, 2023).

H6. Peer group influence significantly moderates the relationship of life satisfaction and prosocial feelings.

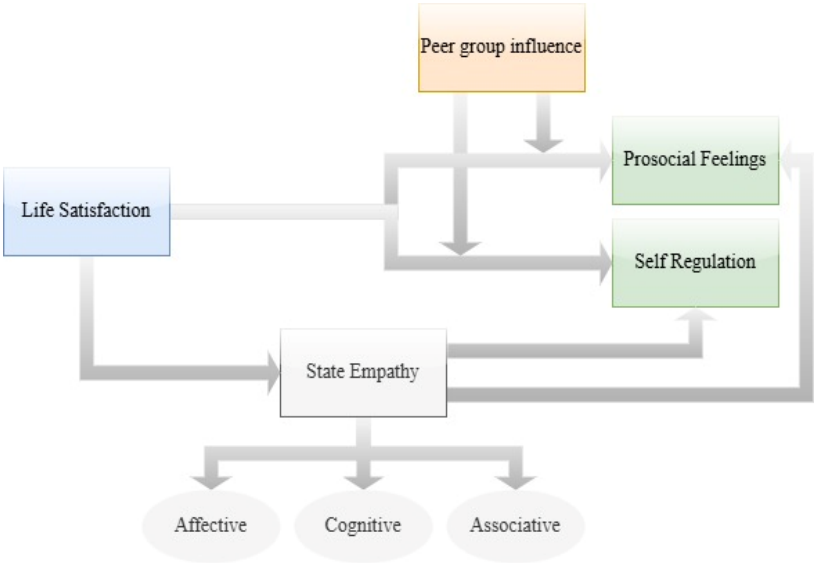

Figure 1: Theoretical Model

Methodology

Study Context and Design

In the Kingdom of Saudi Arabia, such a survey would be helpful for the study of inter-relations between life satisfaction, self-regulation, prosocial feelings, state empathy, and peer group influence in an organizational context. In the present research, the cross-sectional design was adopted for which data were collected from different industry sectors, including different diverse groups of employees. This design was chosen to put the interaction of psychological and social variables into an even more naturalistic work environment, in which further analysis of how life satisfaction translates into self-regulation and prosocial behaviors is possible.

Sample and Data Collection:

The sample included 252 employees who were working in Saudi Arabia for different companies. A purposive sampling technique was utilized to select the respondents and respondents were ascertained to fit into the criteria of having a minimum of one year work experience as a full time employee to ensure that the response was relevant to the constructs of study. The age, gender, and other professional roles of the participants were a diverse variety of participants in keeping with Saudi labor. The vast reach of the survey was handled efficiently through both online and in-person formats.

Measures

This study adopted measurement scales from other research to ensure the reliability and validity of its results. Life satisfaction was measure based on an eight items scale of Mohammadi Mehr et al. (2019). To measure state empathy this research used a twelve items scale of Shen (2010), and this variable was further based on three dimensions (affective, associative, and cognitive). A fifteen items scale of Uzezi and Deya (2017) was used to measure the peer group influence. Self-regulation was measured on five items scale of Hidayati and Idris (2020). Scale for prosocial feelings was adopted from the work of Luengo Kanacri et al. (2021), which was based on four items. Lastly, prosocial feelings were assessed through items that evaluate altruistic and cooperative tendencies. All items were rated on a five-point Likert scale ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree").

Data Analysis

The data were analyzed using ADANCO, robust statistical software that applies variance-based SEM. Besides the fact that it can judge the measurement properties as well as structural relations, the facility of its management of models with many mediators and moderators gave impetus to adopting it. Two stages were included in the analysis. Factors of Dijkstra-Henseler's rho (ρA), Jöreskog's rho (ρc), Cronbach's alpha (α), and Average Variance Extracted (AVE) are to be checked for reliability and validity in the measurement model. For the purpose of this analysis, testing of the structural model is used for establishing hypothesized direct, mediating, and moderation effects occurring in the study. Some statistics which are being used in results' interpretation include path coefficients, t-values, p-values, and R^2 values.

Procedure

The purpose of the study and the approximate time required to complete the questionnaire were explained to the participants. The respondent's preference was addressed by both manual and online means. All the returned replies were cross-checked against outliers and missing values before the analysis of the survey. Although the SEM methods are used to test the hypothesized relationships, descriptive statistics are calculated for demographic analysis of the sample. The methodology used ensures that the output from the study, therefore, will be reliable; relevant for application within a given context being studied and in line with the known practice within research procedures. Data were analyzed based on a critical framework designed using ADANCO, that will therefore reveal significant insights into interrelations of prosocial behaviors, self-regulation, and life satisfaction at work.

Results

Construct validation is necessary for establishing that a measure is reliable and valid. Reliability and validity assessment of the constructs will thus ascertain the strength and consistency of measurement. Table 1 Reliability and Validity of Constructs Construct Life satisfaction State empathy Peer group influence Self-regulation Prosocial feelings Reliability Rho (ρA) of Dijkstra-Henseler's ρc of Jöreskog's α Cronbach's AVE. All the constructs show internal consistency above the threshold value of 0.70 for the reliability indicators.

Table 1

Variables reliability and validity

Construct	Dijkstra-Henseler's rho (ρA)	Jöreskog's rho (ρc)	Cronbach's alpha(α)	Average variance extracted (AVE)
Life satisfaction	0.856	0.854	0.855	0.505
State empathy	0.892	0.889	0.893	0.561
Peer group influence	0.899	0.897	0.898	0.539
Self-regulation	0.908	0.906	0.905	0.510
Prosocial feelings	0.780	0.779	0.778	0.518

For instance, the highest scores on state empathy were obtained by ρA = 0.892, ρc = 0.889, and α = 0.893, indicating sound measurement properties. All AVE values of the constructs are more than 0.50, thus proving convergent validity. While life satisfaction and self-regulation have moderate AVE values of 0.505 and 0.510, respectively, peer group influence achieves 0.539, indicating its variance explanation capability. This analysis confirms the constructs' reliability and validity, ensuring a sound foundation for subsequent analyses.

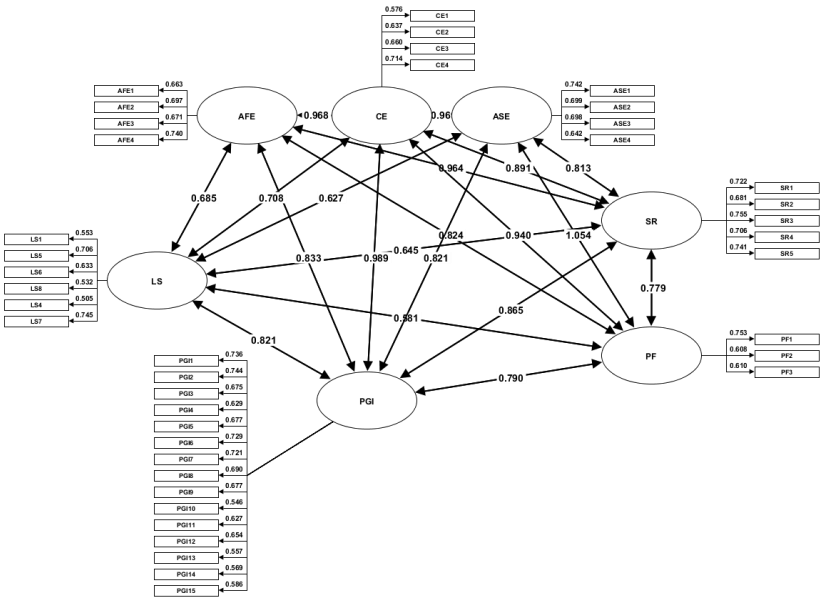

Figure 2: Estimated Model

Table 2 outlines the fit statistics of the measure items selected to measure five constructs. Indicators for the life satisfaction, state empathy, peer group influence, self-regulation, and prosocial feelings are inspected for their standardized factor loading. Items with factors above 0.5 are regarded as acceptable, signifying appropriate representation of their respective constructs. For example, life satisfaction items LS5 (0.708) and LS7 (0.745) have high

loadings, and the state empathy items AFE4 (0.740) and ASE1 (0.742) have excellent representation. Peer group influence has many high-loading items, for example, PGI6 (0.729) and PGI7 (0.721), so it is clearly multi-dimensional. Self-regulation and prosocial feelings present a consistent pattern, with SR3 (0.755) and PF1 (0.753) showing particularly high loadings. These results confirm the adequacy of item selection and their alignment with theoretical constructs, strengthening the study's measurement model (Figure 2).

Table 2

Measurement Items Fitness Statistics

Indicator	Life satisfaction	State empathy	Peer group influence	Self-regulation	Prosocial feelings
LS1	0.553				
LS4	0.505				
LS5	0.708				
LS6	0.633				
LS7	0.745				
AFE1		0.663			
AFE2		0.697			
AFE3		0.671			
AFE4		0.740			
CE1		0.576			
CE2		0.637			
CE3		0.660			
CE4		0.714			
ASE1		0.742			
ASE2		0.690			
ASE3		0.698			
ASE4		0.642			
PGI1			0.736		
PGI2			0.744		
PGI3			0.675		
PGI4			0.629		
PGI5			0.677		
PGI6			0.729		
PGI7			0.721		
PGI8			0.690		
PGI9			0.677		
PGI10			0.546		
PGI11			0.627		
PGI12			0.654		
PGI13			0.557		
PGI14			0.569		
PGI15			0.586		
SR1				0.722	
SR2				0.681	
SR3				0.755	
SR4				0.706	
SR5				0.741	
PF1					0.753
PF2					0.608
PF3					0.610

Discriminant validity ensures that constructs are distinct and measure unique phenomena. Table 3 provides two approaches: the Heterotrait-Monotrait Ratio (HTMT) and the Fornell-Larcker Criterion. HTMT values for all construct pairs are below the recommended threshold of 0.85, confirming discriminant validity. For instance, the HTMT value between life satisfaction and state empathy is 0.510, well within acceptable limits. This is corroborated by the Fornell-Larcker Criterion, where the diagonal values, for example life satisfaction with 0.700, and state empathy with 0.653, are much higher compared to the respective interconstruct correlations. Peer group influence indicates strong discriminant validity when evaluated at 0.766 in the Fornell-Larcker analysis. From the present study, it follows that constructs are distinct entities; that is, this confirms model structural integrity for further validation.

Table 3

Discriminant Validity

Heterotrait-Monotrait Ratio of Correlations (HTMT)					
Construct	1	2	3	4	5
Life satisfaction					
State empathy	0.510				
Peer group influence	0.615	0.729			
Self-regulation	0.406	0.562	0.297		
Prosocial feelings	0.786	0.779	0.784	0.796	
Fornell-Larcker Criterion					
Construct	1	2	3	4	5
Life satisfaction	0.700				
State empathy	0.724	0.653			
Peer group influence	0.825	0.848	0.766		
Self-regulation	0.825	0.714	0.793	0.761	
Prosocial feelings	0.568	0.661	0.636	0.706	0.772

Table 4 presents an assessment of the model's explanatory power in terms of R^2 and Adjusted R^2, predictive relevance (Q^2predict), RMSE, and MAE. The constructs show differences in the amount of explained variance. The highest R^2 was seen for state empathy at 0.744, meaning that 74.4% of the variance in state empathy is accounted for by the model. Prosocial emotions also show moderate explanatory capacity ($R^2 = 0.371$), and self-regulation has a relatively low value, $R^2 = 0.179$, indicating it is a complex concept. Adjusted R^2 values approximate R^2 values, indicating model stability. Predictive relevance is also supported by Q^2predict that is positive for all constructs. RMSE and MAE values are at acceptable levels, ensuring model fitness. This table underlines the model's ability to explain and predict key psychological outcomes, providing a strong foundation for hypothesis testing.

Table 4

R-square statistics Model Goodness of Fit Statistics

Construct	Coefficient of determination (R2)	Adjusted R2	Q^2predict	RMSE	MAE
			0.672	0.045	0.059
State empathy	0.744	0.743			
Self-regulation	0.179	0.180			
Prosocial feelings	0.371	0.373			

The path analysis results in Table 5 confirm that all of the proposed hypotheses are significant, with p-values < 0.001 for all paths, and so there is very strong statistical support. Life satisfaction significantly affects self-regulation (β = 0.587, t = 10.839) and prosocial feelings (β = 0.505, t = 10.526), thus underlining its pivotal role in psychological and behavioral outcomes. State empathy mediates the link between life satisfaction and both self-regulation (β = 0.428, t = 10.203) and prosocial feelings (β = 0.262, t = 6.897), underlining the mediation effect (Figure 3).

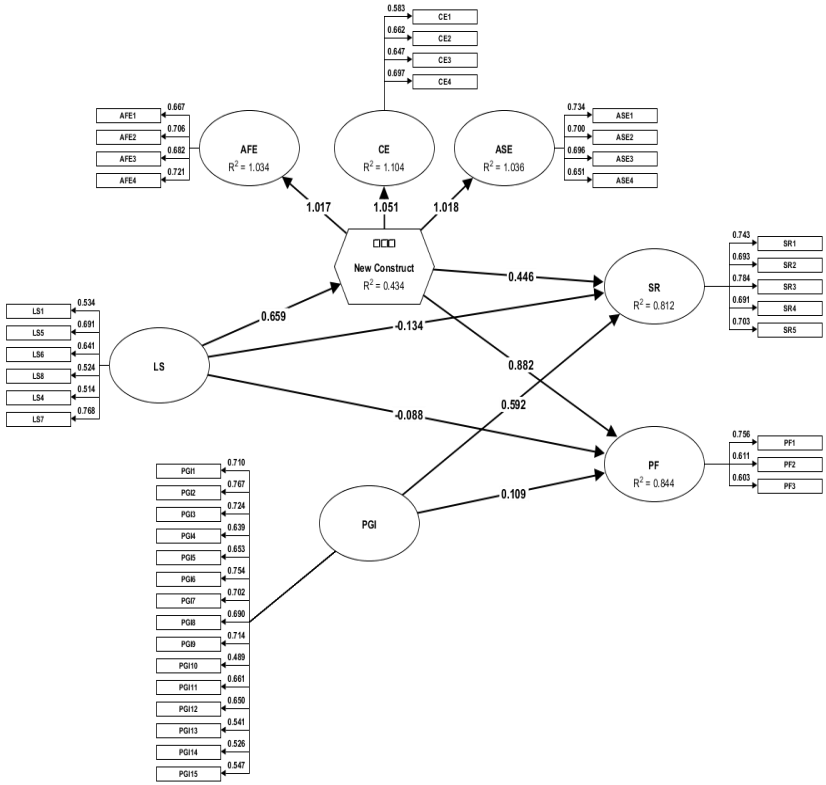

Figure 3: Structural Model for Path Analysis

The influence of peer group also moderates both relationships significantly, with β = 0.296 for self-regulation and β = 0.313 for prosocial feelings. These findings not only validate theoretical predictions but also throw into sharp relief the subtle interplay between psychological and social variables, making it important to understand more critically the dynamics of well-being and behavior.

Table 5

Path Analysis

Hypothesis	Coefficients	Standard Errors	t-values	p-values
Life satisfaction significantly influences the self-regulation.	0.587	0.051	10.839	<0.001
Life satisfaction significantly influences the prosocial feelings.	0.505	0.046	10.526	<0.001
State empathy significantly mediates the relationship of life satisfaction and self-regulation.	0.428	0.040	10.203	<0.001
State empathy significantly mediates the relationship of life satisfaction and prosocial feelings.	0.262	0.036	6.897	<0.001
Peer group influence significantly moderates the relationship of life satisfaction and self-regulation.	0.296	0.032	8.721	<0.001
Peer group influence significantly moderates the relationship of life satisfaction and prosocial feelings.	0.313	0.034	8.683	<0.001

Discussion

The findings of this study offer valuable insights into the intricate relationships among life satisfaction, self-regulation, prosocial feelings, state empathy, and peer group influence. Acceptance of all six hypotheses underscores the critical interplay of psychological constructs and social dynamics, thus providing both theoretical and empirical advancements in understanding well-being and behavior. Based on mediation and moderation research, it emphasizes that life satisfaction, as one of the main components of subjective well-being, actually determines emotional and behavioral consequences. Moreover, by describing mechanisms and contextual conditions which shape these relationships, this study gives implications for individual development and social interventions. The results are synthesized with other research and theory in the literature as being of importance, applied value, and directions for further research.

The findings confirm a strong impact of life satisfaction on self-regulation while giving credence to theoretical models that connect subjective well-being to behavioral control. As with previous studies, the results imply that higher life satisfaction is associated with better capacities for self-regulation: high impulse regulation capacities, better action-congruence with long-term goals,

and emotional balance. This relationship aligns with Fredrickson's broaden-and-build theory, which suggests that positive emotional states expand cognitive and emotional resources, improving regulatory functions. Empirical support for this hypothesis supports the role of life satisfaction as a psychological resource that breeds resilience and adaptability (Tsai, 2024). Given how it enables people to navigate stress and uncertainty, life satisfaction is here represented as an important determinant of self-regulation, indicating its use as both a personal and professional agent.

It depicts the induction of life satisfaction that promotes prosocial feelings as its effect is to generate empathy and compassion along with other such altruistic acts. If it induces psychological wealth, better emotional states among people, they tend to empathize more readily about the necessities for the others, and all this if combined with higher emotional resonance or good deeds on their behalf. These findings are similar to others, such as the work of Bartolo et al. (2023), wherein it was established that life satisfaction is what drives prosocial tendencies. To this effect, the present findings are seen to expand on related literature since, besides prompting prosocial behavior, life satisfaction further induces supportive emotional skills like empathy. The relationship depicts how life satisfaction impacts social cohesiveness and personal well-being in such a manner that they are interactive, making it a very relevant area for any interventions that are aimed at improving overall well-being.

Life satisfaction, in itself, turns out to be a major determinant of intrapersonal and interpersonal outcomes. Prosocial feelings would help in solidarity and community cohesion, while self-control would be required for helping others to achieve their goals. Summing it up, these concepts provide all-inclusive understanding of psychological and social dimensions of life satisfaction and its complex relationships with human behavior. Such results would emphasize the values of interventions that promote life satisfaction, and such interventions may foster prosocial and self-regulation most likely to enhance the wel-being of both the individual and the community.

This result means that state empathy strongly mediates the relationship between self-regulation and life satisfaction. This research reveals how empathy is a bridge of emotional connection from subjective well-being to ability regulation. State empathy helps individuals have emotional sensitivity and awareness. As such, it will be possible for people to regulate their thoughts and behaviors relative to social and personal goals. This mediation, as reported here, favors the idea that increases in empathetic engagement foster greater

positive emotional states and promotes self-regulatory activities. Thus, it aligns the results with the outcomes from research by Walker (2024) on neurobiological bases of empathy and regulation consequences for life satisfaction measures.

Support was added for the fourth hypothesis of the assumption that empathy has a central role in prosocial processes: state empathy mediates the relationship between life satisfaction and prosocial feelings. Negative emotion reduction and increasing of emotional availability through life satisfaction can lead to state empathy that accommodates altruistic behaviors. A positive life assessment develops empathy that then increases prosocial orientations further. This mediating relationship illustrates the cascading effect of life satisfaction. In so doing, these results support the empathy-altruism hypothesis of Su-Russell et al. (2024), who assume that prosocial behavior is indeed empathetically driven. In showing an innovative path of exploration and application, the empirical evidence in this study illustrates the affective pathway by which life satisfaction influences behavior.

Together, these findings outline mechanisms that underlie relationships between life satisfaction and self-regulation and between life satisfaction and prosocial feelings. State empathy is an important construct in linking psychological well-being to behavioral and social consequences in terms of its effect on promoting emotional and social competency. This mediating effect shows how states of emotions interact and how this interweaving contributes to a more comprehensive perspective in describing the functioning of life satisfaction. This opens up scope for focused interventions to leverage both self-regulation and prosocial orientations through empathy, thus improving both individual as well as collective well-being.

The fifth hypothesis was accepted. This verifies that the peer group influence indeed moderates the interaction of life satisfaction and self-regulation significantly. Thus, it would seem that self-regulation is also a contextual phenomenon that would predict behavioral outcomes based on social contexts. Positive influences by peers augment the relationship between life satisfaction and self-regulation through reinforcement of adaptive behaviors and emotional support. However, these outcomes are blunted by adverse peer influences, represented by lower self-regulation capacities of individuals exposed to unfavourable social norms (Ren et al., 2024). The findings are in line with the social learning theory of Bandura, suggesting that social learning and social reinforcement are the strategies through which behavior is socially

elaborated. In this case, it cannot be overestimated how crucial it is that the peer context acts in the regulatory processes.

The sixth hypothesis was supported wherein peer group influence is a moderating variable between life satisfaction and prosocial sentiments. This means that prosocial behavior indeed has its social dynamics. Positive peer groups create both prosocial and sympathetic environments where there's more emphasis on prosocial life satisfaction. Negative peer groups, on the other hand, because they induce egotism or competitive behavior, can act as an inhibiting force. Observed trend Salvo-Garrido et al. (2024), it was the moment by the writers as they ensured that peers' norms tend to have stronger effects on their behaviors. Again, the proposed study well presents an approach of perception on how such psychological welfare interacts in causing prosociality.

These six hypotheses bring out the intricate interlinking between life satisfaction, self-regulation, prosocial feelings, state empathy, and peer group influence. And with that, psychological constructs and social dynamics are woven into a holistic sense for what drives personal and societal wellbeing. The practical findings offer practical insights in designing interventions for enhancing life satisfaction, empathy, and supportive peer environments. This way, it provides intrapersonal and interpersonal coverage towards knowledge concerning the relation between well-being and behavior and opens up possibilities for future research and application.

Theoretical Implications

This research makes important theoretical contributions to the area because it advances understanding of the mediating and moderating roles by which life satisfaction impacts self-regulation and prosocial feelings. In so doing, the study integrates state empathy with the influence of peer group on the conceptual model. Overall, this is a rich view of the psychological and social processes driving well-being and behavior. These findings extend Fredrickson's broaden-and-build theory by showing how positive emotional states associated with life satisfaction facilitate regulatory and prosocial outcomes through empathy and social interactions. Moreover, the incorporation of peer group influence as a moderator builds on Bandura's social learning theory, emphasizing the contextual nature of psychological processes and the critical role of social environments. This theoretical enrichment bridges existing gaps in literature, providing an even more holistic understanding of the interplay between individual well-being and interpersonal dynamics.

The paper also contributes to the empathy-altruism framework by introducing the mediating role of state empathy in translating life satisfaction into self-regulation and prosocial behavior. The research sets empathy as a pivotal construct, thus underlining the dual influence of empathy on both emotional self-management and social engagement. This work also enriches social influence theories by showing how these norms within the peer group shape the interaction between life satisfaction and behavioral expressions in individuals. That is, these contributions not only validate extant theories but also open new avenues through which to integrate constructs, such as life satisfaction and social influence, into broader psychological models. The study's theoretical framework provides a robust foundation for future research exploring the intersections of well-being, emotional intelligence, and social behavior.

Practical Implications

This leads research into more practical applications: designing interventions that improve not only social harmony but also individual well-being. Organizations, academic institutions, and lawmakers can use this to come up with initiatives that enhance prosocial and self-regulatory behaviors in support of life satisfaction. For instance, wellness workplace programs among employees can include life satisfaction techniques like mindfulness training or exercises on gratitude that will increase self-control and teamwork. Curricula can be made to focus on increasing the emotional intelligence and sympathy in students; this will increase the tendency of prosocialism and improve better control over behavior.

This established the need for establishing positive social environments. From the study, it emerged that peer group influence is associated with group dynamics like encouraging and inclusive peer relationships. This is an area where interventions would be most crucial in education and communities. Training programs that enhance people's state empathy would help reduce conflict and lead to selfless action. These applications can be used to show how the research can be turned into solutions for real problems-whether it is enhancing social cohesion and community well-being, boosting productivity, or raising mental health. It promotes individual and societal development by changing abstract insights into practical strategies.

Limitations and Future Research Directions

Despite its contributions, this research has certain limitations that should be taken into account. First, the capacity to deduce causal relationships between variables is restricted by the cross-sectional design. Longitudinal studies are required to establish temporal causality and investigate changes in these dynamics over time, even though the findings offer strong correlational evidence. The accuracy of the results could be impacted by the potential biases of subjective interpretation or social desirability that come with using self-reported measures. Multi-method approaches, such as behavioural evaluations or physiological measurements, could be used in future studies to improve the validity and reliability of the data. The relationships analysed may be influenced by cultural and demographic factors, and the study sample may not be representative of diverse populations. The results may be more broadly understood if the research is extended to cross-cultural studies or diverse demographic groups. Future studies can look more closely at other possible moderators and mediators, like personality traits, social support, or cultural values, to better understand the intricate relationship between prosocial behaviours, self-regulation, and life satisfaction. Above all, in order to deepen theoretical and practical insights in this field, future research should address the limitations of these findings while building on them.

Conclusion

This study provides a comprehensive understanding of the relationships amongst life satisfaction, self-regulation, prosocial feelings, state empathy, and peer group influence. This study points out the mediating role of state empathy along with the moderating effect of peer group influence on life satisfaction, underlining its comprehensive impact on individual and social outcomes. These results are the robust empirical support to theoretical frameworks for instance the broaden-and-build theory, and the theory of social learning. This aims to cover the gap in literature research. The findings highlight the need to promote constructive emotional states and social contexts supportive of well-being and behavior. Finally, the study underlines the intimate relationship between psychological and social factors influencing human action. Theoretical contributions merged with practical suggestions open avenues for interventions toward improving self-regulation, empathy, and prosociality. This work provides a solid foundation for future studies to further examine the

dynamics of well-being and social behavior by addressing its limitations and moving in new directions of research. The results have big potential for advancing knowledge both from an academic and practical standpoint, ultimately leading to better understanding about the pathways toward individual flourishing and collective flourishing.

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Appendix 1

Life satisfaction

1. As I grow older, things seem better than I thought they would.
2. Most things I do are boring or monotonous.
3. This is the dreariest time of my life.
4. The things I do are as interesting to me as they ever were.
5. Compared to other people, I get down in the dumps too often.
6. I have made plans for things I'll be doing a month or a year from now.
7. Compared to other people of my age, I make a good appearance.
8. I am just as happy as when I was younger.

State empathy

Affective Empathy

1. The character's emotions are genuine.
2. I experienced the same emotions as the character when watching this message.
3. I was in a similar emotional state as the character when watching this message.
4. I can feel the character's emotions.

Cognitive Empathy

1. I can see the character's point of view.
2. I recognize the character's situation.
3. I can understand what the character was going through in the message.
4. The character's reactions to the situation are understandable.

Associative Empathy

1. When watching the message, I was fully absorbed.
2. I can relate to what the character was going through in the message.
3. I can identify with the situation described in the message.
4. I can identify with the characters in the message.

Peer group influence

1. I belong to a peer group
2. I spend much time with my peer group

3. My current achievement in chemistry is worse
4. My current achievement in chemistry is better than the previous one before I met my friends
5. I often skip chemistry classes to spend time with my friends
6. I and my friends are always punctual to chemistry class
7. I and my friends compete for good grades
8. We study chemistry together after class
9. We always help each other with academic difficulties
10. My friends have assisted me improve my grades in chemistry
11. I and my friends always solve any assignment given to us in Chemistry
12. My friends like to persuade me in the class while the chemistry lesson is going on
13. We always perform experiment during chemistry
14. I and my friends always revised together before chemistry examination and test
15. I and my friends dislike chemistry as a subject

Self-regulation

1. Recognizing self-thinking
2. Making effective plans
3. Understanding and using the needed information
4. Becoming sensitive toward feedbacks
5. Evaluating the effectiveness of acts

Prosocial feelings

1. I am emphatic with those who are in need
2. I intensely feel what others feel
3. I easily put myself in the shoes of those who are in discomfort
4. I immediately sense my friends' discomfort even when it is not directly communicated to me.