

Mapping the Nomological Network of Adolescent's Virtues: What Doesn't Correlate and Why It Matters

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Abstract—While adolescents' virtues are often assumed to form a unitary "positive character," nomological network analysis is required to test this assumption. Mapping these boundaries allows policymakers to personalized interventions and allocate resources to virtue-specific programs, ensuring that adolescents develop a complete rather than lopsided positivity profile. Adolescents' virtues can be conceptualized as the eight attributes of the Positivity Quotient, i. e., Kindness, Honesty, Gratitude, Optimism, Lifestyle, Resilience, Eloquent Communication, and Cultural Values. It is a critical and logical intervention to determine whether these virtues are correlated with each other or are independent of each other's existence. The study was conducted on 214 school and college-going adolescents using a random sampling method. The assessment tool used was the Positivity Quotient Scale by Dr. Rinita Jain. Pearson correlation analysis of the eight Positivity Quotient virtues (N = 214) revealed that the constructs were largely independent. Only 4 of 28 inter-correlations reached statistical significance, all in the weak range ($r = .150$ to $.265$). The strongest relationship emerged between Resilience and Optimism ($r = .265$, $p < .001$), which suggest that there is a small shared variance equivalent to 7%. indicating that resilience requires optimistic attitude. Overall, the pattern of independence indicates that the Positivity Quotient is multidimensional implying distinct presence of traits rather than unitary. Intervention programs targeting one virtue cannot assume transfer effects to others, necessitating virtue-specific resource allocation.

Index Terms—Adolescents' Virtues, Positivity Quotient, Mapping, Nomological Network, Correlation, Multidimensional Independence.

I. INTRODUCTION

Adolescence is a phase characterized by transition from childhood to adulthood. This is a mediation phase which represents an important growth stage defined by substantial cognitive, emotional, social, and moral

transformation. These include 13-19 years of age group. They act as a catalyst for developing sound mental health enabling them to sail through the difficulties of life. During this phase, individuals begin to establish personal values, develop social identities, and cultivate psychological resources that contribute to long-term health. Positive psychology has increasingly emphasized the importance of character strengths and virtues in facilitating healthy development among adolescents.

Virtues such as positivity variables including kindness, gratitude, honesty, optimism, resilience, eloquent communication, healthy lifestyle practices, and cultural values are widely regarded as protective factors that promote psychological adjustment and social competence. These strengths are often collectively referred to as indicators of positive functioning and thus assumed to contribute to an individual's overall positivity profile.

Despite this assumption, an important conceptual question remains largely unexplored: Do positive virtues naturally co-occur within individuals, or do they function as distinct and relatively independent psychological dimensions? Many educational and mental health interventions are designed under the premise that enhancing one positive characteristic will automatically influence other positive traits. However, such assumptions need to be proved with empirical evidence.

The concept of a nomological network was originally proposed by Cronbach and Meehl (1955) which explains a useful framework for verifying relationships among various traits assumed theoretically. Researchers map a nomological network in order to determine whether they have a meaningful connection or work independently even if their conceptual domain remains same.

The concept of Positivity Quotient (PQ) developed by Dr. Rinita Jain (2024) explains adolescent positivity through eight virtues/ traits: i. e. Kindness, Honesty, Gratitude, Optimism, Lifestyle, Resilience, Eloquent Communication, and Cultural Values. While each virtue holds a positive value in adolescent's life still it remains doubtful whether these virtues work as unified construct or are independent in functioning.

The present study aims to examine the correlations among the eight virtues of the Positivity Quotient. Understanding their correlated relationships will give an important implication for theory as well as provide inputs for assessment, clarity for intervention design, improving the educational policy.

1.1 Positive Psychology and Character Strengths

Positive psychology enables individuals to understand the various factors that helps people to build their life out of difficulties they are going through. The focus changes from the sole concentration on difficulties to recognition of strengths, virtues, resilience and wellbeing.

Building Character with strengths are required with enduring positive qualities so that the individual works effectively and leads towards satisfied life. It is proved through research evidence that strengths like gratitude, optimism and resilience is outcome of sound mental health which in turn reflects in better academic performance and improved interpersonal relationships.

However, it is still not evident through positive psychology literature that all strengths develop simultaneously. It is more reflective of individual's experiences, social belongings, and learning opportunities.

1.2 Nomological Network Theory

A nomological network theory explains the relationships between various theoretically related constructs. According to Cronbach and Meehl (1955), verifying correlations among variables helps obtaining construct validity and thus specifies the structure of psychological phenomena.

If positive traits together present a unitary construct than it is expected that they have substantial positive correlations. On the other hand, weak or absent correlations would imply that each virtue has a separate and a distinct psychological dimension.

1.3 The Positivity Quotient Framework and assumed interrelatedness

The Positivity Quotient proposes eight virtues as indicators of adolescent positivity:

A. Kindness

Kindness is the tendency to demonstrate empathy, compassion, and helpfulness toward others. It is assumed that it acts as behavioral bridge that initiates and is multiplied with gratitude, empathy, spirituality, optimism, low materialism and life satisfaction, they all together build a positive system that supports situational harmony.

B. Honesty

Honesty is commitment to truthfulness, integrity, and ethical behaviour. It generally filters the presence of other traits and turns them more real, stable and naturally adaptive. Without honesty kindness can become like flattering, gratitude can become suppression and optimism looks like denial.

C. Gratitude

Gratitude is recognition and appreciation of positive experiences, relationships, and opportunities. It is assumed that it acts like a connector and necessary for other traits to work. It takes input from the other traits and converts it into emotional stability and social harmony. It's often the outcome trait that shows the system is working.

D. Optimism

Optimism is the expectation that positive outcomes are possible despite challenges. It is like an engine supervising all other traits. It becomes resourceful through honesty, kindness, gratitude etc. and uses them when required in future. Without this the other traits cannot become active and despite of their presence will be found in passive state only.

E. Lifestyle

Lifestyle is engagement in healthy habits that support physical and psychological well-being. Lifestyle is surely an outcome variable of the Positivity Quotient. So, assumption clearly states that a life high in honesty, kindness, gratitude, empathy etc. produce healthier ways of dealing with life making life stable with higher goals and satisfaction.

F. Resilience

Resilience is the ability to adapt effectively and recover from adversity. This is like life taking stress test of positivity. The negativities can take towards anxiety, loneliness, depression etc. Resilience acts like a bouncer to be back with life. The other 7 traits of positivity quotient are the resources without which resilience gets subsided. So, it is assumed that honesty gives clarity, kindness gives support, gratitude gives energy, optimism gives direction and healthy lifestyle gives the baseline to recover to.

G. Eloquent Communication

Eloquent communication is the capacity to express thoughts and emotions clearly and effectively. This is the bridge trait. It is assumed that internal traits like honesty and optimism turns them outward to speak eloquently. So, it's often the mechanism that translates positivity into better relationships and crisis support.

H. Cultural Values

Cultural values are the respect for traditions, cultural identity, and social responsibility. It can be taken as context while other 7 traits are the skills. It is assumed that if the culture supports honesty, kindness etc., those traits are easier to live out and becomes less draining yet if culture conflicts with them, the burning out becomes essential to live positively. So, it is said that for a better lifestyle, it is important the other traits to be value congruent., also aligning personal positivity traits with cultural norms or in other words building micro cultures like family and friend's groups that support them.

While it is assumed that these virtues collectively represent positive functioning, empirical evidence is necessary for determining whether they are interconnected or independent dimensions. Assumptions might be important to understand the truth, yet they cannot be automatically representing truth. They can be the wishful thinking or the personal experience, beliefs and the limited information which carries biases or gaps. So, empirical evidence matters to test those assumptions against observable, measurable reality instead of just accepting them. Through this study we like to gather data, checking the actual outcomes of the real world, confirming the truth, correcting the mistaken beliefs and making decisions. Though both the assumed truths and empirical evidence are important, to generate ideas

and empirical evidence to verify them. This prevents confusions on feeling what might be truth and what is truth.

1.4 Objectives of the Study

The objectives of the study can be the following:

- To examine the interrelationships among the eight virtues of the Positivity Quotient.
- To map the nomological network of adolescent virtues.
- To determine whether the Positivity Quotient represents a unidimensional or multidimensional construct.
- To identify implications for virtue-based intervention programs.

1.5 Hypotheses

- The virtues constituting the Positivity Quotient will demonstrate significant positive correlations with one another.
- The virtues constituting the Positivity Quotient will function independently and demonstrate weak or non-significant correlations.

II. METHODOLOGY

2.1 Research Design

The study uses a quantitative, descriptive-correlational research design. It is quantitative because numerical data were collected using standardized scale to measure the positivity quotient traits. It is descriptive because the study aimed to describe the current levels and patterns of these traits in the sample, without manipulating any variables. It is correlational due to its primary goal which is to examine the strength and direction of relationships between variable. For e.g., how optimism, gratitude and cultural values relate to life satisfaction and resilience. This design does not imply causation, but it allows us to identify significant association that can inform theory and future experimental work.

2.2 Participants

The sample consisted of 214 school- and college-going adolescents selected through random sampling. Participants were taken from different educational backgrounds and represents various developmental stages within adolescence.

2.3 Instrument

Data were collected using the Positivity Quotient Scale, developed by Dr. Rinita Jain. The scale measures eight distinct virtues: Kindness, Honesty, Gratitude, Optimism, Lifestyle, Resilience, Eloquent Communication, and Cultural Values.

2.4 Results

The correlation analysis obtained 8 positivity traits revealed that they are independent of each other. Out of twenty-eight possible inter correlations, only four reached statistical significance. Even then, all significant correlations found were weak in magnitude, ranging from $r = .150$ to $r = .265$.

Among them, the strongest relationship found was between Resilience and Optimism ($r = .265$, $p < .001$), which revealed approximately 7% of shared variance. This shows that most of the traits demonstrated negligible or non-significant associations with one another, indicating that they are independent of each other.

Thus, the findings challenge the assumptions made according to which positive traits have a tendency to cluster together naturally and instead suggest that they are substantially holds an independent value among adolescent virtues.

III. DISCUSSION

Historically it is assumed with prevalent theories like Aristotle, Plato and the Stoics that all traits and virtues are dependent and embedded in each other and work in sync with each other as a single entity with Thesis of the unity of virtues. The theory predicts that one virtue does not have any significance until all virtues works together and thus a virtuous individual will be equally correct in all his dealings as his moral values and evaluative reasoning work as a whole like an integrated system than as a scattered piece.

Yet the findings of the present study provide important insights into the truth of structure of adolescent positivity. Defying the conventional assumptions, the results bring out the individual structure and suggest that virtues do not automatically co-develop and thus we cannot find them functioning as a construct having single entity.

The findings showing weak relationship between Resilience and Optimism can be explained theoretically and can be understood meaningfully.

Both constructs are future oriented and involves adaptive responses to challenges. Resilient individual's modest association can be explained as they often maintain optimistic expectations despite adversity.

However, the weak correlations show the overall pattern indicating that virtues such as kindness, honesty, gratitude, communication skills, and cultural values may emerge through unique developmental pathways which are distinct in its own ways. The strengths of each virtue may be influenced by experiences effected through environment, educational opportunities available, family practices done, and immediate social contexts.

The findings provide a conceptualisation of positivity which is multidimensional. Adolescents who might demonstrate high levels of one virtue may not necessarily demonstrate similar levels of other virtues. For example, an adolescent may be highly resilient and gets up after each setback but not particularly grateful and has less gratitude, or may possess respect for cultural values and shows strong connections without having advanced communication skills and thus demonstrate fewer social skills.

Thus, it is implied that generalised approaches to character education should be challenged and it is imperative that interventions should target the individual virtue and framework should be such that there is place for each virtue to be taught and flourished.

IV. PRACTICAL AND EDUCATIONAL IMPLICATIONS

Significantly the findings have workable implications for schools, mental health professionals, policymakers, and the parents. Educational institutions should understand that assuming a single positive development program will not enhance all virtues simultaneously. Instead, interventions should be designed to target specific strengths individually.

Schools may benefit from implementing separate programs focusing on:

- Gratitude enhancement: in students through role plays, creating visual displays, writing thank you notes and engaging in mindful activities like gratitude walks and verbally expressing appreciation for the observed details.

- Resilience training: through awareness programs on cognitive re framing, goal setting, improving social emotional competence.
- Communication skills development: through promoting active listening, improving speaking through discussions and presentations, recording and reviewing for correcting the tone, pitch and pace. This also includes responding thoughtfully through using verbal affirmations that makes sense.
- Ethical decision-making: through respecting autonomy, taking decision taking beneficiary into consideration, minimizing harm to others and ensuring justice through their acts.
- Cultural awareness: through promoting open dialogues on diversity, opting for collaborations, encouraging cultural shows reflecting the taste and norms in a fairer light. This can also be done through integrating the resourceful documentaries to be blended with course curriculum of the students.
- Healthy lifestyle promotion: through healthy nutrition and dietary promotional campaigns. Introducing essential daily movement habits, limiting screentime, improving sleep to prevent fatigue and maintaining cognitive growth.

Mental health professionals can utilise the multidimensional nature of positivity to design individualised intervention plans based on specific strengths and deficits.

V. LIMITATIONS OF THE STUDY

- The cross-sectional design of the study limits study when findings reflecting virtues cause outcomes or outcomes causes virtue, or might be there is third factor which can explains the link.
- With adolescents there is high possibility of getting socially desirable responses on virtues like honesty and kindness which can inflate some correlations and mask others.
- Culture specific responses limits and thus generalisations cannot be done. So doesn't correlate here may not mean doesn't correlate everywhere.
- Developmental fluidity is prevalent in this stage so self- identification of adolescents are dynamic than static.

- Mediators and Moderators might be missing. There can be indirect correlation than direct correlation between the variables.

VI. SUGGESTIVE RECOMMENDATIONS

Based on the findings and limitations of the present study on the nomological network of adolescent virtues, the following recommendations are proposed for future research and practice:

- Adopt longitudinal designs: Future studies should employ longitudinal or cross-lagged panel designs to understand the developmental trajectories of virtues and to establish temporal precedence. This will help clarify whether relationships among virtues are stable, reciprocal, or change across adolescence, rather than relying on cross-sectional correlations.
- Use multi-informant and multi-method approaches: It is imperative that adolescents have tendency to answer with social desirability factor and thus have self-report bias, so to reduce this the data should be taken from parents, peers, teachers and all those are closely related to understand the behavior issues. This will act as a reliable and valid mapping of the virtues to be measured and perceived.
- Importance of cultural and contextual validation: Culture specific scales should be given importance so that the experiences can be captured and needless mismatches doesn't occur due to extreme contextual differences.
- Investigate mediators and moderators: As the findings are suggestive of no or weak correlations between the variables, it is important to investigate the role of intervening variables. The future research should also focus on mediators like regulation or social support and moderating factors such as gender, SES, or school environment, to build a strong theoretical model.
- Inform targeted interventions: It is needed that interventions should target each virtue individually as not all good qualities are linked to each other. For example, if we want to make students more optimistic, we may still need a separate activity to help them become resilient.

Implementation of these recommendations will surely strengthen the validity of the nomological network and

this further make findings more applicable for educators, counselors, and policymakers who wish to work with adolescents.

VII. CONCLUSION

The present study will be contributing for literature enhancement on adolescent becoming positive through analyzing the nomological network of the Positivity Quotient. The findings clearly depicts that adolescent virtues are largely independent variables with some overlaps found among dimensions. The results challenge the assumptions that virtues naturally collide with other rather proves that positivity is multidimensional. Thus, it implies that educational, psychological and policy interventions should not consider generalized strategies and programs for positivity enhancement rather design virtue specific approaches. This will promote a comprehensive development of adolescents with balanced personality growth and strength integration.

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