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Socioeconomic Stability Buffers Racial Discrimination Effect on Depression in a Marginalized Community

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Abstract

Depression disproportionately burdens poverty-affected minority communities. Racism and racial discrimination are well-known determinants of depression among members of marginalized minority communities. Less is known about potential buffers of the discrimination effects on depression, particularly those that could serve as targets for efficient community-based policies and interventions. Our secondary analysis of data from a community needs assessment survey ($N=677$) in an urban minority neighborhood of low socio-economic status revealed that high school completion and current employment significantly weakened the association between discrimination and depression. Our findings frame community-level efforts to foster high school completion and employment as potential strategies to reduce the footprint of racism on the mental health of marginalized community members. Implications for future research and policy are discussed.

Keywords Depression · Racial discrimination · Social determinants of health

Introduction

In 2020, the journal *Lancet* published a letter from an international group of health experts which conceptualized racism as a public health crisis that must be no longer ignored by the global healthcare community [27]. Structural racism, in the form of systemic discrimination and inequities in education, employment, housing, health care, and criminal justice systems in the United States [3], is a human rights violation [10] that has profound physical and mental health effects on historically discriminated communities of color, particularly those living in poverty [18]. In the US, the burden of racial discrimination is particularly insidious on African American and Latino communities [16, 78] where intergenerational experiences of race-based trauma [7] are deeply rooted in pervasive experiences of discrimination and oppression over the life course and throughout history [39]. Empirical evidence suggests that racial discrimination is associated with poor mental and physical health outcomes, as well as a range of emotional responses that are reflective of a trauma response, including avoidance, hypervigilance, intrusive thoughts, confusion, anger, depression and low self-esteem [15].

In addition to reduced access to health resources among racially marginalized populations all over the world, the physiological effect of experiencing racial discrimination have been well documented [8, 15]. Cumulating over the life course, experiences of discrimination lead to activation of stress responses and hormonal adaptations, increasing the risk of multiple conditions, including depression [7].

Racial Discrimination Is a Major Cause of Depression

Literature has consistently presented the experience of racial discrimination as a major mechanism explaining elevated levels of depression among members of marginalized and oppressed communities around the world, including the US [4, 14, 29, 30, 47]. Studies have demonstrated depressogenic effects of both acute exposures to racial discrimination [64, 67], as well as of a more prolonged exposure to everyday

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discrimination, defined as "chronic yet subtle mistreatment due to a socially devaluated characteristic" [28, 55]. Both type of exposures to racial discrimination contribute to the well-established mental health disparities including elevated levels of depression experienced by communities of color in the US (Essed 1991) [28, 77]. Depression is on the rise in the US [42],therefore, multiple ways of reducing it should be examined, particularly among the populations disproportionately affected by depression.

Challenges to Treating Depression in Ethno-racial Minority Communities

Challenges to addressing the psychological effects of racial discrimination, including depression, have been well documented. Thus individuals from communities of color have been found to be more likely to hold stigmatizing views about depression and mental health issues more generally [19, 33], and are more likely than white Americans to have negative views of mental health treatment, including psychiatric medication and psychotherapy [58, 75]. As a consequence, individuals from racial or ethnic minorities are less likely to seek treatment, and have disproportionately poor retention in depression care [21, 35]. Due to the obstacles associated with using direct mental health interventions to address the psychological scars of experienced discrimination [54], recent efforts have emphasized the need to develop effective secondary prevention interventions [69], namely by identifying factors that can protect against the negative effects of racial discrimination on depression among people of color.

Social Determinants of Health as Potential Buffers of Discrimination Effect on Depression

Literature suggests that the effects of experienced racial discrimination on depression are not identical for all individuals who experience such discrimination [55]. Social determinants of health (SDOH) provide a well-established framework for understanding how the social, economic and environmental conditions of individuals' lives impact development of health and mental health conditions, and thus represent potential buffers of health-eroding processes [65]. In particular, several SDOH have been robustly associated with the risk for depression across the lifespan,they include indicators of socioeconomic status such as income and educational [11, 32, 65]. While substantial research on various SDOH have demonstrated how socio-economic and environmental conditions may independently influence risk and protective factors associated with depression, less is known about how SDOH function as potential buffers to the effects of racial discrimination effect on depression. The present study examined whether several dimensions of socioeconomic stability, potentially addressable by community organizing efforts, may buffer effects of experienced discrimination on depression.

Socioeconomic Status (SES) as a Potential Buffer of Discrimination Effect on Depression

In addition to racial discrimination, depression has long been empirically linked to people's socioeconomic status. As mentioned above, in the US, depression disproportionately affects communities of color which also tend to be affected by income inequality, creating an intersectional public mental health disparity []. According to studies [25], (Hobfoll & Ritter, 1999), 28 to 31% of residents in low-SES minority communities tend to suffer from major depression, compared with 16% prevalence of major depression among those living outside minority, poverty-affected communities, suggesting that bot discrimination and SES play major roles in genesis of depression. The socio-economic footprint on depression is demonstrated by the US Centers for Disease Control [13] report, according to which people living at or below poverty level have five times greater likelihood of major depression compared to those with annual income four times or more above poverty level. Studies have linked elevated depression in low-SES urban communities (also referred to as inner cities) to socioeconomic deprivation [74], and to neighborhood-level characteristics such as community violence [20] and substandard quality of built environments [37, 38]. Although these factors are important for understanding the etiology of elevated depression in low-income communities, and for guiding broad policy changes, they do not provide direct and feasible targets to address inner city depression by practicable community-level policies and interventions. There is a need for empirical knowledge and theoretical frameworks elucidating malleable socioeconomic determinants of depression addressable at the level of marginalized, low-income communities. In search for such malleable socioeconomic determinants which could serve as potential buffers of the racial discrimination effect on depression, we explored the following key constructs representing several socioeconomic dimensions of life in an urban, low-SES ethno-racial minority community.

Key Socioeconomic Constructs

Educational Attainment and Depression In social science and public health literature, socioeconomic status (SES) has been conceptualized as a multi-dimensional construct. Beside direct economic indicators such as income or net worth, dimensions of SES also include educational attainment [53], which strongly determines employment and overall economic opportunities in contemporary society [45, 72]. Another often-used dimension of SES is employment status

[70], which constitutes a direct source of income for most individuals. Multiple studies have documented that higher educational attainment is associated with a reduced likelihood of depression [6]. However, the association between educational attainment and depression may be more complicated, and may affect various segments of populations differently. For example, for the elderly Black adults living in low SES urban environments, the extent of economic strain is a more salient social determinant of health (including depression) than the educational attainment [2]. Apparently, educational attainment may reduce depression by increasing people's access to better employment and career opportunities, and thus may matter more for working-age individuals vs. the elderly.

Employment Status and Depression Unemployment has been strongly associated with lowered personal optimism, self-esteem, anxiety, and hence with depression [31, 61]. Conversely, gainful employment tends to provide an antidote to depression by creating a sense of economic security, and multiple forms of inclusion, for example in regard to being a part of the work team, as well as access to healthcare through job-related health coverage which may provide better healthcare service experiences compared with the use of publicly funded Healthcare systems such as Medicaid [57].

Housing Insecurity and Depression Several studies have associated housing insecurity, a lack of assuredness in the sustainability of one's access to housing, with depression [22, 23, 26, 40] and suicide [36]. Housing insecurity has been conceptualized as a result of extreme economic strain and poverty [5], high housing costs, poor housing quality, overcrowding and, importantly, the looming risk of homelessness [1, 9, 44, 49].

Financial Insecurity and Depression Studies have consistently linked depression to various indicators of financial insecurity such as debt [12]. For individuals without secure financial "cushioning" and without access to borrowing money in a non-adverse, dignified way, being in debt may become particularly stressful, increasing depression risk [43, 66]. One indicator of affectedness by debt-related stress in low-SES communities is the reliance on predatory financial services, including pawn shops [50], which provide financial cushioning for the individuals with low borrowing power at a cost of losing objects of value [43]. We hypothesize that the practice of using pawn shops operates as a proxy for the extent of debt-related stress and is thus associated with depression among the residents of a low-SES minority community.

Research Question

Both racial discrimination and several SDOH have been independently associated with increased risk for depression; however, less is known about the potential interactions between these two sets of risk factors. Understanding the relationship between experienced discrimination, SDOH, and depression may inform needed community level prevention strategies by identifying conditions that will protect against the psychological effects of racial discrimination [46]. To address this gap, the current study performed secondary analysis of the data from the initial wave of a community survey ($N=677$) conducted by Bedford Stuyvesant Restoration Corporation in a racial-minority, low-SES neighborhood in Brooklyn. The overall goal of the study was to examine whether the SDOH known to impact depression, including educational attainment, the current employment status, housing and financial security, also impacted the relationship between experienced racial discrimination and depressive symptoms (Fig. 1). We also hypothesized that high school completion determined employment, while employment determined financial security and housing security, in a mediation chain.

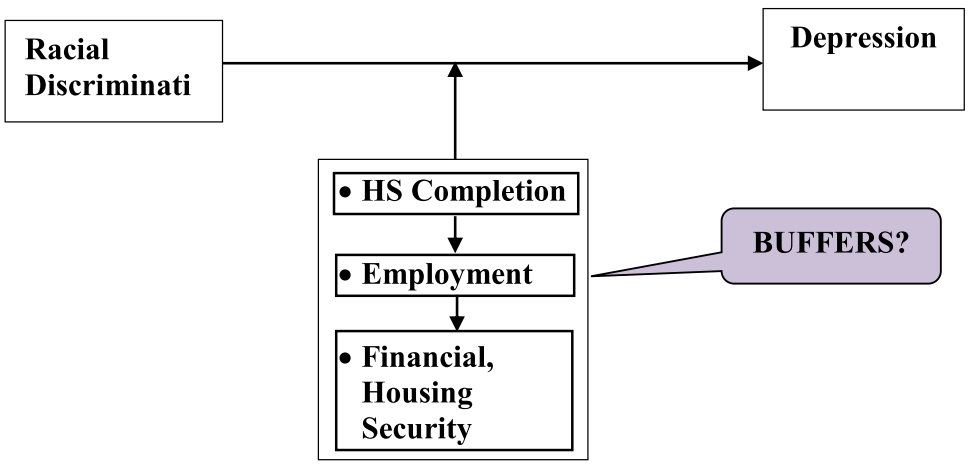

Fig. 1 Hypothesized buffers of the effect of discrimination on depression

Method

Data Source and Respondents

For the present study, we analyzed cross-sectional data from a Community Services Survey conducted by Bedford Stuyvesant Restoration Corporation (BSRC) widely known as the nation's first community development corporation [24]. The survey collected data on the socio-economic needs of the community residents, and precipitated BSRC to participate in Roadmap to Mental Health, the New York City mental health initiative for the marginalized populations, and the city-wide Jobs Plus program [71]. The survey was conducted with the residents of Northern Bedford-Stuyvesant (NBS), a low-SES minority neighborhood in Northern Brooklyn, that constitutes two US Census tracts, 255 and 283, in the summer and fall of 2015. According to New York Citizens' Committee for Children [92], in 2011, 34.7% of Bedford-Stuyvesant residents lived on incomes below federal poverty standard, with the concentration of poverty increasing in the northern tracts of the neighborhood where the number of individuals living below federal poverty standard exceeded 50%. In contrast, in the neighboring Brooklyn Heights/Fort Greene, only 18.5% of residents live below federal poverty standard. This makes NBS residents more than twice as likely to live in poverty as their peers across the neighborhood line. The New York citywide proportion of residents living below federal "poverty line" is 23% [92]. The residential built environment of NBS consists entirely of similarly designed cinder block apartment buildings. From the roster of all 280 street addresses in Census tracts, 255 and 283, fourteen street addresses were selected. BSRC community organizers asked residents of these buildings to respond to the Community Service survey. The sample consisted of 677 residents, aged 16 to 80 (descriptive statistic of the sample are presented in 14 section).

Procedures

Respondents were provided with a-priori description of the survey and gave written consent; confidentiality was assured. Self-report questionnaires were administered via tablets and uploaded onto a secure server; BSRC community organizers assisted respondents with the use of tablets, and, when necessary, with understanding questions. The topics covered in the questionnaires were diverse, covering residents' need for, and receipt of, community services, as well as their depression, experienced discrimination, employment, high school history, and concerns regarding their domestic lives.

Measures

Depression CES-D [59], a 20-item depression scale, assessed the frequency of occurrence of depression symptoms during the past week on a Likert-type scale ("rarely or none of the time" to "most or all of the time"). Literature has shown high internal consistency of CES-D, as indicated by Cronbach's α coefficient of 0.90 [59]. In our study, the scale's Cronbach's α coefficient was 0.91.

Discrimination The Everyday Discrimination Scale [17], a 10-item scale, assessed the frequency of various discriminatory experiences on a Likert-type scale ("never" to "always"). Literature has demonstrated high internal consistency of the scale, Cronbach's $\alpha = 0.87$ [17]. In our study, the scale had the Cronbach's α of 0.88. The total score of discrimination is a sum score, not a mean score as with depression, therefore the total scores of discrimination range between 0 and 50.

High School Completion Respondents were asked to report, dichotomously, whether they have or have not graduated from high school or had obtained a GED. Completion of high school or GED were coded as 1, and the lack of both was coded as 0.

Unemployment Participants responded to a dichotomous question, whether it was true that they were currently not employed.

Housing Insecurity: Safe Housing Option All participants were safely housed at the moment of the survey; however, many of them expressed an imminent risk of losing their current access to housing. Participants responded to a dichotomous question, whether, in case of the loss of their current access to housing, they have a "safe housing option," a place where they and their dependents could stay, such as their parents' home.

Financial Insecurity: Debt-Related Stress Captured By Pawn Shop Use This was captured by a dichotomous question about the prior practice of using pawn shops to get access to emergency funds in a situation of need. We used this item as a proxy for debt-related stress given that debt is a known socio-economic predictor of depression, and use of pawn shops illustrates a last-resort option of providing financial cushioning, illustrating extreme financial strain [43, 50].

Analytic Strategy

We tested the moderation model in Fig. 1, using several analytic approaches. First, we tested several linear regression models with product terms for moderation [48], with depression levels as the continuous outcome, experienced discrimination as a determinant, and several socio-demographic variables as covariates. We examined whether, and to what extent, the association of experienced discrimination with current depression were strengthened or weakened by potential moderators reflecting recipients' socioeconomic status. The relationship between experienced discrimination with current depression were examined as differing across the strata of moderator variables. The projected moderators included respondents' history of completing high school or obtaining GED, their current employment vs. unemployment status, as well as their housing insecurity operationalized as the absence of the "safe housing option," and financial insecurity operationalized as the use of pawn shops. Moderation analysis relied on product-term approach where a product of the main effect determinant (experienced discrimination) and the hypothesized moderator is added to the regression equation, in Aim 1 where the regression coefficient associated with this product term represents the interaction effect [48]. Analyses were conducted in the frame of Structural Equation Modeling (SEM) as implemented in Mplus analytic software with robust estimator and full-information maximum likelihood (FIML) algorithms [76].

We then tested multiple-group comparison models relying on delta methods as implemented in Mplus software [] to examine whether high school completion strengthened or weakened the magnitude with which current employment and other socioeconomic indicators moderate discrimination effect on depression, and directly affect depression. Multiple-group comparison algorithms in Mplus test formal differences between the defined groups for the model parameters of interest.

To maintain consistency in coefficient interpretations, the socioeconomic variables were recoded so that grater values represented a more adverse condition. For moderation analyses, to minimize the impact of collinearity, the Discrimination variable was mean-centered; and the variables representing potential moderators, all of them dichotomous, were coded to contain a meaningful zero.

Covariates included respondents' age, gender, sexual orientation, and ethnicity. To address missing data, frequencies of missingness were estimated for each variable, dummy variables were created to represent missing data and were correlated with the key sociodemographic variables to examine whether data were missing at random. Further, FIML algorithms in Mplus addressed the missing data.

Results

Descriptive Statistics

Table 1 presents descriptive statistics reflecting the sample ($N=677$). The sample was skewed middle-aged (mean age = 47, SD = 15) and female (58.6%), with 6.9% of respondents identifying as LGBTQ. Among respondents, 51% reported being unemployed; and 28.9% did not have a high school diploma or a GED. The mean depression level was 1.9 (SD = 1.1) among high school graduates, and 2.4 (SD = 1.3) among high school non-graduates; the difference was significant ($p<0.001$).

Variables in the data set representing participants' race missed over 50% of data, making it difficult to use these data in analyses (according to data collectors, BSRC activities, close to 100% of respondents were African-American). Other variables had little missing data. Beyond race, the index of depression had the largest frequency of missing data 5.3%, and the data were missing at random (MAR), making it appropriate to rely on FIML algorithms to address missing data [41].

Preliminary Analyses

We first examined whether the theoretically informed indicators of socioeconomic stability in the data were bivariately associated with depression, by conducting a series bivariate linear regression analysis. Depression was significantly associated with high school non-completion status (B [unstandardized regression coefficient] = 0.43, β [standardized

Table 1 Descriptive statistics ($N=677$)

Variable	Mean (SD)	Percent
Gender Female		58.6
LGBTQ status		6.9
Latinx		24.2
High School Dropout, no GED		28.9
Unemployed		51.0
No "Safe House" available		41.7
Has used Pawn Shops		17.3
Age in years	47 (15)	
Depression (CESD), Range = 1–5	2.1 (1.2)	
Depression among HS Graduates	1.9 [A] (1.1)	
Depression among HS Non-Graduates	2.4 [B] (1.3)	
Experienced Racial Discrimination, Range = 1–5	1.7 (0.9)	

[A, B]Difference between values with different superscripts is statistically significant ($p<0.001$)

regression coefficient] = 0.16, $p < 0.01$), unemployment ($B = 0.37$, $\beta = 0.15$, $p < 0.01$), having no safe house option to use in case of losing current housing, such as parents' or relatives' home ($B = 0.45$, $\beta = 0.18$, $p < 0.01$), and the history of using pawn shops ($B = 0.36$, $\beta = 0.12$, $p < 0.05$).

Model Testing

We first conducted a series of preliminary linear regression analyses with product terms to examine each of the above socioeconomic indicators as potential moderators of the discrimination effect on depression. Only high school dropout status and unemployment significantly moderated (amplified) the effect of experienced discrimination on current depression.

We then tested the multiple group comparison model described in 13 (Fig. 2). Given that, in the life span, high school completion theoretically predates and determines the current employment status and housing and financial security, high school completion was conceptualized as a grouping variable for the multiple group comparison. Within each of the two group (high school graduates, and high school non-graduates), unemployment was examined as a moderator of discrimination effect on depression; housing and financial security were specified as mediators of unemployment effect on depression (Fig. 2). Fit indices for the multiple group comparison model indicated very good model fit: RMSEA = 0.00 (must be below 0.05 to indicate good model fit), CFI = 1.00 (must be above 0.95 to indicate good model fit), SRMR = 0.01 (must be below 0.05 to indicate good model fit) [].

Parameter estimates are represented in Fig. 2; and Fig. 3 displays the difference in the slopes representing discrimination effect on depression between the groups of high school/GED graduates vs. high school non-graduates without a GED diploma. In the high school/GED graduate group, the experience of discrimination had very small, statistically non-significant effects on depression ($B = 0.004$). In contrast, in the high school non-graduate group, the experience of discrimination had strong, statistically significant positive effects on depression ($B = 0.39$, $\beta = 0.29$, $p < 0.005$). The between-group comparison for this parameter was 0.39 ($p < 0.005$). In the high school graduate group, the unemployment status strengthened the effect of discrimination on depression ($B = 0.26$, $\beta = 0.14$, $p < 0.05$). In contrast, in the high school non-graduate group, this moderation effect was not significant. The between-group comparison for this parameter was not significant (Fig. 2).

The total effect of unemployment status on depression was significant in, both, high school/GED graduate group ($B = 0.24$, $\beta = 0.11$, $p < 0.05$), and in the high school non-graduate group ($B = 0.64$, $\beta = 0.24$, $p < 0.001$); in the latter group the total effect of unemployment on depression was particularly strong. Additionally, in the high school graduate group, depression was strongly directly associated with housing insecurity ($B = 0.56$, $\beta = 0.24$, $p < 0.001$) and with

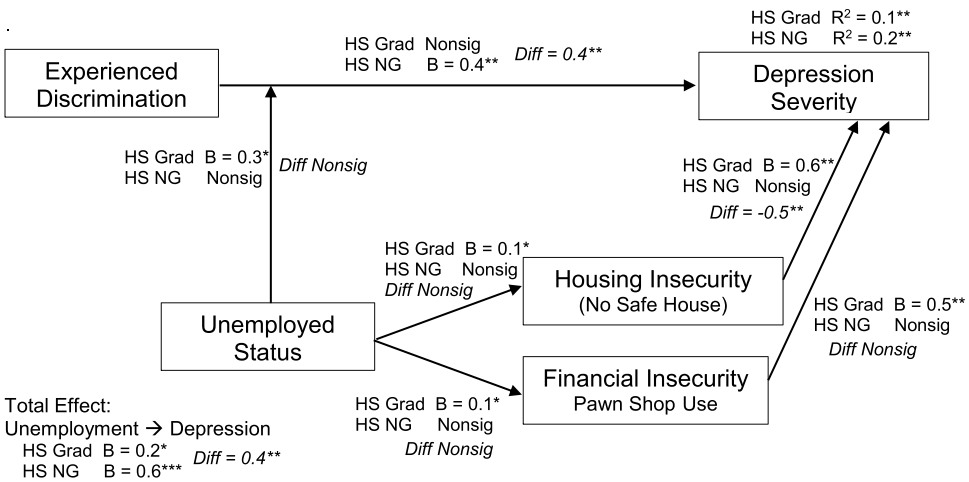

Fig. 2 Racial discrimination affecting depression in high-school graduates vs. high-school dropouts, in the context of socio-economic stability variables: A multiple-group comparison. *$p > 0.05$; **$p > 0.005$; ***$p > 0.001$. Abbreviations: HS Grad—Parameter estimates for High School Graduates; HS NG—Parameter estimates for High School Non-Graduates; Diff—Formal difference between HS Gr. and HS Dr. groups on a given parameter estimate; Nonsig—Parameter estimate is statistically non-significant. Regression coefficients (B) are non-standardized

*$p > 0.05$; **$p > 0.005$; ***$p > 0.001$

Abbreviations:
HS Grad – Parameter estimates for High School Graduates
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Diff – Formal difference between HS Gr. and HS Dr. groups on a given parameter estimate
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Regression coefficients (B) are non-standardized

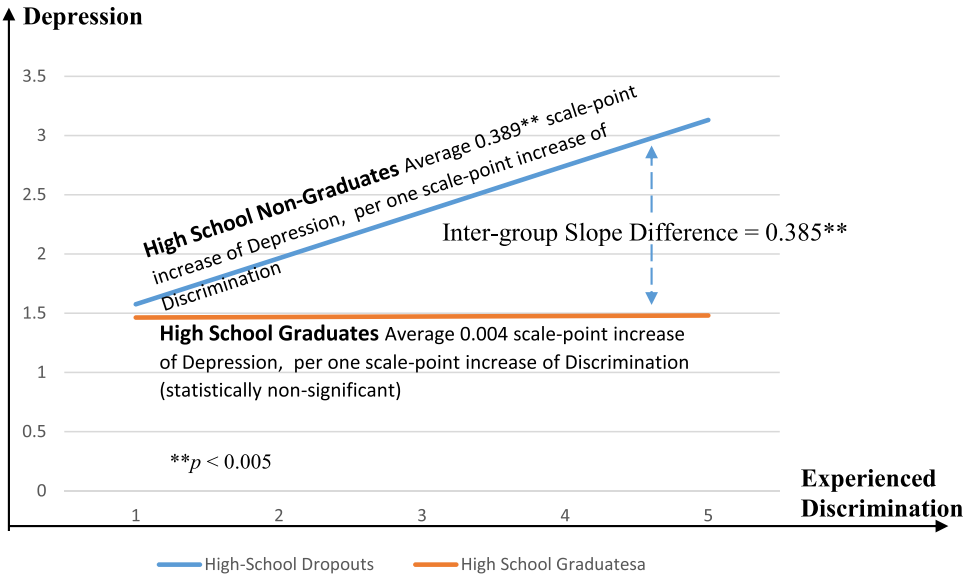

Fig. 3 Depression slopes as a function of Experienced Discrimination, among High-School Graduates vs. High-School Non-Graduates: a two-group comparison

financial insecurity operationalized as the use of pawn shops ($B = 0.49$, $\beta = 0.17$, $p < 0.005$); but none of these associations was significant in the high school non-graduate group. Housing insecurity and the use of pawn shops were modestly, significantly associated with unemployment ($B = 0.11$ and 0.13, respectively; $p < 0.005$) in the high school graduate group, but not in the high school dropout group. Total explained variance (R^2) of depression for the high school graduate group was 0.12 ($p < 0.005$), and for the high school dropout group it was 0.16 ($p < 0.005$).

Discussion

The key results of this study are that two SDOH—high school completion and employment—significantly buffer effects of experienced racial discrimination on depression, in a low-SES minority community. High school completion plays an important role for buffering the effect of everyday discrimination on depression, perhaps by placing high school graduates embedded in the aforementioned communities on a trajectory of upward mobility which shapes stronger self-esteem, a known buffer of stressors leading to depressive symptoms [15, 34]. In support of this explanation, our data also show that the current employment status, another marker of upward mobility, also buffers the effect of discrimination on depression. It appears that economic stability and/or upward mobility may buffer the adverse effects of discrimination, thus contributing to reducing symptoms of depression. Thus, fostering resilience that can protect against the psychological effects of racial discrimination may be through policies and interventions that will increase high school completion and economic stability.

Both high school completion and current employment, the reported buffers of the discrimination effects on depression, are malleable by community organizing efforts [56]. In a promising example, BSRC has developed a number of efficient community programs to foster educational attainment among community youth and fortify workforce participation among community members. Further studies are needed to compare effects of various educational and employment-enhancing programs in marginalized communities for reducing the levels of depression.

In our study, housing insecurity and financial insecurity (the latter operationalized through pawn shop use) were associated with depression, but did not moderate the effects of racial discrimination of depression. One possible explanation for this is that, unlike high school completion and employment, these dimensions of socioeconomic stability, while having a vivid impact on one's emotional status, may not affect the fundamental schemata of self-worth, key to the healthy processing and cognitively rebuffing discriminative experiences [73].

Interestingly, in our data unemployment status amplified the effects of discrimination on depression only for high school graduates, but not for high school non-graduates. A potential explanation is that high school graduates may hold an internal expectation of being able to find and keep gainful employment; the failure to match this expectation potentially damages the person's self-esteem and the ethno-racial sense of self, a known pathway to depression [15]. On the other hand, individuals who have not completed high school may have a lowered expectation for their own employment prospects, so their already elevated depressive response to the discrimination may not additionally increase from being sidelined from the workforce. Additionally, the housing and

financial insecurity were directly associated with depression, but, again only for the high school graduates. Apparently, individuals who have not finished high school may have a lower expectation in regard to their housing and financial security, and these experiences may not additionally exacerbate their already elevated depression level.

Limitations

This study has certain limitations. First, the data we analyzed were cross-sectional, which limited our ability to tease out the causal dynamics at the root of the interactive effects detected by our analyses. For example, it is difficult to establish whether the high school completion buffers the depressive effect of experienced discrimination, or the experience of discrimination amplifies the depressive effect of high-school non-completion. In both scenarios, however, the role of high school completion as a deterrent of depression is clear and warrants the focus on supporting high school completion as an anti-depressive effort for the youth in marginalized communities known to be disproportionately vulnerable to depression. Additionally, the severity of recalled discriminatory experiences may be potentially affected by the person's current level of depression; in such scenario the current depression may affect the reports of discrimination. To be sure, multiple longitudinal studies have showed discrimination to actually predict depression (e.g. [29, 30]. Further studies should longitudinally examine the buffering roles of various dimensions of socio-economic stability for the discrimination effect on depression and other health outcomes disproportionately affecting marginalized communities. It should also be noted that, on average respondents reported mild to moderate levels of depression symptoms (2.1 on the 5-point scale), and that the CES-D scale used in the survey is not a clinical measure, so the results should not be generalized to apply to clinical depression but rather to feelings of dysphoria that may have substantial adverse effects but does not necessarily require clinical treatment.

Also, in our analysis housing and financial security were represented by one item each which is not ideal; but this is a secondary concern given the peripheral role of housing and financial security for our analyses which emphasized the role of high school completion and employment status. To represent financial insecurity, we used a proxy of debt-related stress, the use of pawn shops, as opposed to a direct measure of debt-related stress, because such measure was absent from the data set. Therefore our results around the role of financial insecurity, while secondary to the overall goal of our study, should be interpreted with caution.

Despite these limitations, the present study offers theoretically important and practically helpful insights into the role of malleable social determinants of health, high school completion and employment status, which may help address elevated depression stemming from the racial discrimination experienced by the members of marginalized communities.

Clinical and Policy Implications

The clearest implication of our results is that helping youth in marginalized communities complete high school and supporting GED attainment for high-school non-graduates, as well as reducing unemployment and financial insecurity for adults in those communities, are likely to improve not only their economic well-being but also to reduce the adverse impact of racial discrimination on their vulnerability to depression symptoms. Our findings support coordinated efforts between health service systems and community organizations to foster educational attainment and economic stability in order to address mental health issues in marginalized communities. Our data encourage development and implementation of community-based educational, job training, and employment programs to eradicate educational exclusion and reverse the entrenched patterns of community poverty. Our findings suggest that mental health professionals should adopt a human-rights, anti-racist perspective that aims to acknowledge social inequities in the fields such as employment, education, racial discrimination, and focus on increasing access to socioeconomic opportunities and resources, reducing racial discrimination and its associated adverse effects on depression and mental health outcomes. An example of such efforts by mental health professionals may be the use of the aforementioned Malleability Mindset approaches [79] by school mental health counselors and community mental health providers. Municipal, state-wide and federal programs aimed to reduce mental health disparities affecting minority communities may increase their effectiveness by including funding and administrative mechanisms to enhance educational attainment and pathways to sustainable employment in the targeted communities.

Implications for Further Research

As our findings relied on cross-sectional data, further studies should longitudinally analyze the mechanisms by which economic stability protects individuals from risks for depression elevated by exposure to racial discrimination. Additionally, further research is warranted to develop and test evidence-based programs to buffer the effects of racial discrimination on mental health in marginalized communities through fostering high school completion and GED attainment, as well as further educational opportunities, and through increasing employability for community members. One promising framework for the above efforts may be Yeager's Malleability Mindset approach to modifying youths' beliefs about

the malleability of their cognitive skills; this approach has demonstrated high effectiveness in fostering high school and career building success among youth in marginalized communities [79].

Author Contribution Rebecca Rivera co-developed the idea of the paper, co-led the data analysis, wrote a large portion of the manuscript, and revised the manuscript.

Tracey Capers provided the de-identified administrative data set for secondary analysis, co-developed the concept of the paper, wrote a portion of the manuscript, and revised the manuscript.

Marquis Chandler wrote a portion of the manuscript, participated in data analysis, and revised the manuscript.

Elizabeth Matthews wrote a portion of the manuscript, and revised the manuscript.

Justyna Rzewinski, wrote a portion of the manuscript, and revised the manuscript.

Jo Rees wrote a portion of the manuscript, and revised the manuscript.

Shimonah Israel wrote a portion of the manuscript, and revised the manuscript.

Victor Lushin, PhD, MD, MSW (senior author) supervised the group effort to work on the paper, co-developed the idea of the paper, co-led the data analyses, wrote a portion of the manuscript, and revised the manuscript.

Data Availability Available upon request.

Code Availability Available upon request.

Declarations

Ethics Approval Not applicable: This research conducted secondary analysis of de-identified administrative data.

Consent to Participate Not applicable: This research conducted secondary analysis of de-identified administrative data.

Consent for Publication Not applicable: the manuscript does not contain any individuals' data or image(s).

Conflict of Interest The authors declare no competing interests.

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