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A STUDY ON THE SALUTOGENIC APPROACH TO YOUTH ANTI-DRUG PREVENTION FOCUSING ON PSYCHOLOGICAL HEALTH AND PERSONAL RISK FACTORS

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SUMMARY

The issue of youth substance abuse persists as one of public health concern, and the current strategies targeting adolescents through messages related to danger and deficit frames have proven inconsistent in terms of effectiveness in the long term. This paper explores the theory of salutogenesis, which derives its origins from the model of health by Aaron Antonovsky, as another paradigm for youth anti-drug prevention, where the focus will be on the psychological well-being and the individual risks for young people. In contrast to the prevailing deficit-oriented approaches, the salutogenic model focuses on the resources for general resistance and the sense of coherence consisting of comprehensibility,

manageability, and meaningfulness, which determine the ways adolescents cope with difficulties, including the use of substances. This study provides a narrative review of theoretical and empirical literature published between 2010 and 2025 to examine youth substance use risks, protective resources associated with a high sense of coherence, and the integration of salutogenesis into school-, family-, and digital-based prevention programs. The following conceptual architecture of associations among risk exposure, generalized resistance resources, sense of coherence, psychological health, and behavior outcomes is put forward in an effort to integrate these variables under one explanation model, through process flow and comparative illustration examples. It is clear from the results of this research that psychological health acts as a proximal mediator between risk exposure and substance use susceptibility, and that efforts aimed at enhancing manageability, comprehensibility, and meaningfulness of people's life situations have a positive correlation with the reduction in substance involvement. Implications of the current study are discussed in relation to the field of prevention studies.

Key words: *salutogenesis, sense of coherence, adolescent substance use, psychological health, risk factors, protective factors, drug prevention.*

INTRODUCTION

Adolescent onset of substance use remains one of the most enduring risks for healthy adolescent development and development across the realms of cognition, relationships, and occupation during adulthood. The traditional paradigms of prevention have focused upon identification and removal of pathogenic exposures based on the danger, deficits, and risk messages. Though there is much validity in these perspectives, there is growing evidence to suggest that the risk-based messages have a limited impact unless they incorporate the psychological resources necessary to cope with adversity.

Another orientation can be provided by the salutogenic approach to health, which was developed in the field of medical sociology and then expanded further in the field of contemporary health promotion research [1][3]. Instead of addressing the problem of what makes people sick, the salutogenic approach deals with the problem of what creates health and focuses on generalized resistance resources (GRRs), which help individuals deal with tension and achieve "health-ease" position along the health-disease continuum [22]. An important element of the salutogenic approach is the sense of coherence (SOC), defined as a global orientation that includes comprehensibility, manageability, and meaningfulness [21].

When applied to adolescence, salutogenic theory transforms anti-substance-use prevention from simply avoidance of risks into development of psychological health. Adolescents perceiving their situations as understandable, believing themselves capable of handling the demands of life, and finding their involvements meaningful seem less inclined toward using substances as a means of coping; there are empirical data on the relationship between high sense of coherence and lower rates of tobacco, alcohol, and cannabis use during adolescence and young adulthood [5][23]. On the other hand, vulnerability to substance use among adolescents is a result of interplay of numerous individual risks factors, such as impulsivity, lack of emotional regulation skills, low self-esteem, and early adversity, combined with family and community environment characterized by poor supervision, family conflicts, and peer substance use [8].

However, the distinction between deficit-oriented risk models and salutogenic frameworks is not a binary choice. Personal risk factors and psychological resources of good mental health can be found to co-exist and influence one another in the same developmental process, and a full understanding of the risk of substance abuse among young people could well demand the consideration of both. This is what the current paper attempts to do through the integration of personal risk factor research and salutogenic theory.

Key Contributions and Objectives

The contributions of the current study include three parts. The first one is that literature on personal, familial, and contextual risk factors is combined with the literature on salutogenic theory which, so far, has been developing on its own within the prevention research field. The second contribution is in the proposal of an integrative model in which generalized resistance resources and sense of coherence are seen as mediating variables between risk exposure and vulnerability to substance use. Thirdly, current

school-, family-, and technology-based prevention interventions are examined in terms of their conformity to salutogenic approach. As a result, the specific goals of this study include (a) identification of personal and contextual risk factors related to vulnerability to adolescent substance use, (b) exploration of protective and resilience-related resources that are associated with sense of coherence, and (c) assessment of the extent to which the salutogenic-consistent approach is incorporated in current prevention interventions.

To guide this investigation into the salutogenic framework for youth anti-drug prevention, four central research questions were formulated:

- RQ1: How do individual, familial, and contextual risk factors intersect to influence adolescent vulnerability to substance use?
- RQ2: What specific Generalized Resistance Resources (GRRs) foster a high Sense of Coherence (SOC) and build psychological resilience in adolescents?
- RQ3: To what extent does psychological health act as a proximal mediator between risk exposure and substance-use susceptibility?
- RQ4: How effectively do current school-, family-, and technology-based prevention programs align with and operationalize salutogenic principles?

The paper is segmented into seven parts. Section 1: Introduction deals with the research background, objectives and contributions. Section 2: Literature Review covers salutogenic theory, risk factors, protective factors and methods of prevention. Section 3: Proposed Conceptual Architecture covers the conceptual architecture. Section 4: Narrative-Synthesis Procedure covers the methodology of literature review. Section 5: Illustrative Visualization covers the evidence representations. Section 6: Discussion covers interpretation of findings and implications. Section 7: Conclusion covers the contribution, limitation and future work.

LITERATURE REVIEW

Salutogenic Theory and the Sense of Coherence in Adolescence

Health is seen as a continuum in the salutogenic approach, with movements on the continuum being controlled by access and deployment of generalized resistance resources [1]. Sense of coherence, which is the key variable in the model, consists of three dimensions: comprehensibility, the level at which internal and external stimulation appears to be organized and predictable; manageability, the availability of resources needed to cope with challenges presented by these stimuli; and meaningfulness, the extent to which life challenges are seen to be worthwhile. Textbook approaches to the model point out that sense of coherence is not a coping strategy per se but an orientation towards resources.

Modern iterations of salutogenesis have suggested that more attention needs to be paid to the process through which this construct develops throughout the life span, ways in which a salutogenic approach could be implemented to enhance the construct, and the potential applicability of the construct outside the health context to areas such as education [22]. One of the developmental periods that have been highlighted for their sensitivity in terms of developing sense of coherence is adolescence.

The research works conducted concerning sense of coherence and substance abuse have mostly agreed on this aspect. It has been established that sense of coherence predicted low tobacco and alcohol consumption among German adolescents in ten years; however, the impact on cannabis use appeared to be mutual [5]. In another systematic review and meta-analysis that was carried out on adult population, it was found that sense of coherence had high correlations with the decreased chances of alcohol consumption, even when taking into account demographics and socioeconomic confounders. The research works that were conducted to study the concept of sense of coherence during and after the

coronavirus pandemic have shown high correlations between school-belongingness and psychosomatic stress measures and sense of coherence among Japanese secondary school students.

Overall, the body of theory and evidence outlined above provides reason to consider sense of coherence not only as an associate of substance use but as a mechanism by which more broadly defined risk and protective factors may affect adolescents, a question considered below in the subsections that follow.

Personal and Contextual Risk Factors for Adolescent Substance Use

There is an extensive body of research detailing risk factors that influence adolescent substance abuse both personally and socially. A systematic analysis of 22 quantitative studies revealed that individual level risk factors include impulsivity, rebelliousness, emotional regulation difficulties, and religiousness, alongside maltreatment, psychopathology such as conduct disorder and major depressive disorder, and greater drug accessibility [4]. At the familial level, it was found that risk factors included prenatal smoking by mothers, poor maternal psychological control, low parental education, inconsistency in supervision, and having family members who use substances, while peer affiliation with substance abusers at the community level was an important risk factor.

Non-Western literature based on family-centered review supports many of these results but through culturally determined pathways. A cross-cultural family factors analysis between Iran and more prosperous nations in relation to adolescent substance abuse problem pointed out that a history of childhood abuse, parental or sibling addiction, marital discord, lower socio-economic status, and indulgent/permissive or inconsistently applied parenting styles are significant determinants of the behavior, along with other individual determinants like attention deficit hyperactivity disorder symptoms, depression, anxiety, and low self-esteem. In another systematic review conducted among Iranian adolescents, risky sexual behavior, drug abuse, and drinking were shown to have common socio-environmental determinants [14].

Early developmental adversity is another well-substantiated pathway of risks. It has been demonstrated that adverse childhood experiences, including abuse, neglect, and family dysfunctions, affect the neurodevelopmental, emotional, and stress responses of individuals such that their vulnerability to developing problematic use of substances as an unhealthy coping mechanism is increased [13]. A systematic review and synthesis of interventions for traumatized adolescents and young adults also indicated that prevention and treatment programs should take into account the impact of early life experiences on vulnerability to substance use as opposed to viewing substance use in isolation from other problems. In support of this evidence, a systematic review that focused on young adults demonstrated that most of the studies reviewed revealed significant positive associations between exposure to adverse childhood experiences and alcohol and/or drug use in young adulthood. Poor self-regulation and maladaptive coping were proposed as potential pathways explaining these associations [15].

The convergence of risk factors in individual, family, and community context in these literatures shows that vulnerability to substance use among adolescents is never the product of one factor alone. Rather, it is an accumulation of risks at different levels of ecology, which aligns with the conceptual framework of person-in-environment theory of adolescence, and forms the basis from where the protective literatures discussed below can be assessed.

Protective Factors, Resilience, and Generalized Resistance Resources

Opposed to this literature on risk factors is the literature looking at the factors that help adolescents resist the temptation of using substances despite being in difficult circumstances. Research done prospectively, following up on children born to alcoholic and non-alcoholic parents till mid-adolescence, revealed that resilience – that is lack of substance use in spite of problems with alcoholism among parents – was linked with low levels of paternal irritation and emotion regulation in early childhood [10].

Norwegian studies that have examined negative life events and resilience have reported that goal orientation, self-confidence, family cohesion, and social support have a protective-stabilizing relationship with substance use problems, with the protective effects becoming stronger as the degree of adverse experience increases [11]. In a similar study carried out in the same population, self-confidence and family cohesion were repeatedly found to be related to fewer depression symptoms after negative life events, with family cohesion being identified once more as an asset with cross-protective value across outcomes [12]. To this effect, a study on parental support and supervision during adolescence reported that both factors were protective against alcohol and tobacco use for all adolescents, regardless of age and gender [16].

Clinical research on resilience among individuals already engaged in substance-use treatment provides a complementary perspective on how protective resources relate to recovery rather than solely to onset prevention [6][7]. A cross-sectional study of patients with substance use disorder found that resilience and related psychosocial factors were meaningfully associated with relapse risk, suggesting that constructs implicated in onset prevention may also carry relevance for relapse-prevention programming [3].

Such results together suggest that resistance resources act on many ecological levels, namely individual, family and social, and that it is not each resistance resource alone, but their sum total that influences the adolescent's resilience toward substance abuse. Within the framework of the coherence theory, family cohesion, social support and constant parental supervision can all be seen as generalized resistance resources which facilitate the feeling of manageability and meaningfulness, while goal orientation and self-confidence possibly contribute to a greater sense of comprehension and control of life situations.

Salutogenic and Life-Skills-Based Prevention Interventions

The trend in preventive research has been toward the development of interventions which enhance psychosocial competence as opposed to hazard communication, which is quite aligned to the salutogenic approach irrespective of whether the salutogenic theory is used. A meta-regression analysis of 288 school-based prevention programs enrolling more than 430,000 individuals revealed that the effectiveness of such programs changed according to the developmental stage such that personal-competence enhancement was the most effective strategy for elementary age children, social norm-oriented information was the most effective strategy for early adolescents while universal programs were less effective in middle adolescents but could be made more effective in late adolescents [17].

According to a literature review and synthesis of the theory of positive youth development, these programs work through offering adolescents' affective connections and different experiences, which help in building self-regulatory skills and several positive attributes that protect them from substance abuse and violence [18]. This process is similar to the salutogenic process of resistance resources contributing to the sense of coherence, despite the lack of salutogenic terms in the positive youth development literature.

Digital life-skills training is an additional prevention modality, in line with salutogenic theory due to its focus on self-management, social skills development, and building skills to resist substances [2]. The pre-post evaluation of the mobile phone-based life-skills program in vocational school students revealed high acceptability of the intervention and positive effects on reducing problem drinking and smoking in the short term. In the follow-up cluster randomized controlled trial of the above-mentioned intervention, based on a study protocol, significant positive changes in alcohol and tobacco outcomes and perceived stress, as well as marginal effects on cannabis and social skills, were observed after six months. Follow-up of the same trial indicated sustained effects of the intervention on selected substance use outcomes [9].

Besides individual programming, prevention research has also explored the implications of locally sourced information on adverse childhood experiences for informing state- and community-level prevention efforts. A study employing local information on adverse childhood experiences and

substance use among youths and adults made the case for integrating trauma-informed approaches into prevention frameworks and not treat it as an additional clinical approach.

Taken together, the above-reviewed interventions reveal that programmes with emphasis on building skills of competency, self-regulation, social connections, and appropriate development of the programming have consistently better protective outcomes compared to programmes focusing exclusively on risks. This finding is consistent with the theory that enhancing comprehensibility, manageability, and meaningfulness, and not only danger, is a more resilient path to decrease substance-use vulnerability, which will be discussed further.

PROPOSED CONCEPTUAL ARCHITECTURE

Drawing from the findings of the previous literature review, a conceptual framework is offered whereby personal and contextual risk factors along with general resistance resources contribute to sense of coherence, which then affects psychological well-being and subsequent behavior (See figure 1 below). In the above framework, the personal risk factors like impulsiveness, low self-esteem and early adversity along with community and family risk factors such as lack of supervision and drug abuse among peers are considered input factors which, when not balanced by other factors, tend to decrease comprehensibility and manageability.

Sense of coherence is the proximal mediating process through which the balance between risk and resource exposure gets translated into an overarching orientation towards psychological health and well-being that encompasses coping skills, resilience, and life orientation. The psychological health, on the other hand, is related to two downstream constructs: decreased vulnerability to drug use initiation and maintenance of a health-ease pathway as a consequence of adaptive coping with life transitions. Feedback loops are incorporated in the model due to the fact that interventions to prevent the onset of drug use behavior (life skill training, school connectedness programs, family strengthening approaches, positive youth development efforts, digital and mobile coaching), apart from influencing downstream constructs, also reinforce sense of coherence.

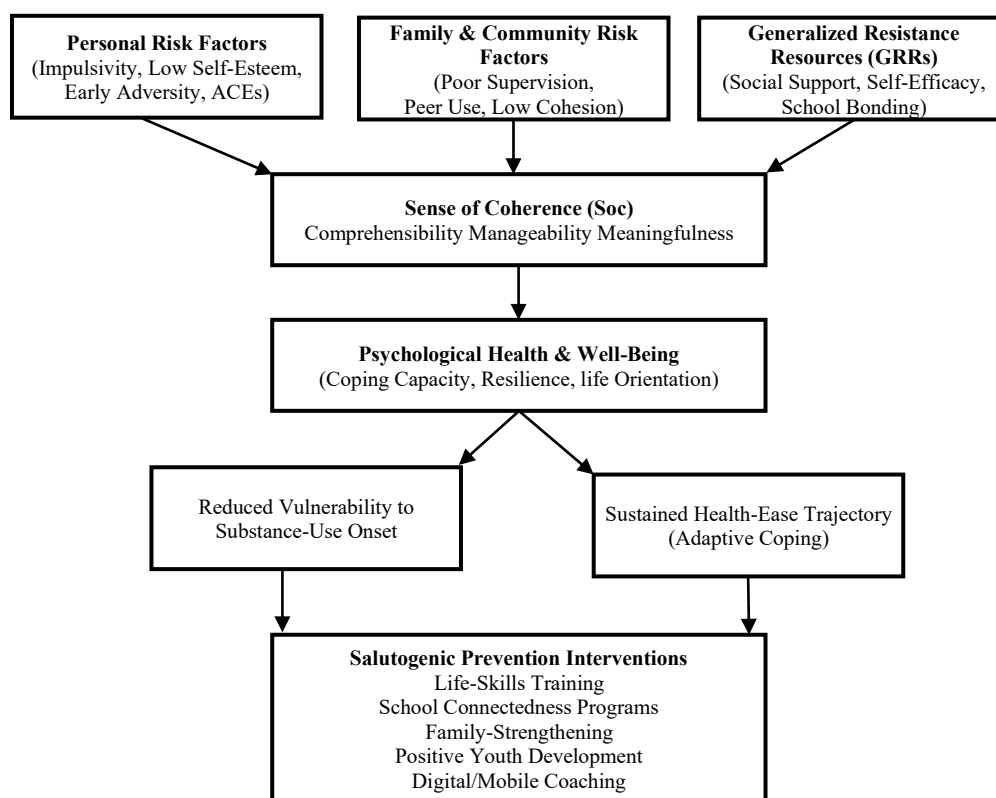


Figure 1. Proposed conceptual architecture linking risk exposure, generalized resistance resources, sense of coherence, psychological health, and behavioral outcomes within a salutogenic youth drug-prevention framework

NARRATIVE-SYNTHESIS PROCEDURE

While this research synthesizes global theoretical and empirical literature, the primary analytical scope targets adolescent and young-adult populations within secondary schools, family units, and digital intervention environments. The empirical studies evaluated in this synthesis draw from diverse international contexts—predominantly high-income regions (including North America, Western Europe, and East Asia) alongside emerging cross-cultural insights from Middle Eastern and developing nations. The "study area" for proposed intervention models encompasses institutional settings (such as school systems and community youth centers) and digital health platforms (including mobile life-skills coaching apps) designed for universal and targeted youth drug prevention.

This paper employs an integrative narrative-synthesis approach to construct a unified theoretical model rather than a systematic meta-analysis. Literature published between 2010 and 2025 was retrieved from Scopus and PubMed databases using key search strings including salutogenesis, sense of coherence, adolescent substance use, risk factors, protective factors, and prevention. Studies were included if they explicitly evaluated adolescent/young adult populations and addressed salutogenic constructs, ecological risk/protective factors, or preventive intervention outcomes. The sources were selected based on their relevance to either adolescent or young adult populations and on their involvement of salutogenetic theory, personal or contextual risk factors, protective factors, or prevention/intervention outcomes.

The retained sources were then coded thematically into four categories, each reflecting the topics outlined above under the literature review subheadings: salutogenesis and sense of coherence; risk factors; protective factors and resources that promote resilience; and interventions for prevention. The four categories were subsequently mapped on to the conceptual framework outlined in figure 2 below.

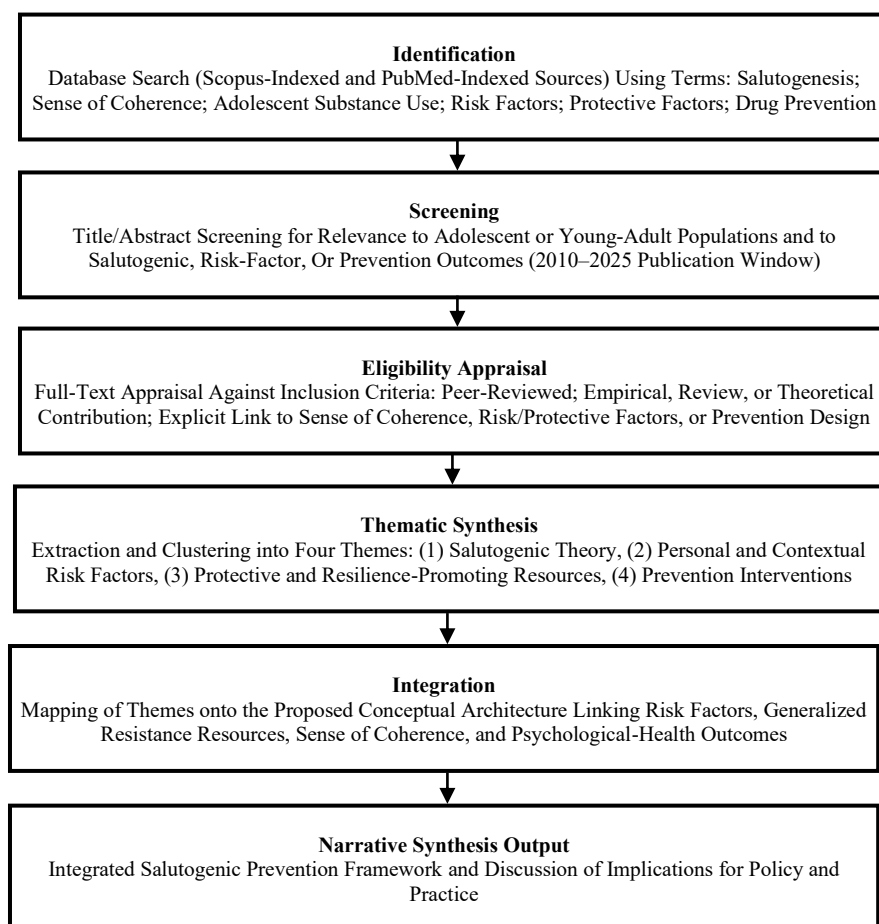


Figure 2. Narrative-review search and synthesis flow, from source identification through thematic integration

ILLUSTRATIVE VISUALIZATION OF SYNTHESIZED EVIDENCE

To synthesize the thematic findings visually, figures 3, 4, and 5 present conceptual and illustrative models based on qualitative aggregation of the reviewed literature. These figures serve as theoretical schematics to illustrate domain distributions, dimension profiles, and developmental trajectories, rather than empirical plots derived from primary quantitative data.

Figure 3 provides a summary of the distribution of risk and protective factor themes found within the reviewed literature, based on their ecological domains. In terms of risk themes, the individual domain is the most concentrated, but in terms of the balance between risk and protective factors, the school domain has a relatively favorable ratio.

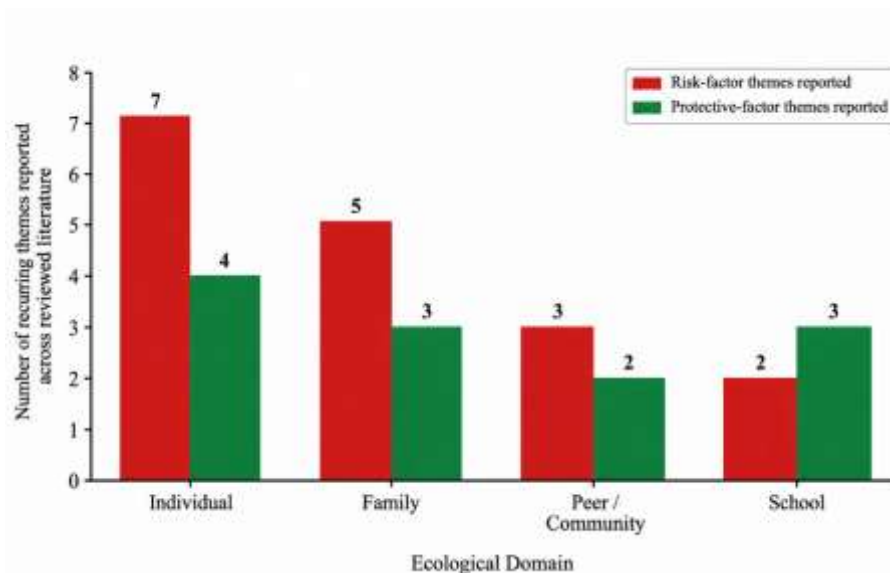


Figure 3. Qualitative thematic distribution of reported risk and protective factors across ecological domains (synthesized from reviewed literature, 2010–2025)

Figure 4 shows a conceptual representation of the difference between the sense-of-coherence dimension profiles of adaptive versus vulnerable youth, meant to show an illustration of the qualitative description of this difference presented by sense-of-coherence theory as opposed to the actual results from a particular study.

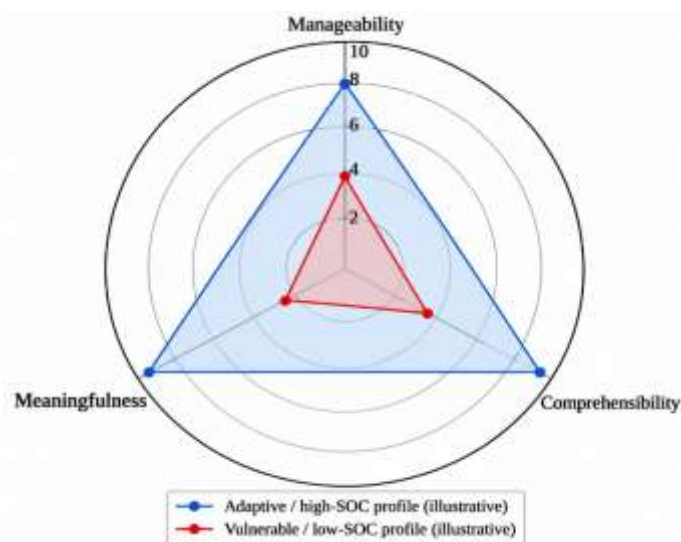


Figure 4. Conceptual comparison of comprehensibility, manageability, and meaningfulness across adaptive and vulnerable adolescent profiles (illustrative)

Figure 5 provides a schematic representation of the divergent developmental paths within the health-ease/dis-ease continuum by comparing a high resource path, an ignored risk path, and a salutogenic intervention path that begins midway through adolescence. This schematic is meant to represent the theoretical idea, as derived from the reviewed literature on interventions, that a declining developmental path may be reversed if a timely intervention involving resources is initiated.

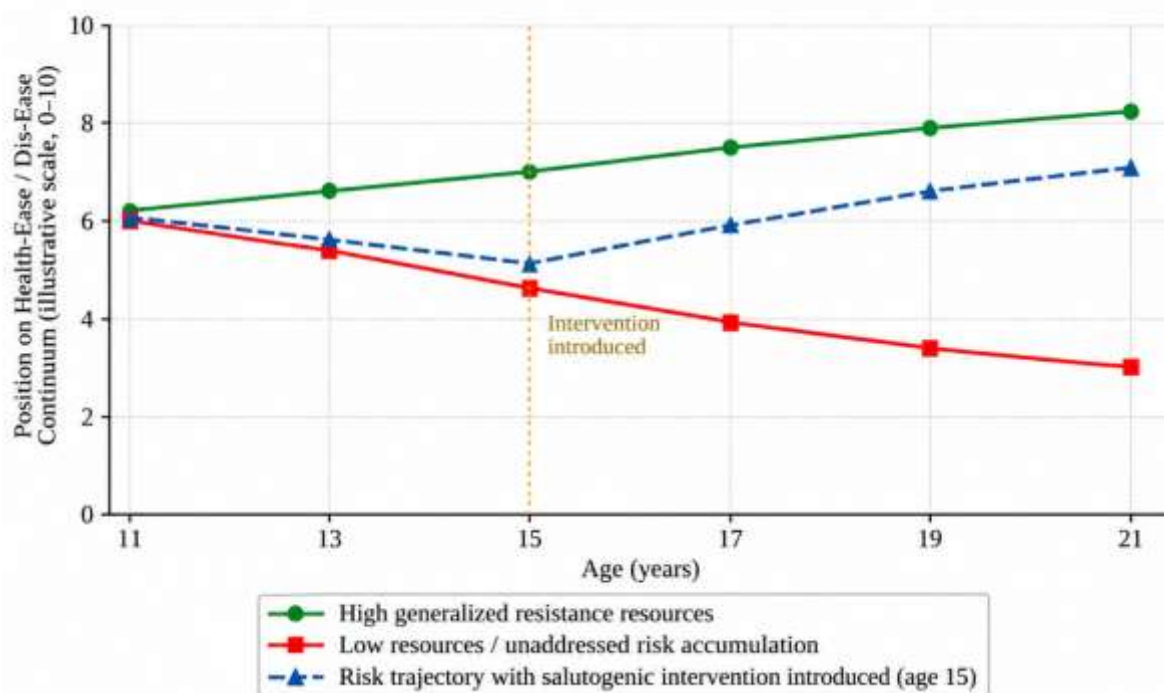


Figure 5. Conceptual trajectories along the salutogenic health-ease/dis-ease continuum during adolescence, contrasting high-resource, unaddressed-risk, and intervention-supported pathways (illustrative)

DISCUSSION

There are a number of important interpretive intersections between the reviewed literature and suggested architecture. To begin with, the repeated occurrence of such personal risk factors with emotion regulation corresponds very well with the dimensions of comprehensibility and manageability of sense of coherence: those young people who have problems regulating their emotions and understanding the situation cannot help feeling unable to manage the demands of life, which has been known for a long time as a substance use risk factor in the context of salutogenesis [2][5].

The second line of research examined above, relating to family cohesion, parental control, social support, and goal orientation [11][12][16] aligns with the generalized resistance resource aspect of the salutogenesis theory [1]. The connection is an indirect demonstration that interventions for promoting resilience in the areas of family and society function, at least in some ways, via the effect on the sense of coherence, although it was not the subject of examination in the studies themselves. Future research measuring sense of coherence in conjunction with the established protective factors could confirm this hypothesis.

Third, there is considerable evidence from the literature on intervention programming that those programmes which focus on developing competence and appropriate content are more consistently effective than those which focus on hazard information alone [17][18]. This trend is in keeping with the emphasis of the salutogenic approach on building resources rather than risk avoidance messages. Digital delivery of life skills interventions also shows that such salutogenic programming can be effectively scaled up from the traditional classroom setting [19][20].

Fourth, the trauma and adverse childhood experience literature [13][14][15] underscores a key boundary condition in terms of the salutogenesis prevention design: when exposure to risk is a result of early adversity, prevention strategies that focus on life skill development alone might not be sufficient unless there are also trauma-informed components addressing the impact on neurodevelopment and emotional regulation caused by early adversity. Consequently, the proposed conceptual architecture should be interpreted as a dynamic, adaptable framework rather than a universal protocol. Interventions addressing high-adversity populations must integrate specialized trauma-informed modalities alongside general life-skills training to effectively alter neurodevelopmental and emotional regulation outcomes.

There are several aspects of the current synthesis that must be pointed out. For one, the heterogeneity of the reviewed literature in terms of methodology, population, and culture prevents comparisons of the magnitude of the effects in the reviewed studies. The concept and figures (3, 4, 5) generated in this study are a product of qualitative review of the literature and not a product of an independent quantitative analysis of primary data gathered for this paper. Moreover, the sense-of-coherence literature examined in this paper has come mainly from high-income countries. More research needs to be conducted to test the cross-cultural applicability of the generated concept based on findings from lower- and middle-income country settings.

Regardless of these limitations, however, the fact remains that converging literatures on risk factor, protection factor, and interventions have identified constructs that can be considered as fitting into the salutogenic model of health. This allows the idea of psychological health cultivation to be treated as an integral part of youth anti-drug prevention programs.

Implications for Practice

Several practice implications arise from the above synthesis. Curricula on prevention for early adolescence might benefit from focusing on personal competence and emotional regulation topics in light of the predominance of risk factors on the individual level revealed above. Components aimed at strengthening family functioning, such as parental monitoring, developing communication skills, and fostering cohesion should be further explored as they consistently serve as protective factors according to various literatures. Programs involving school connectedness seem to provide a more advantageous ratio of protection over risks and might serve as an efficient avenue for intervention within an already existing structure of schools. In turn, digital platforms serve as a way to deliver salutogenic-oriented curricula to hard-to-reach populations.

CONCLUSION

In this paper, the salutogenic approach was explored as a model for youth anti-drug prevention, which includes the psychological health and risk factors of individuals into one cohesive whole. Unlike traditional preventive models that were designed predominantly around the issue of avoiding danger, the salutogenic approach focuses on the general resistance resources and sense of coherence, which influence adolescents' perception and interpretation of the stressors of being a teenager, which include availability to drug use. Systematic review of existing theoretical and empirical literature on the topic, which dates between 2010 and 2025, revealed common patterns across separate pieces of research. Specifically, personal and contextual risk factors were found to be concentrated in the area of problems in emotional regulation, unstable family environment and early-life adversity, while the protective factors were linked to stable family environment, good social support and parental control.

The theoretical model being developed, connecting risk exposure and general resistance resources with sense of coherence, mental well-being, and behavior patterns, presents a systematized approach that can be used to guide future empirical study, intervention development, and assessment of prevention programs. In spite of limitations inherent to the existing synthesis due to the heterogeneity and upper-middle class bias of the underlying body of research evidence, the consistency in the risk factor, protective factor, and intervention literature on which this analysis is based allows considering psychological health development as an essential component of youth anti-drug prevention efforts rather than an addendum to messages about risks. Future research involving measurement of sense of

coherence alongside the traditional risk and protective factors, along with intervention evaluation according to the salutogenic principles, seems like a logical next step in putting this model to work in prevention practice.

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