STRENGTH PROFILES OF YOUTH SEEKING MENTAL HEALTH SERVICES:

SHIFTING THE PERSPECTIVE FROM RISK TO POSITIVE ASSETS

WESTCOAST CHILDREN'S CLINIC

Strength Profiles of Youth Seeking Mental Health Services: Shifting the Perspective From Risk to Positive Assets

Authors: Danna Basson, PhD, MPP, Phuc T. Nguyen, David Perry, MA

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WestCoast Children's Clinic, located in Oakland, California, is a non-profit community mental health clinic that has provided services to Bay Area children since 1979. Our mission is to provide mental health services to youth and families; to train the next generation of mental health professionals and caregivers; and to improve services to children and families by conducting research on the impact of clinical services and utilizing findings to advocate on behalf of the children we serve.

Learn more at www.westcoastcc.org.

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The information presented in this series of papers is based on the insight and experiences of children and youth, who come to WestCoast Children's Clinic for services, and their direct service providers, who bear witness to clients' experiences every day.

The following individuals provided significant input and manuscript review:

Cinthya Chin Hererra, PsyD

Melinda Clemmons, MFA

Annie Dang

Kelley Gin, PsyD

Stacey Katz, PsyD

Koffi Korha, MA

Jodie Langs, MSW

Lenny Levis, PhD

Sophie Levis

Lyana Murrell, ASW

Erin Rosenblatt, PsyD

TABLE OF CONTENTS

LIST OF TABLES

EXECUTIVE SUMMARY

When working with youth exposed to toxic stress and trauma, providers often focus on mitigating negative outcomes. While the focus on problems rather than assets is understandable, it represents a missed opportunity for public systems and service providers to promote healing and thriving. In this study, we focus on youths' assets: the qualities and resources that make children resilient in the face of adversity and toxic stress. Our goal is to improve our understanding of strengths, further integrate youth and family assets into our service approach, and influence the public systems with which our clients interact. This work is analogous to our work examining trauma profiles, which has shown that combinations of traumatic experiences are uniquely associated with specific clinical outcomes. The same may be true for strengths. Particular combinations of strengths may be associated with specific outcomes. Some combinations of strengths may be more protective than others.

OBJECTIVES

Our objectives for this study are threefold, namely to:

1. To explore whether there are common patterns of strengths that occur together;
2. To understand how youth mental health needs are associated with strengths profiles; and
3. To examine whether these profiles are explained by demographic factors such as gender identity, ethnicity, and involvement with the foster care system.

METHODOLOGY

Study sample: 2,376 clients receiving community based mental health services at WestCoast between 2013 and 2017. All clients met criteria for Medi-Cal Early and Periodic Screening, Diagnostic, and Treatment (EPSDT). Just over half of our clients (55%) identify as female; most are young people of color; and most have experienced maltreatment or deprivation, with 63% having been involved with the foster care system.

Measure: We used the *Child and Adolescent Needs* and Strengths (CANS), a validated comprehensive instrument used widely in public systems, to assess the child's history of trauma exposures and trauma symptomology, behavioral and emotional health, risk behaviors, needs related to everyday life, internal and external strengths, and caregiver needs.

Data analyses: We used Latent Class Analysis (LCA), a person-centered approach, to identify distinct subgroups of youth with similar types of strengths. LCA helps us identify the more common patterns of strengths in the population of kids WestCoast serves.

KEY FINDINGS

We identified five strength profiles among youth seeking mental health services, resulting in the following groups:

1. *All Strengths* (29% of youth; N = 689). Youth in this class were the most likely of all five groups to report the presence of each of the strength indicators we measured.
2. *Skilled and Optimistic* (19%, N = 451). Besides the All Strengths group, this group is the only other group with all of the skill-based assets we measured, including coping, social skills, and self-reliance. Youth in this group also have a high probability of demonstrating optimism, with 92% likely to report this as a strength, the highest of all the groups.
3. *Resourced and Relational* (22%, N = 523). This group presents with most of the strengths we measured. The only strengths they do not have are the skills, with less than 50% of youth in this group reporting coping, social skills, and self-reliance as strengths.

4. *Externally Resourced* (13%; *N* = 309). These youth only present with the external resource assets, namely resourcefulness and the support of their educational setting, but fewer than half report each of the other strengths.
5. *No Strengths Identified* (17%; *N* = 404). The children and youth in this group had low probabilities of having any of the strengths that we measured.

We found that the All Strengths and Skilled and Optimistic groups were equally associated with the lowest number of mental health needs, while the Resourced and Relational group and Externally Resourced group had higher needs, regardless of the number of strengths. Our findings suggest that the strengths we measured are not equal in their protective or promotive effects. Rather, the type and not just the number of strengths is related to the intensity of mental health needs. In particular, strengths that represent skills—coping, social skills, and self-reliance—are uniquely protective. On the other hand, being resourceful and having educational support may buffer against certain types of challenges, but these assets alone do not ameliorate the mental health challenges that young people with trauma exposure face.

We also find that sociodemographic factors are related to strength profiles. Girls are more likely than boys to be in the groups with skills and external resources than in the groups with relationship assets. With regards to ethnicity, Latinx, Multiracial and White youth do not differ statistically from African American youth with regards to strength profiles. Unsurprisingly, youth with a history of foster care involvement are more likely than those not in care to be in the profiles associated with higher needs. Remarkably, youth in foster care are more likely than youth not in care to be in the *Skilled and Optimistic* group. Though foster care may disrupt their relationships, these youth have skills and optimism that support their resilience.

CLINICAL AND POLICY IMPLICATIONS

By identifying which assets in combination provide more protective effects, our results provide some guidance to providers who want to incorporate strengths into their work. Since the type of asset appears to play an important protective role, this highlights the importance of the skills-based assets that are present among youth in the *Skilled and Optimistic* group. Coping skills help ameliorate the impacts of negative life experiences; social skills are key to making and maintaining healthy relationships that provide support during times of high stress; and self-reliance can be critical for youth whose relationships and family support are disrupted. Unlike traits, skills can be taught and practiced, and positive self-affect can be nurtured in a young person. If the ability to manage negative life experiences and form healthy relationships are critical for children who accumulate many adverse experiences early in their life, the fact that these assets are changeable has strong implications for practice. Our findings suggest that promoting these skills may be important to prevention programs that aim to protect children from the negative impacts of adverse experiences.

INTRODUCTION

The well-established science on how trauma undermines children's development has significantly impacted how policymakers and practitioners have responded to children and families living under stressful conditions. Interventions have emphasized preventing or reducing exposure to risk, diminishing what providers often perceive as individual and family challenges that contribute to impairments in children, and mitigating the effects of those challenges. This focus on the negative outcomes associated with childhood trauma and other adverse experiences is often at the core of efforts by practitioners and policymakers to reduce risk to children, especially children involved with multiple public service systems, such as child welfare and juvenile justice.

Though it is intended to help, this focus on problems often ignores the elements of human development that promote positive health and well-being. A strengths-based approach to working with children and families attempts to move beyond problem reduction or "the relentless pursuit of pathology" to actively promote health and positive development.[1] This perspective recognizes that children and families draw on internal and external resources to manage chronic or repeated stress, and that their skills and self-knowledge help address the challenges that children experience.[2]

This study explores strengths in children and youth receiving mental health services at WestCoast Children's Clinic (WestCoast). Our clients have experienced high levels of exposure to trauma. As a community mental health clinic that aims to improve the well-being of children and youth, WestCoast sees 1,500 youth each year who experience numerous adversities early in life. Viewing our clients holistically and not focusing solely on needs and challenges is central to our value of being youth-centered. The young people we support have varied life experiences before we see them, but most have experienced trauma, poverty, racism, and involvement with multiple public systems, such as child welfare, juvenile justice, and behavioral health care, among others. Additionally, youth have positive assets that allow them to cope with difficult circumstances, heal from trauma, and thrive.

In the first two papers in this series, we examined the challenges that youth experience: the patterns of trauma and the mental health needs that result. In this study, we focus on their assets: the qualities and resources that make children resilient in the face of adversity and toxic stress. Our goal is to improve our understanding of strengths, further integrate youth and family assets into our service approach, and influence the public systems with which our clients interact.

To that end, we explore whether there are common patterns of strengths that occur together, as understanding which assets occur simultaneously can help us tailor interventions for youth. This is analogous to our work examining trauma profiles, which has shown that combinations of traumatic experiences are uniquely associated with specific clinical outcomes.[3–5] The same may be true for strengths. Particular combinations of strengths may be associated with specific outcomes. Some combinations may be more protective than others.

The extant literature on strengths, also referred to as developmental assets, primarily relies on variable-centered approaches to examining strengths individually. This literature has shown that the presence of a strength supports healthy outcomes, a strength is diminished by negative experiences, and more strengths are better than fewer.[6–10] Yet very little attention has been paid to how assets are combined, especially among children living at the intersection of poverty, multiple trauma exposures, and child welfare system involvement. While strengths profiles have been examined in a general population sample,[6] this has not yet been done in a community sample of children with high trauma exposure.

Research has also shown that strengths promote resiliency in the face of adversity.[11–13] Furthermore, healthy development requires positive traits, skills, and resources at the individual, family, and community level.[14] Given the importance of strengths for building resiliency in the face of trauma, it is especially important to examine whether meaningful patterns emerge that can be used to inform resilience-building interventions for children exposed to significant adversity.

A second goal of this study is to explore how patterns of strengths are associated with mental health needs. Rather than treating the development of strengths as a unitary phenomenon—more is better than less—we are examining whether certain combinations of strengths

are associated with different mental health outcomes. Such an analysis provides program leaders, providers, prevention scientists, and policymakers with information about which strengths to target in treatment and where to invest resources to promote strengths in children. Our third goal is to understand how demographic variables are related to strength profiles. Understanding how ethnicity and gender are related to strengths can help us address the nature of disparities in the development of these assets.

DEFINING STRENGTHS AND STRENGTHS-BASED WORK

Strengths are assets that characterize an individual, group, or environment and that predict positive outcomes.[15] Possessing a talent, having a strong family identity, having a supportive educational environment, or living in a safe community are examples. Assets may be promotive, meaning that their presence has a positive impact on development regardless of a person's circumstances, or they may be protective, meaning they are especially beneficial in adverse contexts and help to mitigate risk.[6] Some assets serve both a promotive and a protective function.[15] For example, having a caring and responsive caregiver is a powerful resource under any condition, and is especially protective in the face of adversity.

Strengths-based work is more than recognizing the positive. Rather, a strengths-based approach is about leveraging the assets that children and families have in order to ameliorate the challenges they experience. Children and families often report frustration at being perceived merely as the sum of their problems, and experience the human services system as stigmatizing. Emphasizing strengths may shift the focus from a medical model centered on addressing the internal pathology in children and families, which is how families are often perceived, to the ways in which children and families survive in the face of challenges in their environment. The problem may be in the institutions and systems with which clients interact, not in the clients themselves. In this case, clients don't need help to fix themselves, but to adapt to the institutions, both formal and informal, that shape and constrain their lives. Rather than diagnosing a problem and its consequences, a strengths-based approach may involve validating and building on a client's capabilities to adapt to stressful circumstances, moving from pathology to healing. Operationalizing this into practice remains an ongoing challenge, especially for children whose context is characterized by chronic or repeated stressors, including poverty, abuse, violence, and oppression.[16]

A strengths-based approach to working with children and families has come to be a core value of the child welfare system in the United States, though it can be challenging to practice.[17] While different philosophical perspectives have been brought to bear on strengths-based work, it arises from a humanist point of view that asserts that "humans have the capacity for growth and change" and that children and families "are competent or have the capacity to become competent (page 2)".[2] Despite criticism that this premise places the onus of responsibility for problems and change on the individual or family,[18] the core principles of this perspective continue to be important in social work, including the centrality of relationships, empowerment and autonomy of clients, cultural competence, and centering the work on clients' priorities, among many others.[2, 18–20]

CLINICAL RELEVANCE OF STRENGTHS

Practitioners are certainly aware that health and well-being mean more than being free of problems and that healthy development requires positive traits, skills, and resources at the individual, family, and community levels. However, when working with children who face significant adversity, the challenges they experience often take center stage, especially when their needs are urgent. For children experiencing physical or psychological danger, the immediate need to establish safety supersedes most other considerations. Thus, despite being a core value, strengths-based work can be difficult to practice. Even in the absence of crisis or imminent danger, shifting the emphasis from a focus on problems to one that explicitly incorporates positive aspects of a youth's characteristics, skills, and resources can be challenging. A focus on pathology to the exclusion of factors that promote positive development inhibits our ability to improve well-being in children, especially among children who experience significant adversity. A better understanding of child strengths—how to leverage them in treatment and how to build new ones—is of vital importance to improving outcomes for vulnerable youth.

The research on strengths and strengths-based interventions is still emerging, but a promise of this line of inquiry is that strengths can be used to help youth manage and thrive through enormous life challenges. Recent evidence suggests that strengths can soften the impact of trauma. Strengths appear to be linked with lower levels of risk-taking behaviors and fewer emotional and behavioral needs.[8, 10, 21–24] Complex trauma exposure appears to reduce the availability of strengths, so children have fewer resources to draw on when they are most impacted by adversity.[10, 25, 26] Still, even children greatly impacted by trauma exposure and experiencing the negative impacts of trauma in multiple areas of their life have numerous strengths upon which to draw.[8, 24 ,26] These findings suggest that strengths and impairment are not mutually exclusive, nor are they opposite ends of the same continuum.[26]

Leveraging and building strengths can be a part of every child's development, including children receiving mental health treatment as a result of severe trauma exposure. In line with the philosophy of a strengths-based approach to social work, behavioral health interventions can help children build strengths to mitigate the challenges they experience and improve their well-being.[10, 25, 28–30] Additionally, it appears that working both with more robust and less prominent strengths is important, and that building strengths early in life and increasing a person's awareness of their own strengths can help individuals cope with life stressors.[30, 31]

Strengths also have an additive nature; the presence of more assets provides additional shielding against adversity over having fewer.[6, 7] Positive assets also exist and operate at multiple levels. Just as more strengths are thought to be better than fewer, the more contexts in which strengths are present—including the individual, family, school, community, and society—the more the effects of those assets are enhanced.[6, 7, 32] However, little is known about how strengths combine to provide a protective effect or how they shape or are shaped by experiences. In our previous papers in this series, we found that the types of trauma experiences and not just the number of traumas have an impact on youth outcomes. In this study, we are complementing this work by exploring whether the types of strengths and how they appear in combination matter in addition to the number of strengths.

STUDY METHODOLOGY

Our objectives for this study are threefold: 1) explore profiles of strengths experienced by our clients; 2) understand how youth mental health needs are associated with strengths profiles; and 3) examine whether these profiles are explained by demographic factors such as gender identity, ethnicity, and involvement with the foster care system. There are a multitude of strengths a young person might have, including interpersonal characteristics, such as their outlook on the future; relational strengths, such as strong family or peer relationships; and strengths related to their environment, such as having a supportive school system or safe community. Understanding the patterns and potential relationships among these strengths can provide important insights for clinical practice when working with children and youth who have experienced significant adversity early in life.

STUDY SAMPLE

Our sample for this study is the same as in our previous two papers in this series, namely WestCoast's 2,376 clients served between 2013 and 2017, all of whom met eligibility criteria for Specialty Mental Health Services (SMHS) under Medi-Cal's Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) benefit. EPSDT is a Medicaid entitlement benefit that provides coverage for a broad range of mental health services.

The demographic characteristics of our sample are described in Table 1. Just over half of our clients (55%) identify as female. Most are young people of color: 37% identify as African-American or Black; 31% Multiracial, 13% Latinx, 9% White, and 4% Asian and Pacific Islander. The youth included in this study range in age from 6 to 24 years; most are between ages 10 and 17, with the average age being 12.5 years. Most have experienced maltreatment or deprivation, with 63% having been involved with the foster care system. That is, they may be in foster care during or prior to receiving mental health services from WestCoast, or they may have had other contact with the child welfare system even if they did not formally enter foster care. The children and youth in our sample have experienced significant trauma, with approximately two-thirds experiencing two or more types of trauma. The most prevalent trauma

Table 1. Sample Characteristics and Distribution of Trauma Experiences (*N* = 2,376)

Gender	***N***	**%**
Male	1,055	44%
Female	1,317	55%
Others	4	0%
Race/Ethnicity	***N***	**%**
African American/Black	868	37%
Latinx	318	13%
White	205	9%
Multiracial	737	31%
Other Ethnicities[a]	248	10%
Foster Care Involvement	***N***	**%**
Yes	1,491	63%
No	885	37%
Age	***N***	**%**
6–12	1,093	46%
13–15	633	27%
16–17	449	19%
18+	201	8%
Cumulative Number of Trauma Types	***N***	**%**
0	429	18%
1	627	26%
2	565	24%
3	338	14%
4	225	9%
5+	192	8%
Trauma Indicators	***N***	**%**
Maltreatment		
Emotional abuse	452	19%
Neglect	700	29%
Physical abuse	460	19%
Sexual abuse	322	14%
Familial Factors		
Caregiving disruption	1,397	59%
Family violence	559	24%
Parental crimes	272	11%
Community Factors		
Community violence	252	11%
School violence	81	3%
Witness/victim of crimes	280	12%

[a]Other Ethnicities is a combined category of racial or ethnic backgrounds with small sample sizes, including Native American, Middle Eastern, Asian and Pacific Islander, and Unknown

exposure is caregiving disruption, with 59% indicating this experience.

MEASURES

To examine how strengths are related to each other and to mental health needs, we analyzed items from the *Child and Adolescent Needs and Strengths* (CANS) assessment.[33] The CANS is a validated comprehensive instrument used widely in public systems.[34] The CANS assesses the child's history of trauma exposures and trauma symptomology, behavioral and emotional health, risk behaviors, needs related to everyday life, internal and external strengths, and caregiver needs and strengths with a goal of increasing communication among stakeholders (including the client, their family, and the systems with which they interact).

The CANS serves as a treatment planning tool and a measure of progress in treatment. It is completed at baseline (within the first 30 days of intake), every six months, when there have been significant changes in the child's circumstances, and when treatment is terminated. For this study, we only used the initial assessment to focus on the experiences and needs that clients have prior to receiving mental health services at WestCoast. When a clinician completes the CANS, they supplement their clinical observation of the client with information from other sources, including interviews with the client, the client's caregivers, and other collaterals, such as representatives of the public systems in which the young person is embedded (e.g., social worker, teacher, or probation officer), with a goal of increasing communication and collaboration among these stakeholders.[34]

Each CANS item is rated on a four-point scale, with higher scores representing more evidence of a need or less evidence of a strength, thereby prompting the provider to address the need or strength item in the treatment plan. A score of zero = no evidence of a need or the presence of a well-developed strength; 1 = mild difficulty of a need that should be monitored, or a useful strength; 2 = the need interferes with daily life and requires action to address it, or the strength is a potential asset; 3 = the need is severe and requires immediate or intensive action, or no strength is identified. Scores of 2 or 3 generally indicate that an item is actionable and should be addressed in the child's treatment

plan, whether to ameliorate the need or to increase the strength. Unlike with needs, where only actionable scores are addressed in the treatment plan, in the case of strengths a provider may address areas where strengths are not present in order to build the asset, or they may address areas where strengths are present and accessible, in order to leverage those centerpiece strengths in treatment.

A young person must have the opportunity to express their strength and it must be acknowledged by others on their care team to be indicated with a score of 0 or 1 on the CANS. The absence of a strength does not necessarily imply a need. A strength score should not be interpreted as an objective measure of the child's strengths or lack thereof, but rather as a reflection of whether that strength has been identified by the child and their collaterals and can therefore be useful in the intervention. A strength should be seen as a property of a child or youth that is shaped or constrained by their environment. This is true of external strengths as well as internal strengths, such as optimism.

Indicators of Strengths. Strengths were ascertained using the CANS at the initial assessment of the child or youth. All of the strengths we measured have been identified in the literature as having promotive or protective effects and being important to resilience. That is, they have been shown to be related to positive outcomes and well-being after significant exposure to stress.[11, 13, 14, 35, 37] We classified a strength as present if a client had a score of 0 or 1 for that item, that is, the strength is identified as a centerpiece strength and is useful in treatment. The list of strengths, shown in Table 2 below, includes 11 assets across five different areas, or domains. The definitions of each strength item below come directly from the CANS:

Positive Identity Domain—Optimism: this item represents orientation towards the future and seeing positive aspects about oneself.

Skills Domain—Coping: a skill representing the child's ability to manage negative experiences.

Skills Domain—Social Skills: this item is used to identify a child's social skills, such as their ability to make and keep healthy friendships.

Skills Domain—Self-Reliance: a skill describing the child's ability to recognize their own internal strengths and use them in times of need to support their own healthy development.

Table 2. Distribution of Strengths (*N* = 2,376)

Strength Indicators	*N*	% of youth
Optimism	1,389	66%
Coping	1,164	49%
Social Skills	1,385	58%
Self-Reliance	1,407	59%
Resourcefulness	1,488	63%
Talents and Interests	1,331	56%
Spirituality	1,345	57%
Community Life	1,201	51%
Relationship Permanence	1,016	43%
Family Support	1,406	59%
Educational Setting	1,739	73%

Internal Resources Domain—Talents and Interests: these require external resources and may include hobbies, sports, and artistic talents that represent positive ways young people can spend their time, which also give them pleasure and a positive sense of self.

Internal Resources Domain—Spirituality: this strength represents the presence of beliefs that provide the child comfort and support. Absence of beliefs does not represent a need.

Internal Resources Domain—Community Life: a resource representing the child's connection to people, places, and institutions in their community. This item is often assessed by the degree to which the child is involved in community institutions, such as recreation centers, sports teams, and neighborhood groups.

Relationships Domain—Relationship Permanence: a relational asset referring to the stability and consistency of significant relationships in the child's life, including family members, other adults or peers.

Relationships Domain—Family Support: a relational asset referring to the presence of a sense of family identity, love and communication among family members as defined by the child.

Table 3. Distribution of Mental Health Needs (*N* = 2,376)

CANS Item	Actionable	Non-actionable	Missing
Adjustment to trauma	1,163	1,213	0
Affective/physical dysregulation	651	1,722	3
Anger control	546	1,568	262
Anxiety	1,151	1,225	0
Attachment difficulties	601	1,515	260
Avoidance	387	1,987	2
Conduct problems	91	2,283	2
Danger to others	157	2,217	2
Delinquency	90	2,284	2
Depression	1,115	1,001	260
Developmental functioning	94	2,282	0
Dissociation	182	2,191	3
Eating disturbance	43	2,071	262
Family relationships	1,276	1,100	0
Fire setting	18	2,096	262
Hyperarousal	543	1,831	2
Impulse control/ hyperactivity	476	1,531	369
Job functioning	81	2,293	2
Judgment	514	1,600	262
Legal difficulties	113	2,001	262
Living situation	559	1,448	369
Medical/health management	74	2,040	262
Numbing	257	1,857	262
Oppositional behaviors	358	1,649	369
Other self-harm	90	2,024	262
Physical management	47	2,329	0
Psychosis	85	2,289	2
Recreational functioning	548	1,566	262
Re-experiencing	218	2,156	2
Regression in behavior	96	1,911	369
Running away	259	1,781	336
School achievement	457	753	1,166
School attendance	140	1,070	1,166
School behavior	282	928	1,166
Self-injurious behavior	88	2,026	262
Sexual aggression	24	2,090	262
Sexual reactivity	65	1,186	1,125
Sleep	309	1,805	262
Social functioning	765	1,349	262
Somatization	28	1,224	1,124
Substance use	206	2,168	2
Suicide risk	123	1,991	262
Traumatic grief	508	1,866	2

External Resources Domain—Resourcefulness: an asset representing the child's ability to identify and use external or environmental resources to manage life.

External Resources Domain—Educational Setting: an asset reflecting system or institutional support, this item evaluates the nature of the school's relationship with the child and family and the level of support the child receives from the school.

Indicators of Mental Health Needs. Mental health needs are measured using 44 items from the CANS modules of Behavioral/Emotional Needs (11 items), Life Functioning (13 items), Risk Behaviors (11 items), and Symptoms of Trauma (9 items). We first identified whether each need was present for a child by counting the number of items that were actionable (have a score of 2 or 3). We then tallied the total number of needs. This score represents the client's cumulative mental health needs. The list of items is presented in Table 3 below and the full item descriptions are in Appendix A.

DATA ANALYSIS PROCEDURES

We used Latent Class Analysis (LCA) to address the three main objectives of this study. LCA is considered a person-centered approach that helps identify distinct subgroups of youth with similar combinations of strengths. This stands in contrast to variable-centered approaches such as regression analysis, which may better identify how strengths impact outcomes, or factor analysis, which aims to identify categories of strengths. Detailed information about our data analysis procedures is included in Appendix B.

We expect that strengths bundle differently in different types of individuals. Our focus is on identifying those bundles and understanding which youth are more likely to have which types of strengths. There is great heterogeneity in the experiences children have and in how kids are impacted by those experiences. Identifying distinct subgroups of children with particular clusters of strengths can help improve policies and practice for prevention and intervention when children are impacted by adversity. A potential implication of finding subgroups with common combinations of strengths is that strengths may be interrelated.

MAIN FINDINGS

Our analysis revealed five classes or subgroups of youth strengths, each of which is described below. Table 4 displays prevalence rates, or the estimated number of youth belonging to each of the latent classes. For example, 29% of youth (N = 689) in our sample are estimated to be in Class 1, the largest group. Table 4 also displays the item-response probabilities, or the probability of reporting a usable or well-developed strength (CANS rating of 0 or 1) on each of the strength items we measured. For example, 91% of the 689 youth in Class 1 identified optimism as a strength. We describe the five classes below.

Class 1: All Strengths Group. Because youth in this class were the most likely of all five groups to report the presence of each of the strength indicators, we referred to this class as the *All Strengths* group. Within this group, the most prevalent strengths are self-reliance and resourcefulness, and the least prevalent are relationship permanence and family support, not surprising given that the majority of youth in our sample have had foster care involvement. Even though it is the least prevalent strength for this group, two-thirds of youth still identify relationship permanence as a strength. It

Table 4: Five Profiles of Youth Strengths (*N* = 2,376)

Latent Class Labels	All Strengths	Skilled & Optimistic	Resourced & Relational	Externally Resourced	No Strengths Identified
Prevalence	*29%* *N = 689*	*19%* *N = 451*	*22%* *N = 523*	*13%* *N = 309*	*17%* *N = 404*
Skills					
Coping	**87%**	**88%**	21%	16%	4%
Social	**87%**	**86%**	36%	49%	16%
Self-Reliance	**98%**	**87%**	37%	47%	1%
Positive Identity					
Optimism	**91%**	**92%**	**56%**	32%	27%
Internal Resources					
Talent	**91%**	30%	**69%**	39%	22%
Spiritual	**89%**	26%	**80%**	26%	30%
Community	**92%**	19%	**73%**	17%	11%
Relationships					
Family	**78%**	**57%**	**75%**	15%	44%
Relationship Permanence	**67%**	32%	**55%**	10%	22%
External Resources					
Resourcefulness	**97%**	**65%**	**56%**	**66%**	8%
Educational Setting	**91%**	**84%**	**65%**	**65%**	49%

is notable that the majority of youth in this group are more likely than not to possess each of the strengths identified on the CANS, demonstrating that in spite of numerous and potentially traumatic adversities, these young people are able to maintain considerable assets. It is a reminder that needs and strengths are not mutually exclusive. In fact, this group is the largest class in terms of prevalence, containing over one-quarter of youth (29%). Providers have considerable flexibility when working with youth in this group in terms of what strengths to leverage in the treatment plan.

Class 2: Skilled and Optimistic. Besides the *All Strengths* group, this group is the only other group reporting all of the skill-based assets we measured, including coping, social skills, and self-reliance. In addition to the skill-based assets, youth in this group have a high probability of demonstrating optimism, with 92% likely to report this as a strength, the highest of all the groups. Because of this, we call this group *Skilled and Optimistic*. This group also reports family support and external resources, but the distinguishing features are the skills and optimism that the overwhelming majority of youth in this group demonstrate. This group is less likely than the other strength groups to have internal resources and relationship permanence. Nearly one in five youth (19%) belongs to this class.

Class 3: Resourced and Relational. This group presents with most of the strengths we measured, including all of the internal resources (talents, community, spirituality), all of the external resources (resourcefulness and educational setting support), and both of the relational assets (relationship permanence and family support). Just over half of the youth in this group also report optimism. The only strengths they do not present with at the start of receiving services at WestCoast are the skills, with less than 50% of youth in this group reporting coping, social skills, and self-reliance as strengths. Just over one-fifth (22%) of the sample belongs to this class.

Class 4: Externally Resourced. These youth only present with the external resource assets, namely resourcefulness and the support of their educational setting, but fewer than half report each of the other strengths, including those from the internal resources, skills, relationships, and positive identity domains. Providers working with youth in this group have few strengths to leverage in treatment and may work more on strength development. The lack of positive identity (optimism), skill-based assets (coping, social skills, self-reliance, resourcefulness), and relational assets (family support and relationship permanence) among youth in this group is concerning. The *Externally Resourced* group is the smallest groups in terms of prevalence, with 13% of the sample falling into this class.

Class 5: No Strengths Identified. Approximately one in six (17%) youth fall into this group. Among this group, fewer than half of the youth identify each of the assets we measured as strengths. The least prevalent strengths are internal ones, namely self-reliance and coping skills. Youth in this group are also unlikely to present with relational assets and positive identity. The most prevalent strength is the presence of a supportive educational environment, an external resource. This suggests that for some youth who experience significant adversity, schools may be a key lifeline and a resource that can be leveraged in order to develop other strengths. Focusing on this asset in treatment may present opportunities to identify or build new strengths, both external and internal. For example, a success in school may serve as a source of positive self-affect. The school might help nurture an interest or talent in the young person and provide opportunities for them to demonstrate their aptitude. The school may also connect the youth and their family to resources.

Strength profiles are linked with youth mental health needs. To better understand the implications of the five strength profiles, we examined how these profiles relate to youth mental health needs. As described in the measurement section above, our measure of mental health needs is a cumulative count of the number of actionable items each child has on their CANS assessment and includes items describing the young person's emotional state, behaviors, and daily life challenges. Table 5 displays the estimated cumulative mental health needs for each strengths profile. Table 6 provides detail about whether the differences in mental health scores between each strengths profile are statistically significant. All groups differ from each other in their number of needs with two exceptions. The *All Strengths* and the *Skilled and Optimistic* groups are nearly identical, with 3.4 and 3.6 mental health needs respectively, a difference that is not statistically significant (p=.46). The *Externally Resourced* and the group with *No Strengths Identified*

have 9.3 and 10.1 mental health needs respectively, also a difference that is not statistically significant (p=.177).

We expected that the more usable strengths that youth identify, the fewer their mental health needs. This intuitive pattern appears to be true at the extremes – the *All Strengths* group has the greatest number of assets and the lowest number of mental health needs (3.4 needs on average) while the *No Strengths Identified* group has the highest number of mental health needs (10.4 needs on average). However, for the groups with different patterns of strengths, the number of assets does not correspond directly to level of functioning. Specifically, the *Skilled and Optimistic* group has seven assets, yet is identical in average number of mental health needs to the *All Strengths* group with 11 assets. Furthermore, the *Skilled and Optimistic* group has one fewer asset than the *Resourced and Relational* group, yet the latter has nearly twice as many mental health needs. The *Externally Resourced* group has two assets identified, yet these youth are no better off than those in the *No Strengths* group with respect to the number of mental health needs they experience.

These results demonstrate that the type of strengths and not just the number of strengths matter. All of these assets, at least in the combinations present on our sample, are not equal to each other in their protective or promotive effects. This begs the question of what are the especially protective benefits of the strengths in the *Skilled and Optimistic* group making this group as resilient as the *All Strengths* group, despite having a third fewer strengths. The assets unique to *Skilled and Optimistic* are the skills: coping, social skills, and self-reliance. While optimism is prevalent among youth in this group, this asset is also present for youth in the *Resourced and Relational* group. Despite the fact that *Resourced and Relational* youth have more identified strengths, the only class of strengths they do not have are the skills, yet they have twice as many mental health needs as *Skilled and Optimistic* youth. We cannot know from this analysis if the skills have a causal relationship with mental health needs, nor can we know whether it is the skills themselves or the skills in combination with optimism that is especially protective. What is clear, however, is that having these skills is a significant predictor of having fewer mental health needs among our study sample composed of children and youth with high rates of trauma exposure.

Also of note is that the *Externally Resourced* group is no better off than the *No Strengths Identified* group with respect to the number of mental health needs. While being resourceful and having educational support may buffer against certain types of challenges that young people experience, these assets alone are not able to ameliorate the mental health challenges that young people with trauma exposure face. Skills, relationships, and positive self-affect are needed as well.

These results suggest that the skills measured here provide protective benefits against the challenges associated with trauma exposure. Coping, or being able to manage negative experiences, is largely an internal psychological skill. Social skills, by contrast, are interactional, reflecting skills that enable a child to develop healthy relationships. Self-reliance, at least as defined by the CANS, requires self-awareness and has an element of positive identity to it. These skills appear to have a larger impact on mental health outcomes than having resources or relationship assets combined. While important, the relational assets, which include having a strong family identity that is supportive and

Table 5: Average Number of Mental Health Needs Associated with Each Strength Profile (*N* = 2,376)

	Mental Health Needs	Standard Error	95% Confidence Interval
All Strengths	3.4	0.2	[3.0, 3.8]
Skilled & Optimistic	3.6	0.1	[3.3, 3.9]
Resourced & Relational	7.3	0.2	[6.8, 7.7]
Externally Resourced	9.3	0.4	[8.6, 10.1]
No Strengths Identified	10.1	0.3	[9.4, 10.7]

Table 6: Difference in Mental Health Needs Among Strength Profiles (*N* = 2,376)

Mean Differences	Estimate	Standard Error	*WALD* Statistic	Degree of Freedom	*p*-value
AS vs SO	0.1	0.1	0.5	1	0.46
AS vs RR	0.7	0.1	158.0	1	< 0.001
AS vs ER	0.9	0.1	272.2	1	< 0.001
AS vs NS	-1.0	0.1	393.3	1	< 0.001
SO vs RR	0.8	0.1	118.9	1	< 0.001
SO vs ER	1.0	0.1	172.5	1	< 0.001
SO vs NS	-1.1	0.1	261.3	1	< 0.001
RR vs ER	0.2	0.1	20.9	1	< 0.001
RR vs NS	-0.3	0.0	45.4	1	< 0.001
ER vs NS	0.1	0.1	1.8	1	0.18
Omnibus Test	.	.	664.0	4	< 0.001

Note: AS=***All Strengths***; SO=***Skilled & Optimistic***; RR=***Resourced & Relational***; ER=***Externally Resourced***; NS=***No Strengths*** The estimate value represents the mean difference in mental health needs between two profiles in each row. For example, the first row shows the mean difference in the number of mental health needs between the ***All Strengths*** and ***Skilled and Optimistic*** groups to be close to zero and not statistically significant. The Wald tests along with the p-values indicate whether the expected values of the mental health needs between each pair of the trauma groups are equal or statistically different. The Omnibus test represents a simultaneous comparison of all of the expected values of the mental health needs.

having permanent relationships with family members or other adults, do not make up for lacking coping, social, or self-reliance skills. Similarly, the presence of external resources provides significant protective benefits. However, relationships and external resources are not as impactful without the internal skills.

Sociodemographic variables are related to strength profiles. After identifying the five strength profiles and their relationship to needs, we explored whether demographic factors such as gender identity, ethnicity, and foster care involvement are meaningfully related to those profiles (Table 7). To do so, we compared each strength profile to a reference group. The aim is to better understand how these factors influence patterns of strengths and the potential disparities in youths' opportunities to develop these assets based on their demographic characteristics.

In examining the relationship of ethnicity to the strength profiles, we departed from the standard approach in the scientific literature of using the White group as the reference group. As in our previous papers in this series, in this paper we are using African American as our reference group. We do this both for normative and practical reasons. As we have noted elsewhere[3], people of color are frequently evaluated against a standard of whiteness, where White is the norm and every other ethnicity is understood in terms of how it differs from White. This likely occurs due to a desire to address potential disadvantage that people of color may experience relative to those who identify as White, and because the sample size of the White group is often larger than any other group. Despite the well-intentioned reasons for this approach, it nonetheless reinforces the centrality of whiteness, especially when the sample of White youth in our study is significantly smaller than other ethnicities.

We want to shift this perspective. As a community psychology clinic that primarily serves youth of color, it is important that we center the experiences of our clients. We are using African American youth as our reference to center the needs of the largest group in our sample.

Table 7: Odds Ratios for the Association between Youth Demographics and Strength Profiles (*N* = 2,376)

	All Strengths	Skilled & Optimistic	Resourced & Relational	Externally Resourced	No Strengths Identified
Female ($p < .01$)	reference	1.1	0.8	1.8	0.7
Latinx ($p = .06$)	reference	0.5	0.7	0.6	0.7
Multiracial ($p = .67$)	reference	0.8	0.9	0.9	1.0
White ($p = .14$)	reference	1.3	1.4	1.1	2.0
Other Ethnicities ($p < 0.001$)	reference	0.5	0.2	0.6	0.4
Foster Care ($p < 0.001$)	reference	1.2	0.6	3.1	1.2

In so doing, our analysis compares how the experiences of all other ethnicities in our sample differ from the experiences of African American youth.

Table 7 reports odds ratios, representing the strength of the association between the strength profiles and the demographic factors. The odds ratio is a measure of how strongly the demographic variables are associated with each strengths profile, relative to a reference group. It is challenging to interpret odds ratios because they represent ratios of probability. If the odds ratio equals one, the probability of belonging to one of the strength profiles is equally as likely as belonging to the *All Strengths* group (our reference group). An odds ratio less than one means lower likelihood, and an odds ratio greater than one means higher likelihood.

The odds ratios reported above are not deterministic statements about the experiences of youth. Rather, they tell us whether groups of youth are more likely to develop these particular patterns of strengths. None of these demographic factors should be considered as intrinsic to the development of these strength profiles and their associated mental health impacts.

Gender. The results in Table 7 show that gender is a significant predictor of the strength profiles. Overall, girls are more likely than boys to be in the groups with skills and external resources (odds ratios greater than 1) than in the groups with relationship assets. The most pronounced difference by gender is that girls are nearly twice as likely to be in the *Externally Resourced* group than the *All Strengths* group relative to boys. The decreased likelihood for girls to be in the groups with relational assets suggests the girls in our sample have fewer supportive relationships. More research is needed to elucidate how gender is related to different types of strengths.

Ethnicity. Ethnicity predicts some youth experiences, including exposure to adverse experiences that are potentially traumatic.[36] If strengths are partially shaped by experience, and experience is partially shaped by ethnicity, it is possible that ethnicity is related to strengths. However, the results in Table 7 suggest that Latinx, Multiracial and White youth do not differ statistically from African American youth with regards to strength profiles. Though the differences do not reach statistical significance, there are some patterns worth noting for future research studies. Latinx youth are more likely than African American youth to be in the All Strength profile relative to the other profiles (all of which have odds ratios of less than 1). Multiracial youth are nearly identical to African American youth in strength profiles. There is no clear pattern in the comparison between White and African American youth, although African American youth appear more likely than White youth to be in the *All Strengths* group. Only the odds ratios for Other Ethnicities are statistically significant; like Latinx youth, they are more likely than African American youth to be in the *All Strengths* group relative to the other groups.

Foster Care Involvement. Youth with a history of foster care involvement are more likely than those not in foster care to be in the strength profiles associated with higher needs, namely the groups that are *Externally Resourced* and *No Strengths Identified*. This relationship

is not surprising. Youth in foster care are three times as likely as youth not in foster care to be in the *Externally Resourced* group (odds ratio=3.1) relative to *All Strengths*. This relationship may be a function of the fact that children with foster care involvement are, by definition, connected to an institution that connects children and youth to external resources. Laws protecting the education rights of foster youth in California are intended to ensure these students receive the supports and services they need. Youth in foster care are less likely than those not in care to be in the Resourced and Relational group. This too is not surprising, since foster care involvement is partly predicated on and further exacerbates disrupted attachments to caregivers and other important figures in the child's life.

Remarkably, youth in foster care are more likely than youth not in care to be in the *Skilled and Optimistic* group relative to the *All Strengths* group. This is a good reminder that even though their relationships may be disrupted, youth with foster care experience nonetheless have internal skills and optimism that support their resilience during these experiences.

DISCUSSION

Our primary objectives for this study were to explore profiles of strengths as reported by children and youth receiving mental health services at WestCoast and to examine the association between these profiles, mental health needs, and sociodemographic characteristics. Using a person-centered approach such as LCA, we identified five strengths profiles within our youth sample. By identifying which assets in combination provide more protective effects, our results provide some guidance to providers who want to incorporate strengths into their work by leveraging the positive assets that youth have, and building new ones.

The extant literature largely focuses on the cumulative number of strengths. While it is known that more strengths are better than fewer, this alone does not provide direction on where to focus efforts. However, our analysis suggests that the number of strengths does not directly correspond to the intensity of a youth's mental health challenges. In particular, the *Skilled and Optimistic* group, which has a total of seven strengths, fares as well as the *All Strengths* group, which includes the presence of all 11 strengths. Youth in the *Skilled and Optimistic* group also fare significantly better than the Resourced and Relational group, which has eight strengths. The type of asset appears to play an important protective role.

This finding highlights the importance of the skills-based assets that are present among youth in the *Skilled and Optimistic* group. Coping skills help ameliorate the impacts of negative life experiences; social skills are key to making and maintaining healthy relationships that provide support during times of high stress; and self-reliance can be critical for youth whose relationships and family support are disrupted. Though we cannot unequivocally attribute a causal relationship between the presence of these skills and their protective effects, because we measured the presence of these assets after negative life experiences had accumulated and before treatment began, the findings suggest that these skills are important to shielding against the effects of adversity. External resources, though they might alleviate the immediate challenges the youth is experiencing, are not nearly as protective. In fact, youth with only external resources were no better off than youth without any of the strengths, at least with regards to their number of mental health challenges.

Unlike traits, skills can be taught and practiced, and positive self-affect can be nurtured in a young person. If the ability to manage negative life experiences and form healthy relationships are critical for children who accumulate many adverse experiences early in their life, the fact that these assets are changeable has strong implications for practice. Mental health treatment plans should support coping, social skills, and a positive identity.[37] Given the wide prevalence of exposure to trauma and other forms of toxic stress among children,[38–39] our findings suggest that promoting these skills may be important to prevention programs that aim to protect children from the negative impacts of adverse experiences.

Our findings with respect to ethnicity revealed few, if any, differences between groups, with most differences not reaching a level of statistical significance. However, gender identity and foster care involvement predicted membership in the strength profiles. Compared to boys and youth not in foster care, girls and youth with histories of foster care involvement were more likely to be in the *Externally Resourced* group relative to the *All Strengths* group. The finding with respect to gender

identity might be a function of our study sample, which includes girls experiencing commercial sexual exploitation. For many of these girls and young women, their resourcefulness may be the primary asset that helps them survive, though it may not be enough to protect against the chronic trauma they experience.

For youth with foster care system involvement, the finding that they are more likely to be in *Externally Resourced* is not surprising. However, youth in foster care were also 20% more likely to be in the *Skilled and Optimistic* group relative to *All Strengths*. While youth in this group may struggle with forming or maintaining permanent relationships—unsurprising for youth removed from their homes and potentially experiencing multiple placement changes—it is remarkable that many have skills and spiritual beliefs that help them cope, can imagine a positive future for themselves, and are connected to their community. This combination of strengths may explain why their mental health challenges are not much greater than those of youth possessing all of the strengths we measured. The literature on mental health needs among foster youth is more often focused on deficits than on their resilience. The one-dimensional focus on their challenges ignores their positive attributes and misses potential assets that can be leveraged in treatment. A strengths-based approach to interventions would view the young person more holistically and include their strengths in the intervention.[2]

There is considerable evidence that adverse experiences among youth with foster care involvement diminish the strengths that can help them withstand their significant life stressors. Experiencing removal from one's home, even if it involves living with other kin, is likely to unsettle relationships. Maintaining peer and other relationships can be a daunting undertaking when experiencing placement changes. Since experience with the foster care system is often a long-term stressor—approximately one-third of youth who enter the system remain in care for over two years[40]—addressing skills and relational assets early can provide important protective and promotive effects, as suggested by our findings. Previous research has found that these assets are linked to improved well-being and that interventions for youth in care can serve to build these strengths.[8, 10, 30, 41, 42]

LIMITATIONS

Our findings should be considered in light of several caveats. Future studies should investigate whether additional or different strength patterns may arise with different sets of indicators or samples or both. Our community sample, while ethnically diverse, is relatively homogeneous in terms of socioeconomic status and experiences, including high exposure to traumatic events and high level of mental health needs. Consequently, our five-class model yielded an entropy value of 0.72, indicating some uncertainty for class separation.[43, 44] There may be some overlap between the classes, especially for the two groups with lower levels of mental health challenges and the two groups with the highest levels. However, because our five-class model is distinct and easily interpretable, we argue that our findings are robust and well-supported.

The strength profiles we uncover in our sample and their relationship to demographic variables are highly dependent on the specific assets that are measured in our study. Others have noted numerous other assets that serve a protective or promotive benefit to children and youth.[6, 14, 15] If we had measures of these other assets, our profiles would surely look different. Thus, in addition to replication across different samples, this analysis should be replicated using different indicators or a different measurement instrument. Though we have a typology that identifies different types of assets across different ecological levels, some of the types (e.g. positive identity) include only one indicator. Measuring a broader range of assets may yield different results. Also, since many important strengths occur at the community and system level where program leaders and policymakers can have direct influence, including more of these types of assets in research can be an important opportunity to promote positive development in young people.

In addition, the strength items in our study measured the presence or absence of a strength. However, the degree of a strength may also be important in identifying how assets combine to provide a protective effect and where to focus interventions. Finally, assets may differ across different developmental stages,[6] yet we include a broad age range of young people, from ages 6 to 24. Future work ought to examine which assets are most important at various stages of development.

Our finding that skills-based assets provide a prominent protective effect suggests that future research should examine these assets more closely. In addition, there are many different types of coping skills (e.g. relaxation, cognitive coping, emotion regulation strategies, among others); identifying what works for whom is an important avenue for research.[45] There are likely other factors that boost the protective potency of skills. For example, in their review of evidence-based treatments for traumatized children, Schneider, Grilli, and Schneider (2013) identify parent participation as important to treatment retention and effectiveness.[46] Similarly, in a meta-analysis of psychosocial treatments for children and adolescents exposed to traumatic events, Dorsey et al. (2017) found that parent involvement improves the use of coping skills in the area of anxiety.[47] Future work also ought to explore how strengths are shaped by trauma and other life experiences.

CONCLUSION

Taken together, these findings suggest that more attention needs to focus on promotive and protective factors that predict positive outcomes for children and youth in the foster care system. Preventing pathology is not the same as promoting thriving. The focus on problems rather than assets when working with youth who are exposed to significant risk is understandable, but it represents a missed opportunity for public systems and service providers to promote healing and thriving. An implication of our findings for a strength-based approach is that systems working with and on behalf of foster youth must make coping skills and relationship building a priority in order to provide a buffer against the impacts of trauma.

Ultimately, improving child well-being depends on how we operationalize findings from the research literature on resilience, protective factors, and developmental assets and incorporate these lessons into practice. Though it can be difficult to shift the emphasis from a focus on problems to one that explicitly incorporates positive aspects of a youth's characteristics, skills, and resources, doing so may be an important step in helping youth not just survive but thrive after stressful life experiences.

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APPENDIX A

List of CANS mental health items and their descriptions:

Adjustment to trauma
This item is used to describe the child who is having difficulties adjusting to a traumatic experience. Symptoms include sleeping or eating disturbances, intrusive thoughts, flashbacks, numbing, and other signs associated with PTSD.

Affective/physical dysregulation
Child/youth has difficulties with arousal regulation or expressing emotions and energy states.

Anger control
This item captures the child/youth's ability to identify and manage their anger when frustrated.

Anxiety
This item rates symptoms associated with anxiety disorders characterized by excessive fear and anxiety and related behavioral disturbances (including avoidance behaviors). Panic attacks can be a prominent type of fear response.

Attachment difficulties
This item documents the extent to which a child/youth experiences difficulties with attachment, such as such as problems with separation, avoidance of contact with caregiver, and difficulties with physical or emotional boundaries with others.

Avoidance
These symptoms include efforts to avoid stimuli associated with traumatic experiences. These symptoms are part of the DSM criteria for PTSD and Acute Stress Disorder.

Conduct problems
This item rates the degree to which a child/youth engages in behavior that is consistent with the presence of a Conduct Disorder.

Danger to others

This item rates the child/youth's violent or aggressive behavior. The intention of this behavior is to cause significant bodily harm to others.

Delinquency
This item rates criminal behavior (law breaking behavior and juvenile justice issues) for which the child may or may not have been caught. If the has not been caught, but clinical staff are aware of the behavior it should be rated.

Depression
Symptoms included in this item are irritable or depressed mood, social withdrawal, sleep disturbances, weight/eating disturbances, and loss of motivation, interest, or pleasure in daily activities. This item can be used to rate symptoms of the depressive disorders as specified in the DSM-5.

Developmental functioning
This item describes the child/youth's development as compared to standard developmental milestones, as well as rates the presence of any developmental or intellectual disabilities. It includes Intellectual Developmental Disorder (IDD) and Autism Spectrum Disorders.

Dissociation
This item rates the level of dissociative states the child/youth may experience. It may include emotional numbing, avoidance or detachment, and difficulty with forgetfulness, daydreaming, spacing or blanking out.

Eating disturbance
This item rates problems with eating, including disturbances in body image, refusal to maintain normal body weight, recurrent episodes of binge eating, and hoarding food.

Family relationships
This rates the child/youth's relationships with those who are in their family. It is recommended that the description of family should come from the child/youth's perspective (i.e. who they describe as their family). In the absence of this information, consider biological and adoptive relatives and their significant others with whom the child/youth is still in contact. For children/youth involved with child welfare, family refers to the persons fulfilling the permanency plan. When rating this item, take into account the relationship the child/youth has

with their family as well as the relationship of the family as a whole.

Fire setting
This item refers to behavior involving the intentional setting of fires that might be dangerous to the child/youth or others. Malicious or reckless use of fire should be rated here, however fires that are accidental should not be considered fire setting.

Hyperarousal
This includes difficulty falling asleep, irritability or outbursts of anger, difficulty concentrating, hyper vigilance and/or exaggerated startle response. Child/youth may also show common physical symptoms such as stomachaches and headaches. These symptoms are a part of the DSM-5 criteria for Trauma-Related Adjustment Disorder, Posttraumatic Stress Disorder and other Trauma- and Stressor-Related Disorders.

Impulse control/ hyperactivity
Problems with impulse control and impulsive behaviors, including motoric disruptions, are rated here. This includes behavioral symptoms associated with Attention-Deficit Hyperactivity Disorder (ADHD) and Impulse-Control Disorders. Children with impulse problems tend to engage in behavior without thinking, regardless of the consequences.

Job functioning
If the youth is working, this item describes their functioning in a job setting.

Judgment/Decision Making
This item describes the child/youth's age-appropriate decision-making process and understanding of choices and consequences.

Legal difficulties
This item indicates the individual's level of involvement with the justice system. Family involvement with the courts is not rated here.

Living situation
This item rates how the child's/youth's behaviors impact his/her current living environment.

Medical/health management
This rating describes both health problems and chronic/acute physical conditions or impediments.

Numbing
This item describes child/youth's reduced capacity to feel or experience and express a range of emotions. These numbing responses were not present before the trauma.

Oppositional behaviors
This item rates the child/youth's relationship with authority figures. Oppositional behavior is generally displayed in response to limits or structure set by a parent, caregivers, or other authority figure with responsibility for and control over the child/youth.

Other self-harm
This rating includes reckless and dangerous behaviors that, while not intended to harm self or others, place the child/youth or others in some jeopardy. Suicidal or self-injurious behaviors are not rated here.

Physical management
This rating describes both health problems and chronic/acute physical conditions or impediments.

Psychosis
This item rates the symptoms of psychiatric disorders. The primary symptoms include hallucinations (experiencing things others do not experience), delusions (a false belief or an incorrect inference about reality that is firmly sustained despite the fact that nearly everyone else thinks the belief is false or proof exists of its inaccuracy), or bizarre/idiosyncratic behavior.

Recreational functioning
This item rates the youth's access to and use of leisure activities.

Re-experiencing
This item rates the frequency with which the child/youth experiences thoughts of their trauma that they cannot control and how much/how little these thoughts impact their ability to function.

Regression in behavioral
These ratings are used to describe shifts in previously adaptive functioning evidenced in regressions in behaviors or physiological functioning.

Running away
This item describes the risk of running away or actual runaway behavior.

School achievement
This item rates the child/youth's grades or level of academic achievement.

School attendance
This items rates issues of attendance.

School behavior
This item rates the behavior of the child/youth in school or school-like settings.

Self-injurious behavior
This rating includes repetitive, physically harmful behavior that generally serves as a self-soothing function to the child/youth (e.g., cutting, carving, burning self, face slapping, head banging, etc.). This rating also includes reckless and dangerous behaviors that, while not intended to harm self or others, place the child/youth or others in some jeopardy.

Sexual aggression
This item is intended to describe both aggressive sexual behavior and sexual behavior in which the child/youth takes advantage of a younger or less powerful child/youth. The severity and recency of the behavior provide the information needed to rate this item.

Sexual reactivity
This refers to high risk sexual behavior (including with partners who are abusive or physically dangerous) beyond what is developmentally appropriate, and may or may not involve multiple partners.

Sleep
This item rates the child/youth's sleep patterns. This item is used to describe any problems with sleep regardless of the cause, including difficulties falling asleep or staying asleep as well as sleeping too much. Both bedwetting and nightmares should be considered sleep issues.

Social functioning
This item rates social skills and relationships. It includes age appropriate behavior and the ability to make and sustain relationships. Social functioning is different from Interpersonal (Strengths Domain) in that functioning is a description of how the child/youth is doing currently. Strengths are longer-term assets.

Somatization
These symptoms include the presence of recurrent physical complaints without apparent physical cause or conversion-like phenomena (e.g., pseudoseizures).

Substance use
This item describes problems related to the use of alcohol and other drugs, the misuse of prescription medications, and the inhalation of any substance. This rating is consistent with DSM Substance-Related and Addictive Disorders. This item does not apply to the use of tobacco or caffeine.

Suicide Risk
This item is intended to describe the presence of thoughts or behaviors aimed at taking one's life. This rating describes both suicidal and significant self-injurious behavior. This item rates overt and covert thoughts and efforts on the part of a child or youth to end their life.

Traumatic grief
This rating describes the level of traumatic grief the child/youth is experiencing due to death or loss/separation from significant caregivers, siblings, or other significant figures.

Traumatic grief
This rating describes the level of traumatic grief the child/youth is experiencing due to death or loss/separation from significant caregivers, siblings, or other significant figures.

APPENDIX B

Indicators of Trauma

Trauma was measured using items from the Traumatic/Adverse Childhood Experiences Domain in the CANS at the initial assessment (within the first 30 days of intake). All items except medical trauma, war/terrorism, and natural/manmade disaster were selected. We relied on actionable scores—defined as having a score rating of 2 or 3 for each CANS item—as an indicator of trauma exposure. In other words, we classified a particular trauma item as positively endorsed (i.e., clients experienced trauma) if a client had an actionable score for that item. The final list of trauma exposures included 10 traumatic events: emotional abuse, neglect, physical abuse, sexual abuse, caregiving disruption, family violence, parental crimes, school violence, witness/victim of criminal activities, and community violence. Medical trauma, war/terrorism, and natural/manmade disaster were endorsed very infrequently so we excluded them from analysis.

Youth Demographics

Gender identity: We dummy-coded gender identity so that "female" was coded as "1" and male and others were coded as "0".

Ethnicity: Youth ethnicity was dummy-coded as binary variables for each of the following categories: "Latinx" (i.e., Latinx youth were coded as "1" vs. "0" for everyone else), "Multiracial," "White," and "Other Ethnicities."

Foster care involvement: We dummy-coded foster care so that "involved with the foster care system" was coded as "1" if the child or youth had any experience with the child welfare system, including family maintenance or kinship care, whether or not the child formally entered foster care, whereas no involvement was coded as "0."

Mental Health Needs

We measured mental health needs using items from these core CANS domains: Behavioral/Emotional Needs, Life Domain Functioning, Risk Behaviors, and Symptoms of Trauma Module. We coded all items from each of these domains as a positive endorsement (i.e., the mental health need is present) if a client had an actionable score (2 or 3 rating) for that particular item. We then created a composite mental health needs score by summing all items that were positively endorsed, with this score representing each child's cumulative mental health needs.

Data Analysis Procedures

First, we fit a series of models with one through six latent classes using the 10 indicators of trauma identified in our study. All LCA models were fitted with 100 different sets of random starting values; if they consistently converged to the same solution, we could be confident of a maximum likelihood solution.[48] We then relied on various fit indices including the G^2 statistic and corresponding degrees of freedom and information criteria (AIC, BIC, and sample size-adjusted BIC) to narrow down the set of plausible models. To aid with model selection, we also used the LCA Bootstrap Stata function[49] to perform the Bootstrap Likelihood Ratio Test. Finally, we took into consideration how well a solution could be interpreted (i.e., whether the latent subgroups in a solution showed meaningful patterns, were distinct from the other subgroups, and could readily be labeled) before selecting the optimal model.

Next, we refit the optimal model and added the other variables of interest—being female, Latinx, Multiracial, Other Ethnicities, White, and in foster care—as covariates to examine the extent to which these variables predict trauma group membership. Specifically, using the likelihood ratio $\chi 2$ test, the LCA with covariates tests whether each covariate of interest contributes significantly to the prediction of latent class membership above and beyond the contribution of other covariates in the model. Furthermore, the LCA with covariates model also produces regression coefficients and odds ratios, representing the odds of membership in a trauma latent class in relation to the reference trauma group.[48] Finally, given the limitation of other classify-analyze approaches in predicting distal outcome from latent class memberships, we followed the model-based method[50]—whereby classification error was adjusted in the model—to examine the association between strength patterns and youth mental health needs.

All analyses were performed using Stata 15.[51] The base LCA and LCA with covariates models were conducted using the LCA Stata Plugin Version 1.2,[52] developed by researchers at the Methodology Center at Pennsylvania State University based on their PROC LCA procedure in SAS.[53] The LCA with distal outcome model was estimated using the LCA_Distal_BCH Stata function.[54] All software packages to conduct LCA are available for download free of charge at http://methodology.psu.edu.

Latent Class Labels

We relied on the overall pattern of item-response probabilities for a particular class (listed in Table 4) to inform the choice of label for that latent class. For instance, for youth in the *Skilled and Optimistic* latent class, the probability was 0.88 of having a rating of 0 or 1 on the Coping item in the CANS—that is 88% of youth in this class have identified coping as a strength. Looking at the overall pattern of item-response probabilities for youth in this class, we could see that they were more likely to have identified the strengths in the skills domain and on the optimism item in their CANS assessment. Conversely, they were less likely to have identified the external resources or relational items. This overall pattern suggests that this latent class could be labeled *Skilled and Optimistic*.