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Empathic responses, Sociotropy and autonomy

U. Charanya * and Soumya Simon

Department of Psychology, Kristu Jayanti College (Autonomous), Bengaluru, Karnataka, India.

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Abstract

The study examines the relationship between sociotropy, autonomy, and empathy in interpersonal relationships among Indian adults aged 18-40. A correlational research design was used, with 225 participants meeting the criteria of high school education and English proficiency. The Sociotropy-Autonomy Scale and Interpersonal Reactivity Index were employed to measure participants' levels of sociotropy, autonomy and empathy. The findings of the study reveal no significant relationship between sociotropy, autonomy, and empathy in interpersonal relationships.

Keywords: Empathy; Sociotropy; Autonomy; Interpersonal Relationships; Personality Constructs; Interactions

1. Introduction

Interpersonal relationships are a fundamental aspect of human life, and understanding the factors that influence these relationships is crucial for promoting well-being and mental health. Among the various factors that contribute to interpersonal dynamics, empathic responses, sociotropy, and autonomy have emerged as significant constructs in the literature. This section provides an overview of these variables, their theoretical underpinnings, and their empirical associations with interpersonal relationships.

1.1. Empathic Responses

Empathy is a complex and multifaceted construct that involves the ability to understand and share the feelings of others (Decety & Jackson, 2004). Empathic responses are a critical component of interpersonal relationships, as they facilitate social connection, communication, and understanding. Research has shown that empathic responses are associated with positive interpersonal outcomes, such as increased social support, reduced conflict, and improved relationship satisfaction (Davis, 1983). Moreover, empathic responses have been found to play a crucial role in various domains, including mental health, education, and healthcare (Eisenberg & Eggum, 2009; Hojat et al., 2002).

1.2. Sociotropy and Autonomy

Sociotropy and autonomy are two dimensions of personality that have been extensively studied in the cognitive theory of depression (Beck, 1983). Sociotropy refers to the tendency to be excessively dependent on others for approval and support, while autonomy refers to the tendency to be self-reliant and independent. These personality traits have been found to interact with negative life events to increase the risk of developing depression (Beck, 1983; Blatt, 1995). Research has shown that sociotropy and autonomy are related to interpersonal sensitivity, a depression-prone personality trait (Coyne & Whiffen, 1995). Sociotropy has been found to be associated with interpersonal sensitivity, while autonomy has not (Coyne & Whiffen, 1995). Moreover, sociotropy and autonomy have been found to be related to cognitive vulnerability to depression in undergraduate students (Smith et al., 2018).

* Corresponding author: U. Charanya

1.3. The Role of Empathic Responses, Sociotropy, And Autonomy In Interpersonal Relationships

The literature suggests that empathic responses, sociotropy, and autonomy play a crucial role in interpersonal relationships. Empathic responses facilitate social connection and understanding, while sociotropy and autonomy influence interpersonal dynamics through the tendency to be dependent or independent. Research has shown that these variables are associated with positive interpersonal outcomes, such as increased social support, reduced conflict, and improved relationship satisfaction.

Moreover, the diathesis-stress models proposed by A. T. Beck and Blatt suggest that personality traits, such as sociotropy and autonomy, interact with negative life events to increase the risk of developing depression (Beck, 1983; Blatt, 1995). This suggests that the relationship between sociotropy, autonomy, and depression may be more complex than initially thought.

2. Review of related literature

Sato & McCann (2007) indicated that individuals with high levels of sociotropy and autonomy demonstrate distinctly varied behaviors, depending on their interpersonal relationships. These behaviors differ not only between close and non-close relationships but also within each category. Highly sociotropic individuals, striving for strong interpersonal bonds, tend to exhibit nurturing behavior towards non-close individuals, while being potentially dismissive and calculating towards those they are already close to. This duality suggests that the need for maintaining a sense of relatedness might drive the shifts in their behavior. Similarly, individuals with high levels of autonomy tend to display dominant traits in their interactions with non-close individuals, which align with their emphasis on personal achievements and control. Furthermore, these autonomous individuals tend to exhibit aloof and avoidant

tendencies in their interactions with close others, which is in line with their inclination towards self-reliance and introversion. These contrasting patterns shed light on the complex interplay between personality traits and interpersonal behaviors, underscoring the nuanced dynamics within close and non-close relationships for individuals with high sociotropy and autonomy levels.

Bieling and Alden (2001) proposed that individuals with high autonomy are inclined to disengage from social interactions when they perceive the need for extensive collaboration or the relinquishment of personal control. Given that close interpersonal relationships, such as those with family and intimate friends, often demand significant collaboration, these individuals may be more prone to withdrawing from such interactions, leading to their characteristic aloof, introverted, and avoidant tendencies.

Campbell and his colleagues (2003), revealed that individuals with high levels of autonomy encounter challenges in terms of adjustment and interpersonal dynamics within their familial relationships. However, these issues appear to be specific to their interactions with family members, suggesting that their difficulties do not extend to the work environment. In professional settings, where their interactions primarily involve non-close individuals such as colleagues and clients, highly autonomous individuals seem to navigate more smoothly, demonstrating a greater capacity to manage collaborative tasks and maintain effective working relationships. This distinction indicates that the difficulties experienced by highly autonomous individuals are context-dependent, highlighting the significance of considering the specific social contexts in which these personality traits manifest.

According to Genç (2021), interpersonal interactions are significantly influenced by the distinct characteristics of sociotropic and autonomous personality traits. The sociotropic trait is closely associated with sincerity, the willingness to share, empathetic understanding, acceptance, and commitment, protective tendencies, providing guidance, and offering assistance. This trait comprises three essential components, including the concern about potential rejection, the fear of separation, and a strong inclination towards pleasing others. On the other hand, the autonomous personality trait is characterized by a profound sense of fulfillment derived from directing one's own activities, accomplishing personal goals, exerting influence over one's surroundings, and attaining success. Within this trait, key components include a strong focus on individual achievements, a desire for independence and freedom from external control, and a notable inclination towards solitude. Understanding the intricate dynamics of these personality traits is crucial for comprehending the various ways in which individuals engage with others in social contexts, as well as for delving deeper into the complexities of human behavior and social functioning.

In examining the interpersonal characteristics of sociotropic and autonomous individuals, one prominent approach has involved their analysis within the framework of the interpersonal circumplex model, widely recognized as one of the primary models for investigating patterns of interpersonal behavior. This model, extensively discussed by researchers

such as Gurtman (2001), Lorr (1996), Orford (1986, 1994), and Tracey (1994), organizes interpersonal characteristics along two key dimensions represented in a circular structure. The vertical dimension of the circle corresponds to the continuum of dominance versus submissiveness, while the horizontal dimension reflects the spectrum between warmth and coldness. Originated by Leary (1955, 1957), the model posits that individuals tend to perpetuate consistent interpersonal patterns by consistently engaging in specific behaviors, consequently eliciting corresponding responses from others that align with these behavioral patterns. For instance, a person exhibiting dominant behavior is likely to elicit submissive responses from those around them, which, in turn, can reinforce the dominant individual's tendencies. This cyclical nature of interaction within the interpersonal circumplex model underscores the reciprocal influence of interpersonal behaviors, highlighting the dynamic interplay between dominant-submissive and warm-cold dimensions in social interactions involving individuals with varying degrees of sociotropy and autonomy.

Hill and Safran (1994) initially hinted at the association between specific interpersonal behavior patterns and depression, more recent research has delved into the exploration of the interpersonal schemata of individuals characterized by high sociotropy and autonomy. This recent line of inquiry, as exemplified by the work of Sato (1999, unpublished data) and Sato and McCann (2006), suggests that these individuals exhibit divergent interpersonal patterns that not only contribute to the onset of depressive symptoms but also serve to perpetuate them. Notably, the research indicates that highly sociotropic individuals often display behaviors of arrogance and calculation (BC) in their interactions with significant others, whereas highly autonomous individuals tend to adopt an aloof and introverted stance (FG) towards individuals of significance in their lives. Moreover, the findings in this area propose that these particular interpersonal tendencies, particularly concerning important individuals, may serve as critical factors contributing to the manifestation of depressive symptoms in individuals characterized by high levels of sociotropy and autonomy, underscoring the intricate interplay between interpersonal dynamics and psychological well-being.

Sato and McCann (2001), found the association between heightened sociotropy levels and specific interpersonal traits which was brought into focus, revealing tendencies towards excessive warmth and nurturance (LM), alongside traits of unassuming behavior and exploitability (JK). Conversely, the research also indicated that individuals characterized by elevated autonomy levels were inclined towards overly dominant behavior (PA), coupled with inclinations towards calculated and vindictive actions (BC). Researchers have highlighted the significance of these identified interpersonal challenges, suggesting their potential roles as pivotal elements in the development and perpetuation of depressive symptoms within these individuals. These findings shed light on the intricate interrelationships between distinct interpersonal tendencies and the complex dynamics contributing to the etiology and persistence of depressive symptoms among individuals with varying degrees of sociotropy and autonomy.

In the realm of psychological discourse, the term "empathy," as introduced by Titchener over a century ago and derived from the German word *Einfühlung* (Wispé, 1986), has historically traversed the annals of philosophical contemplation, a notion posited by Stotland, Matthews,

Sherman, Hansson, and Richardson (1978, p. 11). Notwithstanding its prolonged existence, the concept of empathy has evaded a concise and universally accepted definition, leading to a multiplicity of interpretations and frameworks propagated by various scholars, as observed by Decety and Jackson (2004) and de Vignemont and Singer (2006). This inherent diversity of definitions engenders a myriad of challenges in empirical research and scholarly discourse, necessitating the meticulous elucidation of the precise facets under investigation, alongside a discerning recognition of potential overlaps with cognate constructs. The ensuing intricacies render the interpretation of research findings an arduous endeavor, thereby jeopardizing the comparability and synthesis of studies, a concern reiterated by Brown, Harkins, and Beech (2012) and Gerdes, Segal, and Lietz (2010).

Moreover, the evident divergence in the conceptualization of empathy among researchers and practitioners, as underscored by Mann and Barnett (2012), engenders a palpable discrepancy between the theoretical underpinnings guiding empirical investigations and the pragmatic approaches adopted within therapeutic interventions and educational initiatives aimed at fostering empathic capacities. This disjunction not only impairs the comprehensive understanding of the multifaceted nature of empathy but also impinges upon the efficacy of interventions designed to cultivate empathic dispositions within diverse contexts. Concomitantly, the clinical landscape is riddled with potential complications arising from misconceptions surrounding empathic processes, a phenomenon cautioned against by Book (1988) and Clark (2010), with certain interpretations of empathy proving more conducive to therapeutic outcomes than others, as corroborated by Nightingale, Yarnold, and Greenberg (1991). While embracing the plurality of definitions and conceptual frameworks is imperative to the progressive evolution of the field (e.g., Duan & Hill, 1996), concerted efforts must be channeled towards consolidating knowledge and facilitating a cohesive understanding, thus, alleviating the prevalent confusion and dissonance pervading the discourse on empathy.

The dichotomy surrounding the fundamental nature of empathy, commonly dissected into cognitive and affective domains, has emerged as a central discourse within scholarly investigations. Cognitive empathy, intricately entwined with the notion of theory of mind as posited by Blair (2005), pertains to the capacity to comprehend and internalize the emotional states of others, engendering an understanding of their sentiments. Conversely, affective empathy is deeply entrenched in the realm of emotional experiences elicited by external emotional stimuli, constituting an intricate interplay between individual emotional responses and external cues.

While some definitions predominantly emphasize either emotional or cognitive dimensions, the prevailing consensus underscores the indispensability of integrating both facets within the overarching construct of empathy. Notably, empirical inquiries into personality dynamics and developmental anomalies have elucidated the distinctiveness of cognitive and affective empathy as discrete entities, manifesting divergent patterns in various psychological conditions. For instance, empirical evidence from studies on individuals diagnosed with autistic spectrum disorder has highlighted deficits primarily within the cognitive empathy domain, juxtaposed against relatively intact levels of emotional empathy, as highlighted by Baron-Cohen and Wheelwright (2004).

Conversely, individuals exhibiting psychopathic tendencies often demonstrate an inverse pattern, showcasing proficient cognitive empathy but significant deficits in affective empathy, as explicated by Blair (2005). Furthermore, the exploration of the neurological underpinnings of empathy has accentuated the existence of discrete brain regions intricately linked with each facet, a phenomenon underscored by research conducted by Shamay-Tsoory, Aharon-Peretz, and Perry (2009) and Zaki, Weber, Bolger, and Ochsner (2009), among others. Notwithstanding these distinctions, the notion of a rigid demarcation between cognitive and affective empathy has encountered scrutiny, with scholars like Baron-Cohen and Wheelwright (2004), Duan and Hill (1996), and Singer (2006) advocating for the acknowledgment of the profound interplay between these dimensions. In line with this perspective, Lamm, Batson, and Decety (2007) have postulated that while emotional empathy unfolds as an organic response to external stimuli, the manipulation of cognitive factors can significantly influence and modulate affective components, thereby elucidating the intricate and dynamic interdependence characterizing the multifaceted construct of empathy.

When we think about empathy, some experts, like Heberlein and Saxe (2005), say that we can separate the feeling part from the thinking part, but we should remember that these two parts work together. Strayer (1987) suggests that the feeling part is what empathy is all about, and the thinking part helps us understand those feelings. Another thing to think about is whether empathy is just about feelings or if understanding someone's thoughts (cognitive empathy) can also be considered empathy. For example, cognitive empathy could help therapists understand what their clients are thinking, and it could help teachers see when students don't understand something (Rogers, 1967, 1975). But even though understanding others' thoughts is a bit like cognitive empathy, which involves seeing things from their perspective, it doesn't include the emotional part. Most people think of empathy as something that involves both understanding and feeling others' emotions.

To make sure people understand correctly, some suggest using a different term, like "empathic understanding" (Rogers, 1967). Another thing people argue about is whether cognitive empathy and perspective taking, which means seeing things from someone else's point of view, are the same. Some experts think they are, but others disagree. For instance, while perspective taking helps us understand what others might be thinking and is a way to do cognitive empathy (Gery et al., 2009), it might not be exactly the same. There are other ways to understand how someone feels without seeing things from their perspective, like looking at their facial expressions (Besel & Yuille, 2010), remembering similar situations we've been in (Eisenberg, 1986), imagining things happening in other places or times (Stinson & Ickes, 1992), and projecting our own feelings onto others (Nickerson, 1999; Nickerson et al., 2011; Preston, 2007). The available information indicates that comprehending and sharing the emotions of those we assist is vital for fostering strong relationships. Truax (1970) emphasized the necessity of empathy in fields like clinical psychology, nursing, and medicine, stating that helping others would be ineffective without it. Similar sentiments have been expressed by various others. Kalish (1971) asserted that extensive research and theories regarding human interactions underscore empathy as the linchpin of the relationship between the helper and the individual receiving assistance (Reynolds & Scott, 1999).

Need for connection, safety, and reassurance find fulfillment through relationships with others is essential. Bowlby's attachment theory (Bowlby, 1969, 1973, 1980) stands out as a prominent framework for understanding how relationships function. It suggests that our early experiences with our primary caregivers lay the groundwork for how we engage in relationships later in life, forming our internal working models of ourselves (whether we believe we are deserving of love) and others (whether we consider others trustworthy). Inspired by Hazan and Shaver's influential paper in 1987, recent research has delved into how adult attachment styles and their underlying dimensions impact our experiences in relationships.

Continuously echoing Bowlby's assertion that attachment processes operate "from the cradle to the grave" (1979, p. 129), an increasing number of studies confirm that individuals with a secure adult attachment style, characterized by comfort with closeness (low avoidance) and a positive self-view (low anxiety), tend to have more successful relationships than those with less secure attachment styles (e.g., Collins & Read, 1990; Feeney, 1996; Feeney & Noller, 1990, 1991; Hazan & Shaver, 1987; Kobak & Hazan, 1991; Kobak & Sceery, 1988; Levy & Davis, 1988; Simpson, 1990; Simpson et al., 1992).

From a similar perspective, a research study discovered that sociotropy, a personality dimension, served as a mediator in the link between the preoccupied attachment style and depressive symptoms. This implies that the impact of having a preoccupied attachment style on depressive symptoms is partly clarified by the influence of sociotropy. Likewise, the study indicated that autonomy played a mediating role in the relationship between the fearful attachment style and depressive symptoms. This suggests that the connection between having a fearful attachment style and experiencing depressive symptoms is partially shaped by levels of autonomy. These roles as mediators aid in understanding how specific personality dimensions function as underlying mechanisms by which particular attachment styles contribute to the development of depressive symptoms. The results underscore the significance of comprehending these complex relationships within the context of susceptibility to depression and stress the necessity of considering both attachment style and related personality dimensions when dealing with depressive symptoms in individuals (Permyu et al., 2010).

There is some existing literature on the relationship between sociotropy, autonomy, and empathy, but few studies have specifically examined how sociotropy and autonomy relate to the different aspects of empathy in the context of interpersonal relationships. The need for this study is to better understand the factors that contribute to empathic responses in interpersonal relationships. By examining the role of sociotropy and autonomy, the present study can shed light on how personality dimensions influence the ability to accurately perceive and understand others' emotions and perspectives.

3. Method

3.1. Research Design

The research design employed in this study was a correlational research design. It focused on exploring the relationships between sociotropy, autonomy, and empathy within interpersonal relationships through correlation analysis.

3.2. Statement of the problem

The study addressed the lack of understanding regarding the interrelationships between sociotropy, autonomy, and empathy in the context of interpersonal relationships. Existing research has predominantly focused on individual components rather than their combined effects.

3.3. Objective of the study

The primary objective was to investigate the relationship between sociotropy, autonomy, and empathy within interpersonal relationships.

3.4. Hypothesis

H0: There is no significant relationship between sociotropy, autonomy, and empathy in interpersonal relationships.

3.5. Operational Definition

3.5.1. Sociotropy

Sociotropy refers to an individual's emphasis on interpersonal interactions involving intimacy, sharing, empathy, understanding, approval, and other aspects of social connection. It is characterized by an excessive investment in relationships and a focus on gaining approval from others (Beck et al., 1983). In the present study, it is operationally defined as the sum of scores on the Sociotropy subscale on the Sociotropy-Autonomy Scale.

3.5.2. Autonomy

Autonomy is concerned with personal achievement and control. It is characterized by an excessive concern with individual goals and objectives, often at the expense of interpersonal relationships. Autonomous individuals may

prioritize their personal needs and desires over the needs of others (Beck et al., 1983). In the present study, it is operationally defined as the sum of scores on the Autonomy subscale on the Sociotropy-Autonomy Scale.

3.5.3. Empathy

Empathy is the ability to accurately perceive and understand others' emotions and perspectives. It involves interpersonal functions such as sharing feelings, understanding others' perspectives, and providing emotional support. Empathy is essential for maintaining healthy relationships and fostering emotional well-being (Davis, 1980). In the present study, it is operationally defined as the total score on the Interpersonal Reactivity Index.

3.6. Variables

In this study, sociotropy and autonomy are designated as independent variables (IV), representing individuals' tendencies to seek approval and focus on personal needs, respectively. Sociotropy influences social interactions, while autonomy shapes personal priorities within relationships. Empathy, identified as the dependent variable (DV), assesses individuals' ability to perceive and share emotions with others. Sociotropy and autonomy drive behaviors, while empathy reflects emotional understanding and connection in interpersonal relationships.

3.6.1. Demographic Variables

The demographic variables in this study encompass age (18-40), gender (female, male, non-binary, others), marital status (single, married, divorced, widowed), and education qualification (high school or equivalent, some college or vocational training, bachelor's degree, master's degree, doctorate or professional degree, other). These factors provide a comprehensive overview of the participants' characteristics, including age range, gender diversity, relationship status, and educational background.

3.7. Universe of the study

The universe of the study includes adults aged 18 to 40 residing in various states across India. Participants are required to have at least a high school education and the ability to read and comprehend English. This universe represents the population from which data was gathered and analyzed to explore sociotropy, autonomy, and empathy within interpersonal relationships among individuals in different regions of India.

3.8. Geographical Area

Participants were recruited from diverse regions to ensure a varied sample representation such as Karnataka, Kerala, Maharashtra, Telangana, Andhra Pradesh, Haryana, Tamil Nadu, Delhi, West Bengal, Punjab, Manipur, and Gujarat.

3.9. Sample Distribution

The sample distribution for this study consisted of N = 225 participants, with a mean age of approximately 22.5 for females and 23.5 for males. The standard deviation for age distribution was approximately 5.94 for females and 6.52 for males. The non-binary category, consisting of 2 individuals, had a mean age of approximately 23.5 and 24.5. The sample distribution illustrates a diverse range of age groups among the participants, with the majority falling within the 18-34 age range.

3.10. Inclusion and Exclusion Criteria

3.10.1. Inclusion Criteria

The present study examined sociotropy, autonomy, and empathy in interpersonal relationships among adults aged 18-40 from diverse Indian regions:

Karnataka, Kerala, Maharashtra, Telangana, Andhra Pradesh, Haryana, Tamil Nadu, Delhi, West Bengal, Punjab, Manipur, and Gujarat. Participants needed at least a high school education and basic understanding of the English Language.

3.10.2. Exclusion Criteria

The study excluded individuals diagnosed with mental disorders to maintain research integrity, resulting in the exclusion of 33 participants after screening. This exclusion aimed to minimize confounding variables that could affect the interpretation of results among the specified age group and gender categories in India.

3.11. Sample and Techniques

Convenient Sampling Method was used to recruit participants from diverse regions in India, ensuring socio-cultural and geographic representation. Standardized questionnaires were administered via Google Forms, facilitating efficient data collection from a large sample. This method allowed participants to respond at their convenience, boosting response rates and minimizing interviewer bias. Data collection was anonymous, ensuring participant privacy. Validity and reliability were ensured through standardized questionnaires based on established theories on sociotropy, autonomy, and empathy in interpersonal relationships.

3.12. Research Ethics Followed

Ethical considerations were paramount in the study, emphasizing participant confidentiality and data security. Informed consent was obtained from all participants before data collection, respecting their autonomy. Ethical principles of doing good, avoiding harm, and prioritizing participant well-being were adhered to. Integrity, fairness, and respect for individuals' rights and dignity guided the research's ethical framework, ensuring its integrity.

3.13. Tools for the study

The study used the Sociotropy-Autonomy Scale (SAS) to measure participants' levels of sociotropy and autonomy. SAS provided a structured assessment of individuals' dependence on others for approval (sociotropy) versus their self-reliance (autonomy), offering insights into interpersonal behaviors and relationship dynamics.

The Interpersonal Reactivity Index (IRI) was employed to gauge participants' empathy levels. IRI assesses various empathy components such as perspective-taking, empathic concern, fantasy, and personal distress. This facilitated a comprehensive understanding of how individuals perceive and respond to others' emotions, shedding light on empathy's role in shaping interpersonal relationships across diverse Indian regions.

3.14. Statistical Analysis

In the study, correlation analysis was employed to investigate the relationships among the variables. By conducting correlation analysis, study aimed to uncover the extent and direction of associations between different factors such as sociotropy, autonomy, empathy, and various aspects of interpersonal relationships.

This statistical technique allowed for the identification of potential patterns and connections between these variables, shedding light on how they interact and influence each other within the context of the study. Correlation analysis allowed to quantify and see the strength and nature of relationships.

3.15. Descriptive Statistics

The mean and standard deviation were calculated for each variable, including Interpersonal Reactivity, Sociotropy, and Autonomy. The mean values were used to determine the average scores for each variable, while the standard deviation provided insights into the variability or spread of data points around the mean.

4. Result and discussion

Table 1 Socio-demographic details of the participants

	Gender	N
Age Range (18-40 years)		224
	Male	72
	Female	150
	Non-Binary	2

Table 1. shows the sociodemographic characteristics of the study participants. The sample comprised 224 (N=224) young adults aged 18-40, with 72 males, 150 females and 2 non-binary individuals.

Table 2 The Descriptive Statistics of the participants

	Mean	Std. Deviation
Interpersonal Reactivity	42.5	13.0
Male	43.8	12.3
Female	42.1	13.3
Non-Binary	28.0	7.07
Sociotropy	99.2	20.9
Male	98.9	19.3
Female	99.6	21.6
Non-Binary	82.5	26.2
Autonomy	109	17.0
Male	111	14.0
Female	109	18.2
Non-Binary	124	9.90

Table 2 shows the descriptive statistics results. Participants' scores on Interpersonal Reactivity centered around ($m=42.5$), with a variation of approximately 13 points ($sd=13.0$), indicating diverse reactions to others. Sociotropy exhibited an average score of ($m=99.2$), with scores spread out by about 20.9 points ($sd=20.9$), highlighting significant differences in sociotropic tendencies among individuals.

Autonomy, having the highest average at ($m=109$) and scores fluctuating by around 17 points ($sd=17.0$), suggests a higher level of consistency in autonomy levels.

Gender variations were evident in sociotropy and autonomy, with females showing slightly higher sociotropy scores ($m=99.6$) compared to males ($m=98.9$) and non-binary individuals ($m=82.5$). Conversely, non-binary individuals demonstrated the highest autonomy scores ($m=124$), illustrating the impact of gender identities on these personality traits.

Table 3 Results of Correlation between Interpersonal Reactivity, Sociotropy and Autonomy

Among young adults.	IPR	ST	AT
Interpersonal Reactivity (IPR) Spearman's Rho	-		
p-value	-		
Sociotropy (ST) Spearman's Rho	- 0.50	-	
p-value	0.452	-	
Autonomy (AT) Spearman's Rho	0.067	0.120	-
p-value	0.317	0.073	-

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

The correlation analysis revealed the relationships between Interpersonal Reactivity, Sociotropy, and Autonomy. The results indicated weak correlations between these variables. Specifically, there was a weak negative correlation between Interpersonal Reactivity and Sociotropy, implying that higher levels of empathy are associated with slightly lower tendencies to seek approval from others. Additionally, a weak positive correlation was found between Sociotropy and Autonomy, suggesting a slight increase in autonomy with a higher inclination towards seeking social approval. Similarly, a weak positive correlation was observed between Autonomy and Interpersonal Reactivity, indicating that greater autonomy is linked with slightly higher levels of empathy. However, it is important to note that none of these correlations reached statistical significance, as indicated by the p-values exceeding the conventional threshold of 0.05.

This suggests that the relationships observed may not be substantial enough to generalize to the broader population. Hence, the null hypothesis of the study has been retained.

The present study was conducted on a non-clinical population, which might have affected the results. Research suggests that sociotropy and autonomy may vary in their accessibility as a function of mood state (Martínez, R et al, 2020). Therefore, testing these variables on a clinical population could have potentially yielded different results. Furthermore, previous research has questioned the construct validity of the original Sociotropy-Autonomy Scale (SAS). The revised SAS now consists of two subscales, Solitude and Independence, with studies finding more consistent associations with depression. The solitude component may be a risk factor for depression, while independence is not and may even be a protective factor (EK Bent, 2007).

Interestingly, both A. T. Beck and Blatt posit diathesis-stress models where personality traits, such as sociotropy and autonomy, interact with negative life events to increase the risk of developing depression. This suggests that the relationship between sociotropy, autonomy, and depression may be more complex than initially thought. Some studies have found gender differences in the pattern of correlations between sociotropy and autonomy and measures of personality, such as the five-factor model of personality. Therefore, it is essential to consider gender differences when interpreting the results of the present study (McBride, C et al, 200). Research suggests that sociotropy is associated with faster recall of sociotropic negative memories, while autonomy is not associated with speed of recall of autonomous memories. This finding supports the cognitive model of depression and suggests that sociotropy may be a more significant risk factor for depression than autonomy (Moore, R. G et al, 1993).

Studying sociotropy-autonomy and empathy in non-clinical populations has several limitations. First, non-clinical populations may not exhibit the same level of symptoms or severity as clinical populations, which may limit the generalizability of the findings. Additionally, non-clinical populations may not be as diverse as clinical populations, which can limit the ability to detect potential differences based on demographic factors such as age, gender, or cultural background. Another limitation is that non-clinical populations may not be as motivated to participate in research studies or may not be as reliable in their responses, which can affect the validity of the findings. Furthermore, non-clinical populations may not have the same level of insight or awareness of their symptoms, which can affect the accuracy of self-report measures. Additionally, non-clinical populations may not be experiencing the same level of stress or adversity as clinical populations, which can affect the relationship between sociotropy-autonomy and empathy. For example, non-clinical populations may not be experiencing the same level of interpersonal stress or conflict, which can impact the expression of sociotropy-autonomy and empathy. Finally, non-clinical populations may not have the same level of access to mental health services or support, which can affect the ability to detect potential differences based on treatment history or current treatment. While the present study did not find a significant relationship between sociotropy-autonomy and empathic responses in IPR, there are several legitimate research studies that support the role of these variables in depression. Testing these variables on a clinical population, considering gender differences, and examining the relationship between sociotropy-autonomy and cognitive processes could potentially yield different results (Fairbrother, N et al, 1998; Bagby, R.M et al, 2001; Shahar, G et al, 2008; Otani, K et al, 2018; Kunst, L.E et al, 2019).

5. Discussion

In this study, the Sociotropy-Autonomy Scale (SAS) and the Interpersonal Reactivity Index (IRI) were utilized to examine the relationships among sociotropy, autonomy, and empathy in the context of interpersonal relationships among adults in diverse regions of India. Despite the comprehensive analysis, the findings did not reveal statistically significant relationships between these variables. This suggests a need for further exploration and refinement of the research questions and methodologies to gain a deeper understanding of these complex dynamics.

6. Conclusion

While the study provides some insights into individual differences in interpersonal dynamics and autonomy, the absence of significant relationships emphasizes the importance of interpreting these findings with caution. It underscores the intricate nature of these constructs and highlights the necessity for more nuanced investigations to uncover potential underlying factors influencing these relationships.

Implications

The current study's exploration of the relationships among sociotropy, autonomy, and empathy in interpersonal relationships offers insights into the complexities of human behavior and emotional dynamics. Although the findings

did not reveal significant relationships between these variables, this opens up avenues for further research to delve deeper into these intricate connections. The utilization of established psychometric tools like the Sociotropy-Autonomy Scale (SAS) and the Interpersonal Reactivity Index (IRI) contributes to the existing body of knowledge on personality traits and their impact on social interactions. By highlighting the need for more nuanced investigations and refined methodologies, this study paves the way for future research to explore alternative statistical methods and consider a broader range of influencing factors to enhance our understanding of how sociotropy, autonomy, and empathy shape interpersonal relationships in diverse cultural contexts.

Limitations Of Study

The study's limitations include the non-normal distribution of data, which can impact the validity of statistical tests and result interpretation. The relatively small sample size of participants may limit the generalizability of findings to broader populations. Furthermore, not accounting for other potential influencing factors and neglecting to explore trait stability over time represent additional limitations that could be addressed in future research.

Suggestions For Further Research

To address these limitations and advance knowledge in this area, future studies could consider employing advanced statistical techniques tailored for non-normal data distributions. Increasing sample sizes through diverse sampling methods and investigating additional factors such as gender differences, marital status variations, educational backgrounds, and mental health statuses could provide a more holistic understanding of how sociotropy, autonomy, and empathy influence interpersonal relationships. Longitudinal studies focusing on trait stability over time would offer valuable insights into the development and impact of these personality traits on psychological functioning across different contexts. To further refine the understanding of sociotropy, autonomy, and empathy within interpersonal relationships, future research studies could incorporate qualitative analysis of these variables to gain a deeper understanding of individuals' experiences and interpretations. Qualitative methods, such as in-depth interviews or focus group

Discussions, can provide insights into how individuals perceive and navigate interpersonal dynamics based on their sociotropy and autonomy levels. By exploring the subjective meanings and nuances attached to these personality traits, researchers can gain a richer understanding of the complex interplay between sociotropy, autonomy, and empathy. Moreover, future studies could conduct comparative analyses across different age categories or diverse populations to examine potential variations in the impact of these personality traits on interpersonal relationships. For instance, researchers could investigate how sociotropy, autonomy, and empathy manifest and influence interpersonal dynamics in younger and older adults, or in different cultural or socioeconomic contexts. By comparing results across various demographic groups, researchers can elucidate how these personality traits interact with individual and contextual factors to shape interpersonal relationships.

Compliance with ethical standards

Disclosure of conflict of interest

There is no conflict of interest to disclose.

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