

ORIGINAL PAPER

CHARACTER STRENGTHS AS PREDICTORS OF THE WELL-BEING OF ADOLESCENTS: A CORRELATIONAL AND REGRESSION ANALYSIS

Sher Singh^{1(A,B,C,D,E,F)}, Manju Manju^{1(A,C,D,F)}

¹Department of Applied Psychology, Guru Jambheshwar University of Science and Technology,

Hisar, Haryana, India

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Address for correspondence: Sher Singh, Department of Applied Psychology, Guru Jambheshwar University of Science and Technology, Hisar-Delhi Bypass Rd, Hisar-125001, Haryana, India, e-mail: shersinghh89505@gmail.com, phone: +918950526268

ORCID: Sher Singh <https://orcid.org/0009-0008-1854-3149>

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Summary

Background. This major study examines the correlation of virtues of character strengths with well-being dimensions, identifying character strengths as predictors of well-being in boys and girls.

Material and methods. Data was collected from 200 students (100 boys, 100 girls) from 9th to 12th grades using purposive sampling. The Pearson correlation method and stepwise regression analysis were employed to examine the score.

Results. Correlational analysis showed that character strength virtues had a positive correlation with almost all dimensions of well-being, and stepwise regression analysis revealed that character strengths emerged as distinct predictors of well-being for boys and girls. Boys' well-being was predicted by five character strengths, while girls' well-being was predicted by two character strengths. Character strengths accounted for approximately 35% of the variance in well-being for both boys and girls.

Conclusions. The study shows the importance of character strengths for adolescents' well-being. Character strengths play an important role in embracing the positive which results in better well-being.

Keywords: character strengths, positive psychology, gender, health, well-being

Introduction

Character strengths are qualities that promote well-being, psychological flourishing, and life satisfaction [1]. Character strength dimensions are frequently mentioned by parents and educators when talking about the traits they wish to see in their children [2,3]. These moral attributes are prized because they benefit the individual and society [4]. In fact, it is expected that children who have high character strengths are more satisfied with their lives and can contribute more to society. Recent research in the field of positive psychology reveals particular character strengths associated with our current health [5]. Character strengths are personality traits that play a significant role in moral growth. Character strengths, such as other personality traits, are expressed through a person's feelings, ideas, and actions. They are present in personality in degrees, and individual differences are found in them [6]. Character strengths are determined by biological predispositions to solve problems, which is essential to the survival of the species [7,8]. Personality is vital for psychological well-being and can predict it [9,10].

The VIA scale has been developed to classify and measure character traits [11]. In VIA, character strengths are grouped into six virtues. These virtues are: (1) wisdom, (2) courage, (3) humanity, (4) justice, (5) temperance, and (6) transcendence. Character strengths are believed to be similar across all cultures and human history [12]. A bibliometric analysis of Stahlman's [13] studies found that no two definitions were the same among the most influential publications between 2011 and 2022. The research argues that character strengths are a collection of psychological attributes that serve a specific purpose.

Most of the character strengths described in VIA have a significant relationship with well-being [14]. Well-being is referred to as internal qualities such as wellness, quality of life,

flourishing, rational value, etc. [15]. Well-being is a combination of the physical, mental, emotional, and social health factors of an adolescent [16]. Well-being refers to positive experience and performance [17]. Philosophically viewed, there are basically two kinds of well-being: (1) hedonism and (2) eudaimonism. Both perspectives form the foundation of the PERMA Profiler model of well-being [18,19].

Important facets of both individual and societal well-being are associated with character traits. Diverse strengths also predict different outcomes [20,21]. Temperance, vitality, curiosity, interpersonal strengths, and transcendence are all linked to well-being and happiness [22].

As a determinant of well-being, character strengths play a major role [23]. Together with several other investigators, Park et. al. [24] found in their three major studies that well-being was significantly correlated with all dimensions of character strength except humility. Integrating our character traits to improve our health and well-being can be done in a variety of ways. Hooda et al. [25] found that two elements of good mental health, i.e. happiness and life satisfaction, had a significant relationship with six dimensions of social intelligence (confidence, cooperativeness, sensitivity, sense of humor, tactfulness, and memory), and four dimensions of social intelligence (patience, cooperativeness, confidence, and tactfulness) were significantly related to optimism. Finally, using stepwise regression analysis, it was found that social intelligence had a significant relationship with positive psychological health. Harzer et al. [26] explained the unique variance related to character strength and job performance well-being in their study. Prominent among the predictor strengths related to a person's job well-being are: teamwork, creativity, and signature strengths. Tehrani et al. [27] selected seven of the most influential character strengths (critical thinking, hope, emotional intelligence, zest, forgiveness, and gratitude) to help with depression. Their study found that critical thinking can help reduce the need for acceptance and

perfectionism in depression, and the strength of emotional intelligence helps increase emotional awareness to solve problems. Martínez-Martí et al. [28] conducted a study by longitudinal design using the Character Strengths Rating Form (CSRF-24 items), General Health Questionnaire (GHQ-12items), Satisfaction With Life Scale (SWLS), and Scale of Positive And Negative Experience (SPANE) on 348 (86 male and 262 female) adults aged 19-82 to test whether personal traits predict resilience (defined as having improved or maintained subjective well-being and mental health in spite of a negative incident) throughout the epidemic of COVID-19 and found at Time 1, satisfaction with life and positive impact were favorably correlated with all character qualities, but at Time 2, adverse impact and poor mental health were adversely correlated with them. Intrinsic strengths, interpersonal strengths, and patience strengths decreased the negative affect, while of the remaining character strengths increased mental health and predicted a positive affect with the exception of patience strengths. Xie et al. [29] studied the behavior of nurses in hospitals and found that character strength (inquisitiveness, self-control, and caring) indirectly reduces depression and psychological well-being and can be enhanced by social support and self-efficiency. Verma et al. [30] used the NEO-FFI, Environment Scale, and Friedman Well-being Scale on 80 (40 male and 40 female) college students aged 18-25 years to study the relationship of personality trait and family environment with psychological well-being and found in the results that both personality trait and family environment predict psychological well-being. Both variables contribute to 39% of the total variance. Upenieks [31] found in his study that increased religiosity was associated with a greater sense of purpose. Taheriet al. [32] found in their study that character strengths had a positive relationship with social, psychological, and spiritual well-being. The use of character strengths positively enhances social, psychological, and spiritual well-being. Pandey et al. [33] conducted a study on 120 students of

CBSE and ICSE schools to explore the relationship between character strength, resilience, and well-being and found that character strength and resilience have a positive relationship with the well-being of adolescents and suggests how positive psychology can enhance it. Bowles [34] studied 78 married (24 military service members, 54 commissioned officers) soldiers to identify strengths that mitigate the effects of military deployment on the overall health and well-being of military personnel and their family members. The results found that positive humor style was associated with spirituality and personal well-being, and religious practices were associated with deployment family satisfaction. Important in deployment family effectiveness and well-being were character strengths, emotional maturity, external relationship skills, and their work ability, which provide important support to their families after deployment.

Research from several cultures suggests that character strengths are linked to children's and young people's well-being [35,36]. These are required to promote well-being and protect against deviant lifestyles and risks and are thus highly regarded in many cultures throughout history [37]. Personality traits that are basic components of personality and give us a sense of authenticity and belonging are known as character strengths. These strengths, being basic component of personality, have to do with our development, health, and contentment in life [38].

Aim of the work

Character strengths, as essential dimensions of personality, significantly influence psychological well-being, life satisfaction, and personal growth. Although prior research has demonstrated a positive link between character strengths and well-being, a substantial gap remains in exploring how specific character strength virtues serve as predictors of well-being,

particularly among adolescents across gender. Existing studies have largely concentrated on adult populations or general relationships, often neglecting gender-based analysis in youth, especially within the Indian cultural framework. The present study aims to bridge this gap by examining the relationship between character strength virtues and well-being among boys and girls, while identifying key virtues that serve as significant predictors. The findings are expected to offer valuable insights for parents, educators, and mental health professionals in crafting targeted, gender-sensitive strategies to enhance well-being. This investigation is crucial for supporting emotional resilience, psychological balance, and the overall positive development of adolescents.

The present study aims to investigate the association between well-being and the virtues of character strength, and to find out the predictor of the well-being of boys and girls.

Hypotheses of the study:

H1: There would be a significant relationship between character strength virtues and well-being;

H2: Character strengths would be a significant predictor of the well-being of boys and girls.

Material and methods

Participants of the study include 200 students (100 boys and 100 girls) of 9th to 12th class from schools of Hisar (Haryana, India). The age limit of the sample was kept between 14-18 years. The purposive sampling method was used to collect data.

Tools of the study

The following scales were used for data collection for this research:

- Socio-Demographic Data Sheet;
- VIA Youth-96 (Values In Action Youth-96) inventory of youth [39]. This is used to measure character strengths. Its Hindi version, VIA YOUTH-96, has 96 items, 4 items in each subscale, and it was used to measure character strengths for 14- to 18-year-old age groups as per the requirement of this study. This self-report inventory measures 24 character strengths and their 6 virtues. On a 5-point Likert scale, respondents respond to 96 questions (from ‘too few likes’ to ‘too many likes’, respectively);
- The PERMA Profiler Scale [40] was our choice for assessing adolescent health. It consists of 23 items on an 11-point (0-10) Likert scale that measure health in adults 10 years of age or older. PERMA is used to assess positive emotions, engagement, relationships, meaning, accomplishment, happiness, loneliness, health, and negative emotions. The scale has excellent internal consistency, with alpha coefficients for the subscales ranging from 0.72 to 0.94. Exploratory and confirmatory factor analyses were used to analyze the PERMA Profiler Scale. The five-factor model in the adult population

shows excellent fit indices (CF I = 0.97, T LI = 0.96, RMSEA = 0.06, SRMR = 0.03, χ^2 (80) = 10.61).

Purposive sampling was used for data collection. Before distributing the questionnaire, an attempt was made to establish better rapport with the students, and their verbal consent was obtained. After being given proper instructions, the questionnaire was distributed, and the data obtained was put to statistical analysis.

Results

After collecting the data, appropriate statistical methods (Pearson correlation and stepwise regression analysis) were used to analyze the data.

Correlation analysis

The data obtained was analyzed using the Pearson correlation coefficient to test the correlation between character strength virtues and the well-being dimensions of adolescents. The results are shown in Table 1.

Table 1. Summary of correlation analysis

Variable	Positive emotions	Engagement	Relationship	Meaning	Accomplishment
Wisdom	0.342**	0.053	0.179*	0.239**	0.248**
Courage	0.306**	0.090	0.211**	0.284**	0.321**
Humility	0.175*	0.093	0.192*	0.248**	0.314**
Justice	0.314**	0.108	0.258**	0.303**	0.276**
Temperance	0.214**	0.020	0.087	0.234**	0.256**
Transcendence	0.342**	0.113	0.274**	0.290**	0.254**

Notes: Correlation is significant at a level of 0.01** and at 0.05 levels*.

Based on Table 1, the first character strength virtue, i.e. wisdom, is positively and significantly correlated with positive emotion: $r=0.342$ ($p<0.01$), relationship: $r=0.179$ ($p<0.05$), meaning: $r=0.239$ ($p<0.01$), and accomplishment: $r=0.248$ ($p<0.01$). This means that those who are higher in cognitive strength are better at achieving their goals, leading satisfying lives, and having favorable relationships with others, as well as having more positive emotions. Wisdom strengths are determinants of well-being [41,42]. Joseph [42] found in his study that all character strengths-virtues were positively correlated with eudaimonic well-being. Silva et al. [43] found in their study that overall well-being was correlated with all virtues of character strengths.

The second character strength virtue is courage, i.e. emotional strength, which is positively significantly correlated with positive emotion: $r=0.306$ ($p<0.01$), relationship: $r=0.211$ ($p<0.01$), meaning: $r=0.284$ ($p<0.01$), and: accomplishment $r=0.321$ ($p<0.01$). This means that people who are high in emotional strength have satisfying lives, are achievement-oriented, have positive affect, and have harmonious relationships [42-44]. Lodi et al. [44] found in their study that courage plays a mediating role between positive resources and general/domain-specific well-being indices.

The third character strength virtue is humanity, i.e. interpersonal strength, which is positively significantly correlated with positive emotion: $r=0.175$ ($p<0.05$), relationship: $r=0.192$ ($p<0.05$), meaning: $r=0.248$ ($p<0.01$), and accomplishment: $r=0.314$ ($p<0.01$). This means that those who are high in interpersonal strengths have better interpersonal relationships, they are well-oriented in life and have emotional control [42,43].

The fourth character strength virtue is justice, i.e. civic strength, which is positively significantly correlated with positive emotion: $r=0.314$ ($p<0.01$), relationship: $r=0.258$ ($p<0.01$),

meaning: $r=0.303$ ($p<0.01$), and accomplishment: $r=0.276$ ($p<0.01$). This means that those who are high in civic strength are more likely to have positive emotions, are better at achieving goals, and are satisfied with life and their relations with others [42,43].

The fifth character strength virtue is temperance, i.e. strength of restraint, which is positively significantly correlated with positive emotion: $r=0.214$ ($p<0.01$), meaning: $r=0.234$ ($p<0.01$), and accomplishment: $r=0.256$ ($p<0.01$). This means that those who are more restrained are more positive, better at achieving goals, and are satisfied with their lives [42,43].

The sixth character strength virtue is transcendence, i.e. theological strength, which is positively significantly correlated with positive emotion: $r=0.342$ ($p<0.01$), relationship: $r=0.274$ ($p<0.01$), meaning: $r=0.290$ ($p<0.01$), and accomplishment: $r=0.254$ ($p<0.01$). This means that those who are more religious are more positive, achievement-oriented, have harmonious relationships, and have a satisfied life. According to certain studies, transcendence strengths are the best predictors of well-being and positive affect [42,43].

Regression analysis

To identify the potential predictors for boys and girls, stepwise regression was used. The results for boys are shown in Table 2, and results for girls in Table 3.

Table 2. Stepwise regression analyses of boys' data

Variable	R	R square	R square change	B	F	Sig.
Bravery	0.425	0.181	0.181	0.425	21.684	0.000
Leadership	0.504	0.254	0.073	0.297	16.528	0.000
Zest	0.534	0.285	0.031	0.203	12.789	0.000
Humility	0.567	0.321	0.036	-0.215	11.233	0.000
Citizenship	0.593	0.351	0.030	0.216	10.183	0.000

Notes: independent variable: character strength; dependent variable: well-being.

Table 3. Stepwise regression analysis of girls' data

Variable	R	R square	R square change	β	F	Sig.
Zest	0.563	0.317	0.317	0.563	45.419	0.000
Honesty	0.591	0.349	0.032	-0.179	25.967	0.000

Notes: independent variable: character strength; dependent variable: well-being.

Table 2 shows that five character strengths (bravery, leadership, zest, humility, and citizenship) are predictors of boys' well-being. Regression analysis of boys' data shows that bravery strength is the strongest predictor of well-being ($F=21.684$, $p<0.01$). The coefficient R is 0.425, and the R square value (0.181) showed that bravery strength explains 18.1% of the variance in well-being. According to the regression analysis ($\beta=0.425$, $p<0.01$), boys' general well-being is positively impacted by bravery strength.

The second-best indicator of boys' well-being was found to be leadership strength. An R square of 0.254 ($F=16.528$, $p<0.01$) showed that bravery and leadership strengths together explain 25.4% of the variance in well-being, and leadership strength alone explains 7.3% of the difference. The regression analysis ($\beta=0.297$, $p<0.01$) showed that leadership strength contributes positively to boys' well-being.

Zest emerged as the third strongest predictor of boys' well-being. The R square is equivalent to 0.285 ($F=12.789$, $p<0.01$) and showed that bravery, leadership, and zest strengths together explain 28.5% of the variance in well-being, and zest strength alone explains 3.1% of the variance. The regression coefficient ($\beta=0.203$, $p<0.01$) showed that zest contributes positively to boys' well-being.

Humility emerged as the fourth strongest predictor of boys' well-being. An R square equal to 0.321 ($F=11.233$, $p<0.01$) showed that bravery, leadership, zest, and humility strengths together explain 32.1% of the variance in well-being, and humility strength alone explains 3.6% of the variance. The regression coefficient ($\beta=-0.215$, $p<0.01$) showed that humility contributes negatively to boys' well-being.

Citizenship strength emerged as the last predictor of boys' well-being. An R square equal to 0.351 ($F=10.183$, $p<0.01$) showed that bravery, leadership, zest, humility, and citizenship strengths together explained 35.1% of the variance in well-being, and zest strength alone explained 3% of the variation. The regression coefficient ($\beta=0.216$, $p<0.01$) showed that citizenship strength contributed positively to boys' well-being. Figure 1 shows the graphical presentation of predictors of boys' well-being.

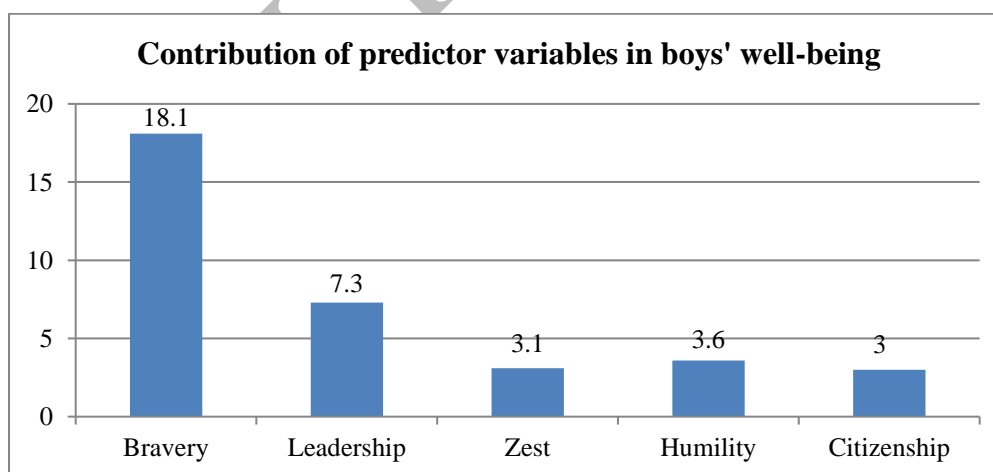


Figure 1. The contribution of predictor variables on boys' well-being

Table 3 shows that two character strengths (zest and honesty) are predictors of girls' well-being. Regression analysis of girls' data shows that zest strength is the strongest predictor of well-being ($F=45.419$, $p<0.01$). The coefficient R is 0.563, and the R square change (0.317) showed that zest strength explains 31.7% of the variance in well-being. The regression coefficient ($\beta=0.563$, $p<0.01$) showed that zest strength contributes positively to girls' well-being.

Honesty strength emerged as the second and last predictor of girls' well-being. An R square equal to 0.349 ($F=25.967$, $p<0.01$) showed that zest and honesty strengths together explained 34.9% of the variance in well-being, and honesty strength alone explained 3.2% of the variance. The well-being of females was negatively significantly impacted by honesty strength, as indicated by the regression coefficient ($\beta=-0.179$, $p<0.01$). Figure 2 shows the graphical presentation of predictors of girls' well-being.

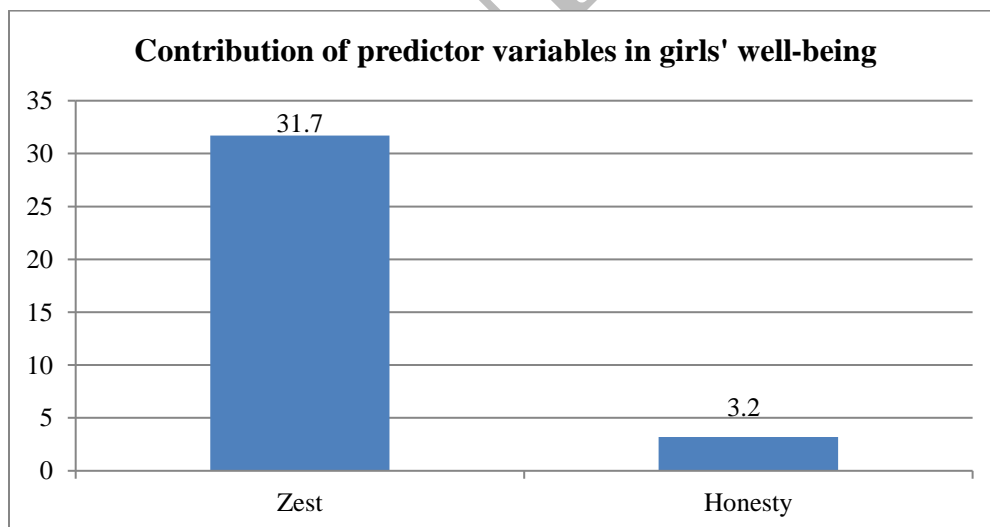


Figure 2. The contribution of predictor variables on girls' well-being

Discussion

The purpose of the present research was to examine the correlation of students' character strengths with well-being and to determine whether character strengths predict well-being. The data collected from students was analyzed using Pearson correlation and stepwise regression analysis. H1: There would be a significant relationship between character strength virtues and well-being. The results of the correlation analysis showed that character strength virtues had a positive, significant correlation with almost all dimensions of well-being (positive emotions, relationships, meaning, and accomplishment); only the engagement dimension of PERMA had no significant correlation with any of the virtues of character strength, but it was positively associated with all character strength virtues [41,42]. Stahlmann et al. [45] reported comparable findings in their investigation. They discovered that personality traits predict engagement in a moderate but consistent way. H2: Character strengths would be the significant predictor of the well-being of boys and girls.

Finally, based on regression analysis, it was found that different character strengths play a role in predicting boys' and girls' well-being. Five predictors of boys' well-being (bravery, leadership, zest, humility, and citizenship) and two predictors of girls' well-being (zest and honesty) were found. The strengths of bravery, leadership, and citizenship positively predict boys' overall well-being, which in turn means that boys who have these strengths will have better well-being. Kabaki and Ergene [46], in their study, have supported "citizenship, leadership, and zest strengths as predictors of well-being". They conducted a study using the Values in Action Inventory of Strengths for Youth, Adolescent Subjective Well-Being Scale, The Student Resiliency Scale, and Personal Information Form on 733 adolescents from 9th to

12th grade to assess the significance of character strengths in vital measures of positive youth development and found that seven character strengths (hope, gratitude, love, forgiveness, enthusiasm, perspective, and citizenship) predict subjective well-being, and 11 character strengths (self-control, curiosity, leadership, forgiveness, zest, social intelligence, love of learning, originality, perspective, hope, and perseverance) predict resilience. The character strength of zest emerged as a moderate positive predictor of overall well-being for both boys and girls. Some researchers have found in their studies that zest strength plays an important role in predicting well-being (Tehranchi et al. [27], Kabaki and Ergene [46], Proctor et al. [47]). Proctor et al. [47] found that the character strengths of zest and hope predict subjective well-being. Humility strength negatively predicts the overall well-being of boys, and honesty strength negatively predicts the well-being of girls [48]. Fine [48] found that humility (-0.08) and honesty (-0.07) negatively correlated with well-being. Character strengths accounted for approximately 35% of the variance in well-being for both. Gender-wise analysis was conducted because research suggests that boys and girls may differ in how they express and benefit from character strengths. The results showed that bravery, leadership, humility, zest, and citizenship predicted boys' well-being, while zest and honesty predicted girls' well-being. Zest was a common positive predictor, while humility (boys) and honesty (girls) had negative associations with well-being.

Conclusions

Based on the findings, it can be said that character strength virtues have a significant relationship with well-being, and they emerged as predictors of the well-being of both boys and

girls. Bravery, leadership, zest, and citizenship strengths positively predict boys' well-being, and zest strength positively predicts girls' well-being. Humility was found to be a negative predictor of boys' well-being, and honesty was found to be a negative predictor of girls' well-being.

Implications of the study

- Strength of character not only makes students healthier, happier, and more socially connected, but it also helps them do better in school and at work.
- This helps students become more self-aware, which leads to positive relations with others and further leads to better well-being.
- Character strengths serve as those crucial influences that help individuals to embrace the positive and navigate their struggles.
- Promoting virtues like zest, bravery, and honesty can improve emotional resilience in adolescents.
- Gender-specific interventions can be designed, as boys and girls benefit from different character strengths.
- Integrating character strength education into school curricula may boost academic and personal development.
- The findings offer practical insights for educators, parents, and counsellors to foster strengths-based growth in youth.

Limitations of the study

- Self-report questionnaires were used to collect data, which may have been influenced by social desirability or inaccurate self-perceptions.
- The study's focus on a small set of adolescents may limit its applicability to larger or more diverse populations.
- The cross-sectional research design does not prove causation between character strengths and well-being, as it only captures correlations at a single point in time.

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Artificial intelligence (AI) was not used in the creation of the manuscript.

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