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Dispositional Preference for Problem Solving Among Young Adults in Kerala.

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Abstract

Problem solving is an activity in which humans show a unique ability for flexible cognition and adaptation, which means we can, in fact, program ourselves and come up with novel strategies for solving problems (Cunningham & MacGregor, 2013). Individuals might choose to approach daily problem-solving circumstances either on their own or with the help of others. This study investigates whether closely related cognitive factors have any relationship with preference for independent or interdependent problem solving, which remains to be investigated. The cognitive factors of interest used to examine a possible relation to the preferred style of problem-solving were self-talk, mental toughness, self-compassion, and perseverative thinking. A sample of 299 young adults was collected for this study through a convenience sampling method. A correlational research design was employed. Current study's findings indicate that there exists a significant relationship between mental toughness and dispositional preference for problem-solving, while there is no significant relationship between independent and interdependent problem-solving and the other 3 variables studied. Also, there is a significant gender difference among individuals in mental toughness and dispositional preference for problem-solving variables, and there exists no significant gender difference with respect to the other three variables. Understanding problem-solving styles deeply can aid as a theoretical foundation in the field of cognitive psychology.

Introduction

Humans face problems throughout their lives, and challenges are an essential part of personal growth and development. Solving the problem is the only way to fulfill the role of problems in growth. Overcoming challenges can lead to increased resilience and self-confidence, ultimately shaping individuals into stronger and more capable individuals. To grow and succeed, they must navigate these challenges and find solutions. A problem arises when a living being has a goal but lacks awareness of how to achieve it. Whenever one is unable to go from a current circumstance to a desired situation, a 'problem' arises, necessitating a reconsideration of thought (Duncker, 1945). Problem-solving is a core cognitive process that enables individuals to overcome obstacles, make decisions, and adapt to changing life circumstances. Contemporary psychological research has increasingly emphasized individual differences that influence how people approach and resolve problems, particularly dispositional preferences underlying problem-solving behavior.

Dispositional preference for problem solving refers to an individual's stable tendency to adopt specific modes or styles—such as analytic, creative, or social—when dealing with problems. These preferences shape the strategies individuals employ in everyday situations and influence the effectiveness of their responses. Individuals might choose to approach daily problem-solving circumstances either on their own or with the help of others. This dispositional preference for independent or interdependent problem solving on the face of a problem was studied by different researchers to assess if individuals rely on themselves or involve or seek others' intervention while solving a problem. This distinction was based on a theory of relational and independent self-construal, which holds that an individual's representation of

oneself can either emphasize their own qualities, like skills and traits, or reflect representations of important others, like their partners, family, and friends (Cross et al., 2000). This idea led Rubin et al. (2012) to assume that a person tends to exhibit an independent problem-solving style if they prefer to solve everyday problems independently across various domains (e.g., academic or work-related) and problem types (e.g., relationship, academic). In the same way, a preference for interdependent problem-solving might be indicated by a willingness to approach these kinds of issues by seeking advice from others wherever feasible. Empirical evidence suggests that collaborative approaches often produce superior outcomes (Qin, Johnson, & Johnson, 1995) and may enhance long-term retention of problem-solving skills compared to solitary efforts (Duren & Cherrington, 1992). However, much of the existing literature has focused primarily on academic contexts, leaving dispositional problem-solving preferences in real-life settings relatively underexplored.

Previous research by Sanatkar and Rubin (2022) has already looked into this and found that people who prefer to solve problems on their own are more likely to engage in withdrawal behaviors like help-seeking avoidance and help-seeking danger, whereas people who prefer to solve problems with the help of others are more likely to engage in targeted problem-solving strategies like problem-centered coping and seek instrumental support. It was noted by the researchers that independent problem solvers do it alone because they adjudge seeking assistance from others as a potential source of dispute and tension. Whereas Interdependent problem solvers require diverse sources to reach outcomes, and hence focus on the problem and solicit assistance from others to mitigate ambiguity in problem solving. It was found with less significance that there exists a gender difference in the preferred style for problem solving, based on the self-construal theory by Cross et al.(2000), which explained that women prefer to be more interdependent in terms of problem solving and interdependent coping, but there was not much difference between genders in preference for independent coping. However, much evidence is not available to confirm these results in terms of dispositional preference for problem solving, and suggests further studies to prove the same. The primary goal of this research is to identify the cognitive variables that are most strongly correlated with the preference for autonomous or collaborative problem-solving. This is with the expectation that recognising the various factors that lead to individual differences in problem-solving styles can help in various organisational contexts, like tailoring leadership styles, team building, etc., educational approaches, and interpersonal relationships that lead to wellbeing. It can also serve as a theoretical foundation for future research and innovation, such as understanding human behaviour and decision-making, and developing interventions to promote effective problem-solving based on the preferred style of problem-solving. Young adulthood (21–35 years) represents a critical developmental phase marked by identity formation, career establishment, and increasing personal and social responsibilities. The ability to effectively address challenges during this period has significant implications for long-term psychological well-being and life success. Furthermore, cultural and regional contexts play a substantial role in shaping cognitive styles and problem-solving preferences. Kerala, a South Indian state characterized by high literacy, rapid socio-economic transitions, and strong cultural traditions, provides a distinctive context for examining dispositional problem-solving tendencies among young adults.

Problem solving has also been conceptualized as a behavioral process that generates adaptive response options and increases the likelihood of selecting effective solutions (D'Zurilla & Goldfried, 1971). Classical perspectives, such as Gestalt psychology, emphasized insight and cognitive restructuring as central to problem resolution (Duncker, 1945). Contemporary approaches extend this view by highlighting the interaction between cognitive processes and psychological resources that facilitate effective problem engagement.

Among such resources, mental toughness, self-talk, self-compassion, and perseverative thinking have received growing empirical attention. Mental toughness refers to an individual's capacity to maintain consistent performance under stress and pressure, encompassing resilience, perseverance, and emotional regulation (Clough et al., 2002). Originating from early observations on performance enhancement in competitive contexts (Triplett, 1898), mental toughness has been associated with greater productivity, goal commitment, and adaptive coping across performance domains.

Self-talk, defined as internal or external self-directed speech, serves critical self-regulatory functions including planning, motivation, emotional control, and evaluation of progress toward goals (Carver & Scheier, 1998). Rooted in Vygotsky's concept of inner speech (Vygotsky, 1986), self-talk has been shown to facilitate cognitive organization and problem-solving, particularly in challenging situations. It comprises dimensions such as self-criticism, self-reinforcement, self-management, and social evaluation, each influencing how individuals perceive and respond to problems (Brinthaupt, 2009; Fernyhough, 2016).

Self-compassion is about offering oneself support and understanding at times of hardship or distress, whether it arises from one's own errors and shortcomings or external difficulties in life. The theoretical paradigm of self-compassion has six distinct components: enhanced self-kindness, acknowledgement of shared humanity, mindfulness, as well as reduced self-judgement, isolation, and overidentification. It entails more than just forgiving oneself when you make mistakes (Neff, 2023). Compassion by itself is an interpersonal process that involves noticing, empathising and acting in a way to alleviate a person suffering from pain or external difficulties (Dutton et al.,2014). Research has shown that self-compassion has a positive correlation with well-being outcomes, including life satisfaction, social connection, and emotional intelligence, and a negative correlation with neurotic perfectionism, self-criticism, rumination, and suppressed thoughts. Moreover, the self-soothing capabilities of self-compassion are believed to foster enhanced capacity for closeness.

According to Hallion et al. (2022), perseverative thought, also known as repetitive thought, negative repetitive thought, or perseverative cognition, is a transdiagnostic cognitive process characterised by the subjective experience of repetition or inability to control mental activity. Perseveration refers to the persistent occurrence and focus on repeating thoughts and bad events, leading to a state of being mentally "stuck". Perseverative thoughts might arise due to attempts to cope with stress, processing of information, attention switching, inability to stop pondering certain matters, or lack of control over activities. It may serve as a coping tool for those experiencing feelings of overload, anxiety, or

unfamiliarity with a certain circumstance (Bennie 2023). Perseverative cognition refers to the persistent or long-term activation of the cognitive representation of one or more psychological stresses, as described by Brosschot et al. (2006). A stressor is a circumstance that poses a potential danger to one's physical and mental well-being or the achievement of an important objective, and is characterised by a lack of perceived control (Verkuil, B.,2010). Although many terms, such as "rumination", "repetitive thinking", "worry," and "depressive rumination," are often used interchangeably, we advocate for the use of the term perseverative cognition because concepts like rumination and repetitive thinking are too broadly defined, while depressive rumination and worry are too specific or narrowly defined.

The present study addresses this gap by examining dispositional problem-solving preferences among young adults in Kerala and investigating their correlation with self-talk, self-compassion, perseverative thinking, and mental toughness. The study aims to contribute to a more nuanced understanding of the cognitive and self-regulatory processes underlying problem-solving behavior, with implications for psychological interventions, educational practices, and organizational applications.

Methods

Participants And Procedure

The target population of the study was young adults in Kerala between the ages of 21 and 35. A sample of 299 participants was obtained for the study after excluding the data obtained from 4 participants who came under the exclusion criteria. Convenience sampling was used to recruit participants for the study. The participants thus fit the inclusion criteria established by the researcher. Data was collected with the help of Google Forms, which were circulated among the targeted population. Inclusion criteria were 1) all Adult males and females between the ages of 21 and 35 who are residents of Kerala, 2) Individuals who can read and comprehend English, and 3) Individuals from whom informed consent is obtained. Participants were excluded if they had any physical or psychological illnesses. Ethical clearance was obtained from the Institutional Ethics Committee.

This study's research approach was quantitative and the research design used was correlational. The data collection was done by providing the participants with questionnaires through Google Form, to a sample between the age groups of 21 and 35. They were provided informed consent before they participated. The participants had to fill a 1) sociodemographic sheet, 2) The Independent and Interdependent Problem solving scale, 2) Self Compassion Scale- Short form 3) Perseverative Thinking Questionnaire, 4) Mental Toughness Questionnaire, and 5) Self Talk Scale.

Measures

Sociodemographic Data Sheet. The sociodemographic sheet collects detailed information of the participants required for the study, including their age, gender, marital status, area of residence, levels of

education, occupation, and economic status. It also collects information regarding the history of any past or present physical or psychological illnesses.

The Independent-Interdependent Problem-Solving Scale. The Independent-Interdependent Problem-Solving Scale, which was developed by Rubin, Watt, & Ramelli (2012), will be used to measure the dispositional preferences for Independent-Interdependent problem-solving. The scale consists of 10 items. "Strongly Agree" and "Strongly Disagree" serve as anchor points on a 7-point Likert-type response scale that participants use to respond. The scale has a good reliability with Cronbach's alpha = .805 for the sample. We have coded IIPS in such a way that higher scores indicate an independent problem-solving style.

Self-Compassion Scale Short Form (SCS-SF). Twelve of the 26 SCS items were included in the condensed version of the SCS created by Raes et al. (2011). The SCS-SF demonstrated an excellent level of internal consistency with the long version of SCS (Cronbach's alpha ≥ .86), and it has a good reliability of Cronbach's alpha = .771. An individual's level of self-compassion cannot be determined by clinical standards or ratings. Scores are used comparatively to examine outcomes for people high or low in self-compassion. Here we have averaged the scores and consider those with high scores to be high in self-compassion and those with low scores to be low in self-compassion.

Perseverative Thinking Questionnaire (PTQ). The Perseverative Thinking Questionnaire (PTQ; Ehring et al., 2011) was used to evaluate perseverative thinking. The 15-item Questionnaire was created with the help of the working definition of RNT (Rumination Negative Thinking), which comprises two features that are related to each other(unproductiveness, capturing mental capacity) and three fundamental characteristics (repetitiveness, intrusiveness, and difficulties to disengage). Items are scored using a 5-point scale ranging from 0 (never) to 4(almost always), with higher scores indicating more severe perseverative thinking. The PTQ had a good reliability score of Cronbach's alpha = .944.

Mental Toughness Questionnaire - Neil Dagnall (2019). The Mental Toughness Questionnaire (MTQ-10) is a concise and often employed assessment tool consisting of 10 items to measure mental toughness. The MTQ-10 is a shortened version of the MTQ-48, which consists of four distinct yet interconnected factors: challenge, commitment, control, and confidence. Although the MTQ-10 samples items from various dimensions of the MTQ-48, its purpose is to generate a single, overall score. The 10-item Mental Toughness Questionnaire (MTQ-10) demonstrated satisfactory levels of structural validity, internal consistency, and hypothesis testing in its domains. The reliability score for MTQ was found to be Cronbach's alpha= .748.

Self-talk Scale. The Self-Talk Scale (STS) is a tool used to assess how often individuals engage in self-talk across different situations (Brinthaupt et al., 2009). The technique assumes a functional perspective by quantifying the frequency at which individuals engage in self-talk, whether internally or audibly, in reaction to particular events or circumstances. The STS assesses four distinct functions of self-talk: self-criticism, self-reinforcement, self-management, and social assessment. The respondents evaluate the 16 STS items using a 5-point frequency scale, where 1 represents "never," and 5 represents "very

often". A good reliability score was reestablished in the study with Cronbach's alpha = .854. For the total STS score, compute the sum of all 16 items. Possible range for total score is 16–80. Scores will reveal the frequency of Self-talk. High scores indicate a high frequency of Self-talk.

Data Analysis

All the collected data(after filtering) were entered for scoring in Microsoft Excel. SPSS v25.0 software was used for data analysis. The reliability of all the scales was found to be good. The data deviated significantly from normal, and hence it was decided to use non-parametric tests. To find the nonparametric associations that were statistically significant, we employed the Spearman correlation test. Regression analysis was done between the variables that had a significant correlation. Mann-Whitney U test was done to find if there is any significant difference between 2 given mean groups with respect to the variables. A Kruskal-Wallis test was also done in order to find if there is any significant difference between the mean groups(more than 2) with respect to the variables. Descriptives of all the variables and sociodemographic data were also taken.

Result

Descriptive statistics

This study had a total of 299 participants, of which 195 were females, 104 were males, and about 5 percent of the total were individuals of 21 years of age, and a total of 88 percent of the sample were singles. About three-fourths of the population was middle class, and most of the sample had a 12th or graduate degree. The data was determined not be normal using the Shapiro-Wilk test, so non-parametric tests were employed. A little over 50% of the sample lived in urban areas. The descriptive statistics (mean and standard deviations) for the variables involved in the present study were taken.

Table 1
Mean and Standard deviation of the variables in the study.

Variable	**M**	**SD**
Independent-Interdependent problem solving	3.8508	.92211
Perseverative thinking	31.8763	11.73282
Self-compassion	3.0279	.54999
Self-talk	54.25	9.25708
Mental toughness	30.4749	5.45037

Note. SD = Standard deviation; M=Mean

The mean score for self-compassion was M = 3.03 (SD = 0.55), indicating moderate levels of self-compassion within the sample. The mean score of Perseverative Thinking was M = 31.88 (SD = 11.73),

self-talk M = 54.25 (SD = 9.26), Mental Toughness M = 30.47 (SD = 5.45), and Independent-Interdependent problem solving M = 3.85 (SD=.92) as given in the table.

Table 2

Results of Spearman's correlation.

Self compassion	**Independent-Interdependent problem solving**
	.034^{NS}
Perseverative thinking	.008^{NS}
Self talk	.024^{NS}
Mental Toughness	.173**

NOTE: **. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

NS-correlation not significant.

Table 2 shows that there exists a significant correlation between Mental Toughness and Independent and Interdependent problem solving. The correlation value was found to be 0.173. There exists no significant correlation between self-compassion and Independent-Interdependent problem solving, Perseverative thinking, and between self-talk and Independent and Interdependent problem solving.

Table 3

Gender difference with respect to Self-Compassion, Perseverative Thinking and Independent-Interdependent Problem Solving.

Variable	Gender	N	Mean Rank	Man Whitney U	Sig
		β			
Independent-Interdependent problem solving	Male	104	171.21	8778.000**	.002
	Female	195	138.69		
Self compassion	Male	104	157.89	7934.000^{NS}	.056
	Female	195	145.79		
Perseverative Thinking	Male	104	136.90	9319.500^{NS}	.248
	Female	195	156.98		
Self-talk	Male	104	136.90	9737.000	.571
	Female	195	156.98		
Mental Toughness	Male	104	171.21	7740.500	.001**
	Female	195	138.69		

* The gender difference is significant.

NS-gender difference not significant.

Table 3 indicates that there exists a significant gender difference concerning Independent-Interdependent problem solving (Mann-Whitney U score-8778.000 and p value of .002), with males having a higher mean score of 171.21, and also for mental toughness (Mann-Whitney U score-7740.500 and p value of .001). It shows that there is no significant gender difference with respect to perseverative thinking(Mann-Whitney U score = 9319.500 and p value=.248), self-compassion (Mann-Whitney U score = 7934.00 and p value=.056), and self-talk (Mann-Whitney U score = 9737.000 and p value=.0571).

Discussion

Individuals engage in problem-solving when they are faced with a challenging situation. They explore a long array of various options and carefully choose the best possible course of action. The individuals will choose either to find a solution by themselves or with the help of others. We had evidence from previous studies that focus on how a preference for a particular dispositional problem-solving style affects various competencies and other functions. This research study's main focus was to understand if cognitive factors such as perseverative thinking, self-talk, self-compassion, and mental toughness have any relationship with an individual's preference for Independent-Interdependent problem solving.

The results show that there is a significant relationship between mental toughness and dispositional preference for problem-solving among young adults in Kerala. Mental toughness is directly related to an individual's ability to solve problems in challenging situations. Studies have shown that individuals with higher mental toughness are better at persisting in the face of failures, adapting to changes, and finding better solutions (Gucciardi et. al., 2015). Mental toughness encourages independent problem-solving because it improves an individual's belief in their ability to deal with difficulties on their own, promoting independence. Resilient individuals can stay focused on a problem and search for various solutions without giving up, even when facing setbacks (Horsburgh et al., 2009). Research indicates that the correlation between mental toughness and problem-solving differs among cultures. For example, individualistic cultures may prioritize autonomous problem-solving, wherein mental resilience can enhance perseverance and self-efficacy. Conversely, in collectivistic societies, interdependent problem-solving may be more common, and mental resilience would facilitate collaboration and the management of group dynamics under stress.

There is no significant relationship between self-talk and dispositional preference for problem solving. This might be because self-talk is viewed as a context-dependent, dynamic cognitive strategy aimed at regulating thoughts, ideas, and behaviours as observed in some studies (Morin, 2006). Self-talk has both affective and cognitive functions, but the majority of the research focuses on its role in emotional regulation (Rassin et al., 2006). This suggests that while self-talk can shape a person's mind during problem-solving, it doesn't necessarily relate to how individuals prefer to solve problems (their dispositional preference). Vygotsky (1962) also suggests that self-talk can be a moderating tool for problem-solving, but this does not necessarily influence an individual's dispositional preference for problem-solving.

There is no significant correlation between self-compassion and Independent-Interdependent problem solving, either. We have studies confirming the relationship between self-compassion and coping strategies and conflict resolution (Yarnell and Neff, 2012; Neff et al., 2005). We have also had literature that says how relational-interdependent self-construal (on the basis of which concept of problem-solving style was developed) was explained by negative facets of self-compassion, which are self-judgement, over-identification, and isolation. In addition, there were studies that point out a relationship between constructive and interpersonal problem-solving with self-compassion. But our study found that having high or low self-compassion doesn't have any relationship with preference for a style of problem solving. This probably will be because there might be a combination of factors that predict a preference for problem-solving, and hence isolating a single factor might not be enough. Even problem-solving is affected by various factors such as personality traits, self-efficacy, socio-cultural factors, and other major cognitive factors. By connecting previous literature with our results, we can say that self-compassion has a positive influence on interpersonal and constructive problem-solving regardless of a preference for doing it alone or with someone's help. The mean value of self-compassion (Table 1) indicates that the average of the respondents has moderate self-compassion, which might have contributed to this result. Hence, we conclude that self-compassion is not having a relationship with a preference for Independent-Interdependent problem solving.

There is no significant relationship between perseverative thinking and dispositional preference for problem solving. Previous literature had evidences for relationship between perseverative thinking and interpersonal problem solving (Lyubomirsky & Nolen-Hoeksema, 1995) and we also had studies explaining how rumination and social problem solving was related and how social sharing mediated in increasing problem solving among young adults with rumination traits, which led us to check for a possible relationship that might exist between interdependent problem solving and perseverative thinking because interdependent problem solving essentially involves sharing our problems with others. But since the results point otherwise, we can say that this probably indicates that perseverative thinking is associated more with the content and pattern of thinking, which can affect the quality of different types of problem solving, but not a preference for a particular type of problem solving.

There is no gender difference with respect to self-talk, self-compassion, and perseverative thinking, but a significant gender difference exists among young adults in terms of mental toughness and independent-interdependent problem-solving, with men showing increased preference for independent problem solving and increased mental toughness relative to women. Gucciardi and Gordon studied the gender differences in mental toughness, particularly in sports settings. Women might give emotional control top priority, for example, whereas men might show more confidence and actions geared toward problems. This influences the way mental toughness is developed and applied. Although both sexes show mental toughness, the study implies that their manifestations may differ depending on gender-specific expectations and social responsibilities. This could affect their approach to solving problems—independent rather than reliant. A study was conducted to find the relationship between mental toughness and the performance of athletes (Horsburgh et al., 2009). This study highlights clear gender differences in mental toughness: where female athletes often show improved attention and emotional control, male athletes often have better scores in resilience and dedication. This shows the general trends of gender socializing as well as the different psychological strategies men and women use in highly stressful situations. Men's and women's approaches to challenges are much influenced by their gender differences in mental toughness, therefore perhaps leading to different dispositions toward independent vs interdependent problem-solving techniques. In a study in cross-cultural psychology by Markus and Kitayama (1991), they observed that with gender disparities often matching these cultural paradigms, individualism (relating to independent problem-solving) and collectivism (relating to interdependent problem-solving) are culturally embedded preferences. Men are taught in many communities to value autonomous problem-solving abilities, whereas women are often trained to stress relationships and teamwork and to favor interdependence. In the context of Kerala, where the current study was based, studies, especially in the field of sports, such as one on state-level chess players and football players, have indicated that males generally exhibit higher levels of mental toughness than women (VinuBhaskar, 2021; Pm et al., 2025).

From the descriptives, it is clear that the number of males in the sample is about 30 per cent less than the number of women who participated in this study. Even then, it is observed that males have a greater mean rank than women with respect to an independent problem-solving style. Hence, we can conclude that the difference is significant. Previous research had also identified a very small, significant gender

difference, which is being reestablished here in our study. According to the self-construal theory, which provided a base for the concept of problem-solving style, men typically exhibit an autonomous self-construal while women generally maintain an interdependent self-construal (Cross & Madson, 1997). Also, it has been noted that an independent style of problem solving is associated with withdrawal behaviours like help-seeking avoidance and help-seeking threat (Rubin et al.2022).

This study clarifies how gender influences decisions on problem-solving; women choose interdependent solutions because of socialisation, whereas men usually choose independent ones. These differences could also affect how mental toughness is developed and applied. Cross (2000) also puts forward the view that gender differences do have an impact on these factors. His study investigates relational-interdependent self-construals, defined by a preference for interdependence in social problem-solving, and notes significant gender discrepancies, thus exposing that women generally show a stronger propensity towards interdependent self-construals. Men, on the other hand, are more likely to develop autonomous self-construals, which match alone, self-sufficient methods of approaching problems. This supports the theory that whilst men show an inclination for independent problem-solving, women are more likely to participate in interdependent problem-solving. Often connected with gender-specific social duties and expectations, these differences influence mental toughness as well as problem-solving capacity. In a culture like Kerala, men’s preference to solve problems independently and mental toughness can be due to the long ingrained and prevailing hegemonic masculinity beliefs in the culture that demand and encourage boys, even from their childhood, to conform to certain normative characteristics like toughness, emotional suppression, and mold men to be self-sufficient and self-restrained (Chitteth, 2025).

The study by Dunn and Hodge (2015) specifically looks at how gender and mental toughness interact in different ways to solve problems. Studies show that women are more likely to use interdependent problem-solving strategies, whereas men are more likely to use autonomous problem-solving strategies. Men demonstrated better resilience in independent pursuits, whilst women showed increased adaptability in group contexts; the variation in problem-solving preferences linked with variations in mental toughness. The study shows significant gender differences in mental toughness and problem-solving preferences, therefore stressing the significant ways in which men and women approach challenges and mental resilience.

Implications of the Study

1. It can serve as a theoretical foundation to the field of cognitive psychology (cognitive and thought attributes) for future research and innovation in understanding human behaviour, problem solving, decision making, and developing interventions to promote effective problem solving based on the preferred style of problem solving.
2. Interventions to Enhance Mental Resilience: The study's findings indicate that individuals' problem-solving strategies are significantly influenced by their mental toughness. This points to the need for development of treatments aimed at enhancing mental toughness, particularly for those who

generally depend on interdependent problem-solving methods. Programs or seminars designed to enhance perseverance, coping mechanisms, and self-confidence might help young individuals to achieve greater autonomy in problem-solving.

3. Customizing Problem-Solving Approaches: The observed gender disparities in problem-solving preferences—men favoring autonomous approaches and women opting for interdependent strategies—suggest that customized solutions could be beneficial in educational and professional environments. Comprehending these preferences enables educators, enterprises, and counselors to devise efforts that align with diverse problem-solving ways, so improving group dynamics and individual performance.
4. Gender-Sensitive Approaches in Psychological assistance: The disparities in mental resilience and problem-solving inclinations highlight the necessity for gender-sensitive methodologies in the provision of psychological assistance or counseling. Recognizing that men and women may employ distinct methodologies to address difficulties can assist therapists and counselors in developing more pertinent and successful treatments for each gender.
5. The research undertaken in Kerala highlights the importance of including cultural context in the development of problem-solving strategies or treatments. Comprehending the impact of cultural norms on decision-making in problem-solving might enhance the efficacy of training programs or counseling directed at youth in contexts where collectivism or familial approaches are prevalent.

Declarations

Author Contribution

All authors are involved in the study.

Data Availability

Yes. This is a research in which the author has primarily collected data.

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