Health Risk Behaviors and Resilience Among Low-Income, Black Primary Care Patients: Qualitative Findings From a Trauma-Informed Primary Care Intervention Study

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Abstract
This study describes an intervention with low-income, Black primary care patients and their experience in changing a health risk behavior. Participant themes, including behavioral coping, personal values, accomplishments and strengths, barriers and strategies, and social support, are understood in relationship to health behavior theories. Two structured interviews were conducted 1 month apart. Content analysis was used to analyze responses from 40 participants. Participants were well equipped with resilience-based coping, self-efficacies, and informal social networks despite economic and social disadvantages. Findings from this study have the potential to improve behavioral health coping and reduce racial inequities in health prevalent for this population.

Keywords
adverse childhood experiences; Black American; health risk behaviors; primary health care; vulnerable populations

TRAUMA in childhood can affect health at each life stage, is cumulative, and can detrimentally impact mental and physical health and social advantage of subsequent generations.\textsuperscript{1,2} Research shows that childhood trauma is especially prevalent in low-income, disadvantaged, and minority populations\textsuperscript{3–5} and is associated with high-risk health behaviors.\textsuperscript{6–9} Prolonged exposure to adversity in marginalized communities often extends into adulthood.\textsuperscript{10} Lower socioeconomic status is associated with poorer mental health.\textsuperscript{11} Living in a chronically stressful environment can increase the use of health risk behaviors as coping mechanisms, which, in turn, may further influence the impact of traumatic events on mental and physical health.\textsuperscript{12}

Individuals from socioeconomically disadvantaged backgrounds have higher levels of unmet needs for mental health services; those who do get care are more likely to receive care for...
mental health exclusively in primary care settings.\textsuperscript{13,14} Quantitative results from this study were previously published.\textsuperscript{15} In this article, we describe the qualitative experiences based on participant responses in changing a health risk behavior. This article fills an important gap for addressing the impact of trauma on health in Black American primary care patients and can help clinicians understand how reframing health risk behaviors as coping strategies offers an avenue to supporting health behavior change.

**HEALTH RISK BEHAVIORS**

Toxic stress directly impacts mental health, as well as indirectly through health risk behaviors as coping mechanisms. Health risk behaviors can be conceptualized as one of the pathways to disease through which trauma exposure and related symptoms can worsen chronic mental and physical health conditions.\textsuperscript{6} A chronic underlying dysregulation of cortical arousal often accompanies maladaptive coping behaviors aimed at the reduction in discomfort of posttraumatic stress disorder (PTSD) symptoms.\textsuperscript{16} Toxic levels of stress may cause negative cognitive and affective states, which can lead to behavior patterns that exacerbate disease risk.\textsuperscript{17} These health risk behaviors may also represent a potential target for interventions.\textsuperscript{18} When practitioners understand that a behavior or health condition may be related to a patient’s trauma history, they are better equipped to see the problem as the patient’s natural adaptation.\textsuperscript{19,20} As a result, clinicians have a better understanding of patient behavior, which can help facilitate a therapeutic relationship. Clinicians operating within a trauma-informed clinical setting assess for and inquire about past and current trauma exposures and provide a safe setting for patient disclosure as well as education about the impact of trauma on health and referrals as needed. By reframing adverse behaviors as coping strategies resulting from the effects of trauma,\textsuperscript{21} clinicians can intervene in more beneficial ways such as emphasizing a person’s strengths and resilience to remind them that they already possess the capacity to cope and to make changes.

**TRAUMATIC STRESS IN BLACK AMERICANS**

Black Americans experience higher than average stressors associated with persistent health inequities that are also associated with poverty, discrimination, and maltreatment.\textsuperscript{5,22} Blacks are historically and disproportionately exposed to stressful and traumatic events and therefore are at a greater risk for PTSD than the general population.\textsuperscript{3-5,23} Of 617 Black Americans screened for trauma exposure in 4 primary clinics in the District of Columbia, 65% reported more than 1 significant traumatic event, and 33% screened positive for PTSD, levels that exceed estimates in the general population by 300%.\textsuperscript{4} Black men continue to have an overall decreased life expectancy as compared with any other race and ethnicity or gender in the United States, despite an increased life expectancy over the past century.\textsuperscript{24,25} Racial inequities in life expectancy in Wisconsin are especially stark. Recent work highlights a long-standing gap in life expectancy between Black and white men, and the life expectancy gap between Black and white women has increased since 1990.\textsuperscript{26} Although health care inequities contribute to the racial survival gap, they are not the sole reason. Inequities in education, socioeconomic status, and access to health care all play a role in widening the gap and are associated with being Black in America.\textsuperscript{27,28}
MENTAL HEALTH IN BLACK AMERICANS

The potential stigma of being diagnosed with a psychological disorder and prevalent cultural mistrust in health care settings due to racial bias are major barriers for many Black Americans in receiving mental health treatment.\(^\text{29–31}\) As a result, Black Americans are more likely to receive mental health treatment in primary care settings than specialty/behavioral health care; those who do get care are more likely to receive mental health services from a primary care provider than whites.\(^\text{4,5,29}\) Black Americans who experience significant health inequities may also have increased vulnerability resulting from present and long-standing trauma exposure, as well as traumatic experiences rooted in the past, both of which can significantly affect mental health, coping, and healing. The combined effects of these traumas are often woven into the family fabric as posttraumatic toxic stress symptoms and can impact successive generations decades after the original trauma has occurred.\(^\text{32}\) Empirical data support using culturally adapted interventions with patients of color in medical settings.\(^\text{33–35}\) Prior studies including the results from this study have shown that brief behavioral interventions in primary care that address health behaviors associated with toxic stress can enhance behavioral coping, which can lead to improved health outcomes for this population.\(^\text{15,34,36}\)

THEORY OF STRESS AND COPING

An appropriate and useful theory of stress and disease includes the notion that resource utilization and other coping behaviors are shaped by reactions to experienced stress.\(^\text{37}\) Research has shown that positive changes in coping self-efficacy are associated with an improved ability to cope and an adaptive stress response, which are predictive of post-trauma growth and recovery.\(^\text{37–39}\) A 2016 review of primary care interventions to improve health outcomes in adult survivors of adverse childhood experiences (ACEs) evaluated a broad range of interventions representing various treatment orientations and modalities.\(^\text{40}\) Coping was observed to mediate both health risk behaviors and associated improvements on social, cognitive, and emotional functioning.\(^\text{41}\) The assessment of psychosocial factors and coping is critical to a comprehensive understanding of health.\(^\text{42}\) In a sample of 348 HIV-positive men with depressed mood, a change in coping self-efficacy was predictive of reducing perceived psychological stress.\(^\text{43}\) Coping self-efficacy can improve behavior self-management by increasing regulating impulses that are associated with trauma-related symptoms.\(^\text{44}\)

OBJECTIVES

In a separate publication, quantitative findings from the current study showed that brief motivational treatment of ACEs is feasible and acceptable for low-income Black primary care patients and could help individuals develop healthier ways of coping with stress, reduce health risk behaviors, and increase referral acceptance to behavioral health.\(^\text{15}\) The purpose of this article is to explore participants’ processes of changing a health risk behavior and to explore how participant themes relate to existing models of health behavior. We endeavor to capture the lived experience of participants by representing both the individual and
collective voices of underserved Black primary care patients, while aiming to develop and improve trauma-informed care.

**METHODS**

**Study setting**

The study sample was drawn from patients currently receiving medical or psychiatric care at an integrated Federally Qualified Health Clinic that serves low-income and underinsured minority patients in central Milwaukee, Wisconsin. Of their patients, 76% are Black, 76% have Medicaid, 60% are female, 44% are between 18 and 49 years of age, 25% are 50 years or older, and 27% have a diagnosed mental health or substance use disorder. The protocol was approved by the University of Wisconsin Health Sciences Institutional Review Board.

**Study participants**

Data collection began in July 2017 and was completed in mid-December 2017. Black, English-speaking adult primary care patients were sought for participation. Patients were excluded if they exhibited signs of active psychosis, dementia, delirium, or intoxication or appeared too physically ill to focus. Patients were approached in the clinic waiting room and asked by the researchers whether they were interested in participating in a study to reduce stress. Recruitment took place 2 to 3 days a week. Approximately 291 patients were approached for screening in the clinic waiting room. Of 188 patients who completed ACE and PTSD screens, 160 were intervention eligible with 1 or more ACEs. Subsequently, 107 patients agreed to schedule an enrollment meeting. Forty participants completed the enrollment meeting. Thereafter, individuals who endorsed 1 or more ACEs and agreed to participate were scheduled within 1 week for an initial intervention session.

**Eligibility screening**

The 10-item Adverse Childhood Experiences Study Questionnaire and the 4-item Primary Care Post-traumatic Stress Disorder (PC-PTSD) screen were administered. Those with an ACE score of 1 or more were invited to participate in the study. Of the 188 patients evaluated for eligibility, 26 (13.8%) were ineligible due to having had an ACE score of zero. ACE items prior to 18 years of age include experiencing abuse (emotional, physical, sexual), neglect (emotional, physical), witnessing domestic violence, living with an individual coping with mental illness, substance abuse, and/or incarceration, and parental separation or divorce. Past 1-month PTSD symptoms were consistent with intrusive experiencing, avoidance behaviors, hypervigilance, and emotional numbing.

**Intervention development**

The intervention was developed on the basis of a combination of the first author’s clinical experience and existing models of health-related behavior change. The intervention consisted of structured interviews conducted at 2 time intervals 1 month apart. The intervention interviews, which are the source of the data presented in this article, use strengths-based and efficacy-promoting questions to motivate a change in a patient-identified health risk behavior. The intervention enhances resilience by acknowledging and building
upon existing strengths of the individual as a springboard to broach more sensitive and difficult topics.

**Intervention procedure**

The delivery of the 2 intervention sessions was conducted in a private office by the principal investigator, a mental health therapist, and a primary care researcher. Participants signed a consent form at the beginning of the first session that stated their participation was voluntary and confidential. In addition, no identifying information was used when reporting results. Participants agreed to have their responses written down while they were speaking and were informed that their responses might be used in a publication. Participant responses were a compilation of field notes recorded by the interviewer. A copy of the completed interview guide was given to participants at the end of each session to refer back to in between sessions and as an ongoing reminder of the behavior change that they wanted to make.

The first session lasted approximately 45 minutes. In this session, participants identified ways of coping with stress, selected a health risk behavior that they wanted to change, and created an achievable behavior change plan. To address the impact of ACEs, each participant was asked, “Tell me how these earlier life experiences [referencing ACE items] have affected you later in your life.” A decisional balance tool was used to weigh the pros and cons of changing a health risk behavior. Participants were asked about the benefits and drawbacks of previous coping behaviors, potential positive and negative outcomes of changing this behavior, and to envision life after changing. Other questions focused on resilience. Participants were asked about past successes and accomplishments as a technique to remind them or help recognize the personal strengths, resources, and support that have helped them be successful in the past and are still available to them to make those changes possible. Finally, this information was combined to help the participant create a health risk behavior change plan with actionable steps. The change plan identified a specific and measurable goal written as an affirmative statement, potential obstacles to success, strategies and alternative ways to overcome barriers and manage triggers, available social supports, rewards to acknowledge progress, and a contingency plan if what was being done was not working. Individuals who were interested in exploring these issues further were introduced to an on-site behavioral health counselor.

The second session was conducted 1 month after the first session. This session lasted approximately 20 to 30 minutes and was completed either in person or by phone according to participant preference. It was designed as a check-in to assess the status of targeted behaviors and to reinforce progress made from the previous session. In addition, it was used to identify potential barriers that had emerged and to clarify any modifications to the behavior change plan. The focus of the second session was to identify emerging barriers and clarify modifications to the behavior change plan. Questions focused on troubleshooting the coping strategies.

The research assistant conducted the final follow-up interview by phone within 2 months of the initial treatment session. During the follow-up, the research assistant readministered the assessment surveys and administered patient satisfaction questionnaires to evaluate participants’ experience of the intervention. The results of the participant satisfaction
surveys will be reported in a separate manuscript in progress. Participants were mailed a $50 gift card upon completion of the follow-up survey.

Data analysis

Directed content analysis was used to understand participants’ processes of changing a health risk behavior. The 12 questions selected from session 1 for the analysis represented themes such as resilience-based and health risk coping, decisional balance/personal values, accomplishments and strengths, barriers and strategies, and social support and accountability. A mix of open- and closed-ended questions addressed these themes. Participant responses to each question consisted of 1 or more phrases. Two researchers independently reviewed and coded text into meaningful units and discussed discrepancies. One additional researcher performed an audit of the coding by cross-checking the coding strategy. Any discrepant issues raised by the audit were discussed and resolved, which offered multiple perspectives aiding in the rich interpretation of the findings.

Several stages of procedures were performed to systematically analyze the manifest content of participant responses using an iterative process. In stage 1, responses were parsed into analytic units and listed within a Word document. Each identified analytic unit was reduced into the smallest conceptual unit and labeled with a code that was relevant to the context. In stage 2, codes were recontextualized by initially grouping similar responses into categories and then organizing them into broader thematic domains derived from the content analysis. In the final phase of the analysis, we considered how findings corresponded with the literature and more specifically to theoretical models of health behavior.

RESULTS

Participants

Table 1 shows the study participants including 40 Black primary care patients with self-reported ACEs. The mean age of participants was 43 ± 13.05 years (range, 20–64 years); 27 (67.5%) were female, and 25 (62.5%) had some college education or more. Most (n = 36; 90%) of the participants earned a household yearly income of $30 000 or less. Many (n = 26; 65%) participants had an ACE score of 4 or more, and 23 (57.5%) had a PTSD score of 3 or more.

Of the 107 patients who were scheduled for their first session, 67 (62.6%) did not show for unknown reasons. The individuals who did not show for the intervention had comparable ACE and PTSD scores with those who attended an initial session. Of the 40 patients who participated in at least 1 session, 36 (90%) completed the second session and 35 (87.5%) had complete data at the end of the study.

Participant themes

The Figure shows the participant themes from this study that are also supported by validated health behavior theories as important contributors in changing a health behavior. Participant themes for an individual with an ACE score of 1 or more included resilience-based and
health risk coping, personal values, accomplishments and strengths, barriers and strategies, and social supports and accountability.

**Resilience-based and health risk coping**

Resilience-based coping is defined as the use of healthy coping skills to deal with difficulties, whereas health risk coping is defined as the use of unhealthy behaviors as coping strategies when things are not going well. Perspectives differ among participants regarding healthy and unhealthy behaviors. For example, marijuana use was viewed by some participants as a stress reliever whereas others viewed it as an unhealthy coping strategy. Table 2 shows the different ways of coping that participants reported when under increased stress. Overall, participants identified healthy or adaptive ways that they cope with life stressors. Distraction techniques, such as engaging in creative hobbies, work, or entertainment, were the primary methods of coping reported by participants. Receiving social support from family members, friends, and professionals was another commonly cited coping response. Participants also used a number of psychological strategies to cognitively reframe or defuse stress. Several participants mentioned the use of health self-management techniques, such as physical activity, improved nutrition, and medication management, as a method of coping. Participants also discussed the importance of their faith in helping them cope. Finally, avoidant behaviors and calming and relaxation techniques were also used to cope with stress and problems in a healthy way.

Participants were able to identify unhealthy ways that they cope when things are not going well for them or when they are having problems. The health risk coping reported by participants were also the health risk behaviors most common to people with ACEs (ie, poor nutrition habits, smoking, drugs, unhealthy alcohol use, risky sexual behaviors, and physical inactivity). In addition, participants acknowledged using emotional regulation techniques such as angry outbursts and negative thought patterns such as rumination, dissociation, and shifting blame to cope with stress. Somatic responses such as insomnia and decreased appetite were also reported. Many of the health risk coping strategies reported were the health risk behaviors that participants identified as wanting to address in their behavior change plans.

**Decisional balance/personal values (motivation)**

Participants reported multiple perceived benefits of health risk behaviors such as the satisfaction of cravings and deriving pleasure from engaging in the target behavior. Participants also reported emotional and mental health benefits of health risk behaviors. Convenience and affordability were commonly mentioned. Anger, a target behavior, was noted as empowering to participants, “…[allowed me] to feel good and powerful at the time” and served as a communication tool, as more than 1 participant noted an angry outburst “gets your point across.” Several participants reported no benefits from engaging in health risk behaviors. Participants were then asked about their perceptions of the disadvantages associated with those same health risk behaviors. Responses primarily related to loss of physical and mental health, undesirable changes in appearance, financial and relationship difficulties, and potential loss of freedom, self-respect, and self-esteem. According to participants, some of the worst outcomes of not making a change could be serious health
problems, disease, or death. Participants also expressed optimism by reporting the best outcomes of making a change they could imagine were feeling better, healthier, more energy, motivated, happier, and peaceful. Participants shared many values in common, which were reinforced by how they positively perceived themselves in the future. By far, death, disability, and disease were the most frequently reported motivators for changing a health risk behavior.

**Successes and strengths (self-efficacy)**

Study participants were asked about past successes and accomplishments as a point of reference to increase a feeling of confidence and sense of empowerment in their ability to change a behavior. Participants produced a substantial list of past achievements. The most commonly cited accomplishments include earning a diploma, degree, or license, overcoming substance abuse, leaving abusive relationships, repairing broken relationships, raising children and grandchildren, breaking cycles of poverty and incarceration, moving from homelessness to home ownership, improvements in health and well-being, and other forms of personal self-development. As a follow-up, participants were asked to describe the personal strengths they possessed that made those changes possible. Participants reported drawing upon a variety of personal attributes and personality characteristics, such as persistence, determination, and flexibility, a sense of altruism, and higher levels of self-esteem, along with personal motivations such as breaking cycles, improving relationships, and learning from past experiences. A number of participants acknowledged the importance of their relationships with others as both motivation and support for changing behaviors. Professional support from therapists was also listed as an available resource. Overall, participant responses indicated that they were highly positive, valued independence and progress, and seemed to possess the inherent qualities to face their life struggles with diligence, patience, and maturity.

**Barriers and strategies**

Study participants were asked to predict potential barriers to successfully changing the target behavior, as well as identify troubleshooting strategies they could use to manage triggers and setbacks (Table 3). Personal factors such as cravings, negative emotions, physical limitations, and personal behaviors and actions were most commonly identified potential obstructions. Others included environmental factors, social relationships, and external stressors (ie, time constraints, financial pressures) as potential triggers for relapsing into health risk coping behaviors. To address these barriers, participants were most likely to choose psychological strategies, such as distraction, positive reappraisal, and calming/relaxation techniques. Other participants cited their faith as key to overcoming barriers. To manage unsupportive environments, participants proposed making changes to their personal environment, or changing personal habits where they could (ie, “keep healthier foods”), or avoiding problematic environments and people altogether. Participants also recognized the dual nature of social relationships. On the one hand, participants noted that family members and friends could be potential barriers, but, on the other hand, many acknowledged that improving social relationships was an underlying motivation for behavior change and family members and friends as key sources of support, encouragement, and accountability throughout the change process.

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Social support (accountability)

Participants in this study were asked to identify at least 1 person with whom they could share their goal and check in on a regular basis. Of the 40 participants in session 1, 38 individuals were able to identify at least 1 person that they could rely on for support and many participants had more than 1 person. The amount of accountability varied by participant. Some participants wanted to connect with their accountability buddy at least once a week, but most people wanted to check in every day. Social supports identified by participants were largely family members and friends. Participants also named mental health and other professional supports (ie, individual and group therapy, physical therapy, and AA meetings), religion (eg, God, church), and other sources (eg, cat, boss, neighbor, and organized events).

DISCUSSION

Findings from this study can help us better understand the experience of underserved Black primary care patients with childhood trauma who are considering changing a health risk behavior. Participants were well equipped with a variety of adaptive coping skills and numerous strengths despite having an ACE history and living in a highly underresourced urban environment. Participants placed high value on health, were able to identify strategies to manage triggers that could undermine efforts to positive behavior changes, and could identify at least 1 source of social support. Accordingly, motivation was high to change a health risk behavior in favor of achieving good or better health. Family and friends were consistently reported as a source of strength, motivation, and encouragement in changing a health risk behavior. Participant themes, including resilience-based coping, personal values, inherent strengths, strategies to overcome triggers, and social supports, are supported by complementary and overlapping health behavior theories that can be understood through a broader lens of population behavior change. Together, these themes can help translate new knowledge into practice by guiding the choices and actions of clinicians with patients to become trauma informed, which can ultimately advance health equity for marginalized groups.

Resilience-based and health risk coping

The Transactional Model of Stress and Coping is a risk and resilience framework for evaluating the processes of coping with stressful events and to learn new ways to cope with stressful situations.\textsuperscript{46,47} Concordant with this theory, the study intervention recognizes and acknowledges both resilience-based and health risk coping as valid responses to the impact of ACEs by highlighting and building upon strengths as well as discovering the underlying basic need that may be driving unhealthy behaviors. Conversations with participants were strengths-based and nonjudgmental in an effort to reduce participants’ perception of stigma and to increase the focus on resilience-based coping. Reframing health risk behaviors as a means for coping with overwhelming events can be helpful in reducing the stigma and addressing the underlying needs of the individual.\textsuperscript{53} As a result, it becomes easier to teach new skills to regulate affect such as breath awareness and to learn safer and healthier ways to manage traumatic activation.
Studies indicate that coping styles can be cultural adaptations of historical oppression and racial inequities, which can produce a paradoxical outcome for Black Americans. For example, studies have shown that an active engagement style of coping, which increases hard work and determination during chronic stress, can have adverse consequences on blood pressure particularly for Black men with lower socioeconomic status and educational levels. Consistent with the literature, participants in this study relied more on engagement-focused coping strategies than avoidant ones. They also reported emotion-focused engagement coping such as seeking support from family, friends, and professionals. In contrast, one study showed that Black women with active coping styles may perceive more social support in their lives, which has positive associations with psychological well-being. Participants in this study were predominantly Black women. The amount and diversity of coping skills reported by participants may have been influenced by the receipt of prior mental health services. Furthermore, participants’ display of resilience may be paradoxically rooted in having experienced lifelong hardships, including economic and social disadvantage and histories of personal childhood trauma and structural adversities, which have led to greater overall success at adapting to life’s challenges.

**Decisional balance/personal values (motivation)**

The Health Belief Model (HBM), a psychosocial model developed in the early 1950s by a group of social psychologists, seeks to predict and explain health behaviors based on attitudes toward health issues. The HBM posits that a principal determinant of behavior change that motivates protective action is the perceived threat of a negative outcome. According to a critical review of 29 health-related HBM publications from 1974 to 1984, the dimension of perceived susceptibility to a serious condition was slightly more associated with health-related behaviors than the dimension of perceived benefit.

Throughout the intervention, the majority of participants expressed a high value for health. However, when asked about the drawbacks of continuing the behavior or the worst outcome of not changing, their response that the health risk behavior placed them at a greater risk for worsened health, disease, or death more than doubled. In some instances, acknowledging the worst possible outcome may be a stronger impetus in changing an unhealthy behavior and more persuasive than educating patients about the benefits of changing. Similar to prior research with Black Americans, our study findings show that the recognition of susceptibility to health risks and the discrepancy between the behavior and one’s goals can help facilitate behavior change.

**Successes and strengths (self-efficacy)**

Bandura’s Social Cognitive Theory emphasizes self-efficacy, which is the belief in one’s own abilities to achieve a desired outcome, and is critical in helping an individual engage in behavior change. A large body of literature shows that those with higher self-efficacy are more likely to successfully bring about health behavior changes than those with lower self-efficacy. In this study, the importance of self-efficacy was demonstrated by the large number of successes and strengths that participants were able to identify before engaging in their behavior change plan. Furthermore, acknowledging one’s valued characteristics can reduce the threat of negative racial stereotypes and is likely to enhance trust in the doctor-
patient relationship, particularly with Black Americans and similarly stigmatized minority groups.  

According to Bonanno, there are multiple pathways of resilience that can help an individual bounce back after experiencing or witnessing adversity that serve as protective resources in the aftermath of overwhelming events such as hardness, self-esteem, and positive emotion and laughter. These were also characteristics demonstrated by participants in this study based on expressed coping and apparent proficiencies to persevere in the face of hardships. Participants initially shared their achievements with hesitancy until they realized that these activities were successes that may have galvanized skills to assist in navigating some of life’s larger challenges. Pointing out accomplishments and identifying inherent strengths helped promote self-efficacies and instill confidence in participants that they were capable of making a health behavior change. Moreover, affirming an individual’s strengths, and thus increasing their self-worth, is associated with enhanced performance and motivation, which may translate to improved adherence and treatment success in a health care setting.

**Barriers and strategies**

According to the Transtheoretical Model of Change, behavior change involves a series of stages including precontemplation, contemplation, preparation, action, maintenance, and termination. Those participants who were initially in a contemplative stage of change may have transitioned into a preparation stage, which is precursor to taking action. In the preparation stage of change, individuals took steps by making a plan to work on their goal of reducing a negative behavior or increasing a positive one. The majority of participants had created a health risk behavior change plan by the end of the intervention, readying themselves for the action stage of change.

Up to 40% of people in primary care meet the criteria for diagnosable emotional disorders. The majority of these individuals seek treatment from primary care providers of emotional-related physical complaints and conditions, which may stem from past traumas. Negative emotions were identified as the most common barriers that might get in the way of following through with a goal. This discovery reinforces the need for embedded behavioral health services and referrals to treatment within primary care. Clinicians should possess the knowledge of evidence-based treatments for trauma-affected patients and be able to make appropriate referrals to trauma-specific services.

**Social support (accountability)**

The Self-Determination Theory explains that positive social interactions that are responsive to our psychological needs lay the foundation for the development of intrinsic motivation. The experience of being held accountable can be helpful in developing an internal sense of agency, self-responsibility, and a sense of accomplishment. Accountability to a specified course of action can increase adherence to treatment and is widely used in a variety of settings to encourage desirable behaviors. People adhere better to a plan when they are held accountable, especially when it is by someone whom they respect and know is committed to
their well-being. Nearly every participant in this study could identify at least 1 person who could hold them accountable to their goal.

The majority of participants relied on support from family or friends. Prior research shows that informal social networks are highly significant for Black Americans. Close ties with family and friends are protective against mental health issues and stress, whereas negative interactions with family members can be especially problematic for the psychological well-being of Black Americans. In addition, participants identified mental health professionals as trusted individuals who could offer support. According to the literature, Black Americans may initially have a positive attitude toward mental health care; yet, they are less inclined to seek out mental health treatment due to beliefs about problems improving on their own, stigma associated with mental illness, and preferences of religious coping. It is likely, however, that participants in this study demonstrated a higher degree of open-mindedness toward mental health services due to a high proportion of individuals who were currently receiving or had been engaged with mental health services in the past.

LIMITATION AND FUTURE RESEARCH

This study, conducted in a single clinic in a city in the upper Midwest, resulted from a convenience sample and is not representative of the general population. Another limitation of this study was the high “no-show” rate for those individuals who had screened eligible for the intervention with 1 or more ACEs. Future studies should include larger and more representative samples with a plan for follow-up with “no-show” participants. Discussions should take place prior to the session to troubleshoot in advance any possible barriers to participation. An alternative approach for the delivery of the intervention is to bring it directly into the communities where people live to increase accessibility and engagement. The potential for bias is common in self-report research on the part of the interviewer as well as participants, including over- or underreporting due to inaccurate recall or social desirability, which could produce misleading responses. Credibility of participant themes was enhanced by confirming results with validated theories of behavior change to increase transferability to generalization. Further studies are needed to provide evidence for discriminant validity among these constructs. Finally, data were collected in the context of an intervention and not using recorded and transcribed semistructured interview methods, and therefore the breadth and depth were limited. Future research should include verbatim transcriptions of in-depth interviews, which will provide additional insight into individuals’ firsthand experiences of changing a health risk behavior.

CONCLUSIONS

Notwithstanding multiple vulnerabilities and economic disadvantages, study participants exhibited considerable resilience in adapting to adversity, trauma, and other life stressors. Findings from this study contribute to the existing theories of behavior change by emphasizing the notion that reinforcing a person’s strengths and resilience in combination with eliciting their values and priorities enhance their desire for behavior change. We can attribute these findings to several key constructs that are linked to health behavior theories,
including emphasizing resilience-based coping, identifying personal values, promoting strengths, strategizing potential triggers, and encouraging accountability—all of which are important contributors to behavior change in health care settings. In concert, these concepts can work to assist in achieving one’s health goals. These findings are helpful for clinicians who are concerned with reducing the effects of toxic stress and related health risk behaviors of Black American adults with childhood trauma. Recognizing the role of trauma in health is critical; acknowledging childhood trauma and its role in adult health later in life is a part of this process. Through improving coping and emotional well-being, we can address the underlying causes of disease as well as racial inequities prevalent in this population. This intervention could be a step in that direction. It is hoped that findings from this study will aid more broadly in the development and implementation of trauma-informed interventions throughout primary care.

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Participant themes paired with behavioral theories of change that are important contributors in changing a health risk behavior for an individual with a history of adverse childhood experiences (ACEs): a Transactional Model of Stress and Coping, b Health Belief Model, c Social Cognitive Theory, d Transtheoretical Model of Change, and e Self-Determination Theory.
### TABLE 1.

**Sample Characteristics**

| Characteristic                          | n = 40 |
|----------------------------------------|--------|
| Age                                    |        |
| Mean (SD)                              | 43.83 (13.05) y |
| Range                                  | 20–64 y |
| Sex, n (%)                             |        |
| Female                                 | 27 (67.5) |
| Education, n (%)                       |        |
| High school or less                    | 15 (37.5) |
| Some college or more                   | 25 (62.5) |
| Income, n (%)                          |        |
| <$10 000                               | 19 (47.5) |
| $10 000–$30 000                        | 17 (42.5) |
| >$30 000                               | 3 (7.5)  |
| Adverse childhood experiences, n (%)   |        |
| 1–3                                    | 14 (35.0) |
| ≥4                                     | 26 (65.0) |
| Posttraumatic stress disorder, n (%)   |        |
| 1–2 symptoms                           | 12 (30.0) |
| >3 symptoms                            | 23 (57.5) |
# TABLE 2.

Resilience-Based Coping Reported by Participants

| Domains                        | Categories                        | Examples                                                      |
|--------------------------------|-----------------------------------|---------------------------------------------------------------|
| Distraction techniques         | Art/creative hobbies              | “Make-up, hair, nails,” “guitar,” “write/draw”                 |
|                                | Entertainment/social media        | “Play games on phone,” “television,” “music,” “read”          |
|                                | Writing/journaling                | “Look at and post pictures on Facebook”                       |
|                                | Work                              | “Organizing/cleaning; cooking,” “study,” “work”               |
|                                | Cultural practices                | “Grinding stones”                                             |
| Social support networks/relationships | Family                          | “Reach out to family,” “comfort with wife”                    |
|                                | Friends                           | “Talking with best friend on the phone”                       |
|                                | Professional support              | “Talking with a counselor”                                    |
|                                | Socializing                       | “Joined the choir,” “shoot pool”                              |
|                                | Communication                     | “Communicate when things are bothering me”                    |
|                                | Service to others                 | “Help people”                                                 |
| Psychological strategies       | Acceptance                        | “Let go,” “let things happen”                                 |
|                                | Positive thinking                 | “Positive talk,” “say 3 positive things in the AM/PM”         |
|                                | Flexibility                       | “Try to find a solution”                                     |
|                                | Problem-solving                   | “Putting things into perspective”                             |
|                                | Reframing                         | “Laughter”                                                    |
|                                | Humor                             | “Think about what happened”                                  |
|                                | Reflection                        |                                                               |
| Health management              | Physical activity                 | “Walking/exercise,” “outdoor activities”                      |
|                                | Medication                        | “Taking medications”                                          |
|                                | Nutrition                         | “Eat well—fish and veggies”                                  |
| Faith/spirituality             | Prayer                            | “Talk to the Lord; prayer”                                    |
|                                | Religious services                | “Church every Sunday”                                         |
|                                | Study religious texts             | “Read the bible and carry it with me”                         |
| Avoidant behaviors             | Removing self from situation      | “Walk away”                                                   |
|                                | Creating boundaries               | “Get rid of job”                                              |
| Domains                  | Categories                | Examples                                      |
|-------------------------|---------------------------|----------------------------------------------|
|                         | Seclusion/isolation       | "Turn off the phone"                         |
|                         |                           | "Shut out people"                             |
| Calming/relaxation       | Mindfulness practices     | "Meditate," "take intentional breaths"       |
| techniques              | Rest                      | "Practice patience with myself"              |
|                         |                           | "Hot baths," "sleep"                         |
| Health risk coping<sup>a</sup> | Substance use             | "Drinking," "cigarettes," "smoking weed," "cocaine" |

<sup>a</sup>Some participants reported the use of health risk coping as both helpful and unhelpful ways of coping when things are not going well.
| Domains                  | Categories                  | Barrier                                      | Examples                                                                 | Categories                  | Strategy                                      | Examples                                                                 |
|-------------------------|------------------------------|----------------------------------------------|--------------------------------------------------------------------------|-----------------------------|-----------------------------------------------|--------------------------------------------------------------------------|
| Personal factors        | Cravings                    | "Craving, habit," "emotional eating"         |                                                                          | Distractions                | "Develop hobbies," "distract myself by       | "watching TV, playing video games, watch my phone, sleep"                |
|                         | Emotions/mental health      | "Uncertainty-anxiety," "scared," "bored,"    |                                                                          | Faith/spirituality          | "Prayer," "read bible, go to church"         |                                                                          |
|                         | Physical limitations        | "unable to get out of depression (anger    |                                                                          | Change habits               | "Eat before I go to the store," "wake up    |                                                                          |
|                         | Personal behaviors/actions  | "irritated all day/week"                     |                                                                          | Psychological techniques    | earlier"                        |                                                                          |
|                         |                             | "Health and mobility," "feeling tired,"     |                                                                          | Physical activity           | "Dedicate positive time to spend with       |                                                                          |
|                         |                             | "eating unhealthy," "not taking medication," |                                                                          | Positive reappraisal        | myself, reading and studying," "writing"     |                                                                          |
|                         |                             | "spending too much time with children at    |                                                                          | Calming/relaxation          | "Yoga," "take walks," "gym, swimming       |                                                                          |
|                         |                             | the store when I am hungry"                  |                                                                          | techniques                 | lessons"                        |                                                                          |
|                         | Personal environment        | "Living situation," "find a comfortable     |                                                                          | Change/control environment  | "Buy own food—keep healthier things,"       |                                                                          |
|                         |                             | gym," "household food," "having a messed    |                                                                          | Avoid triggers              | "[find] tunes to cook to," "no smoking in   |                                                                          |
|                         |                             | up day"                                      |                                                                          |                             | my car," "set rules and parameters in       |                                                                          |
|                         | Social relationships        | "Having to deal with others and their stuff," |                                                                          | Social support              | "snacks with me when I go places"            |                                                                          |
|                         |                             | "being around people who smoke," "[desiring]   |                                                                          | Service to others           | "Walk away," "leave the environment"        |                                                                          |
|                         |                             | companionship," "loneliness"                 |                                                                          | Communication               |                                                                          |                                                                          |
|                         |                             |                                             |                                                                          | Professional support        |                                                                          |                                                                          |
|                         |                             |                                             |                                                                          | Avoid triggers              |                                                                          |                                                                          |

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| Domains          | Categories     | Barrier                                  | Categories       | Strategy      | Examples                                                   |
|------------------|----------------|------------------------------------------|------------------|---------------|------------------------------------------------------------|
| External         | Time constraints | “Making time to exercise,” “schedule conflicts,” “work/school/responsibilities” | Compromise        | “Fit in 20-min walk here and there/bike with husband,” “drop a job to make more time to exercise,” “not coming home after work—do it right away!” |
|                  | Financial       | “Afford to buy healthy food,” “money”    | Problem-solve    | “Buy the best I can,” “create a realistic budget”          |
|                  | Stress          | “Stress/distress”                         | Confrontive      | “Be curious and understand what is stressful or making me emotional upset and seek to change” |

4 Participants identified strategies specific to addressing each barrier.