

Social Defeat and Psychosis in the United States: A Replication and Critical Reconceptualization

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Background and Hypothesis: The social defeat hypothesis posits that exclusion and discrimination experienced by socially marginalized populations predict psychotic experiences (PEs), particularly when perceived as defeatist. However, its emphasis on individual-level factors may obscure the role of structural and systemic influences. This is significant for the US context, given US histories of pronounced structural racism and economic inequality. This study extends the social defeat hypothesis by examining established indicators of social defeat, along with US-specific factors that capture structural influences on individuals' perceptions of discrimination and exclusion as defeatist.

Design: Data from the National Survey of Polyvictimization and Mental Health ($N = 1\,584$) were analyzed to investigate cross-sectional associations between individual-level and structural indicators of marginalization and social defeat and self-reported PEs among young adults.

Study Results: BIPOC participants had 60% higher odds of reporting PEs in the past year ($OR = 1.60$; 95% CI, 1.27–2.03; $P = .003$). Furthermore, participants with at least 1 experience of police violence in the past year have 52% higher odds of reporting PEs ($OR = 1.52$; 95% CI, 1.16–2.00; $P = .003$). Several additional indicators were associated with increased odds of PE, including race (non-White compared to White), high-frequency substance use, everyday discrimination, exposure to childhood abuse or bullying.

Conclusions: Findings align with European social defeat literature, confirming the relevance of the hypothesis in the US context. However, prominence of structural factors (racism, police violence) suggests that the social defeat hypothesis should incorporate systemic influences,

emphasizing the need for interventions addressing societal contributors to psychosis risk.

Key words: psychotic experiences; police violence; structural racism; systemic inequity; discrimination; exclusion.

Introduction

The social defeat hypothesis serves as a framework for understanding how individual experiences of exclusion, marginalization, or discrimination among socially marginalized populations may predict increased risk for schizophrenia-spectrum disorders^{1–3} with epidemiological evidence indicating that it may explain elevated risk across the psychosis spectrum, including psychotic experiences (PEs).^{4–10} Social defeat centers the impact of social-evaluative stress (as opposed to, eg, day-to-day stressors or major life events) and posits that the impact of marginalizing exposures such as discrimination or exclusion is dependent on whether it is subjectively experienced as defeating.² A concern with this framing is that it elevates the role of the individuals' reactions to societal marginalization, which in turn may inadvertently downplay or neglect the structural or societal role of these factors. This is of particular concern when generalizing the social defeat hypothesis beyond Northern Europe, where it originates, to contexts such as the United States, where individual-level exclusion must be contextualized by systemic and structural factors characteristic of the historical legacy of racism and extreme economic inequality inherent within the US context.^{11–15} These concerns are further exacerbated by the use of social defeat as an

unmeasured latent construct in this literature which, while thoroughly addressed in prior conceptual work (for an in-depth examination of measurement issues in assessing social defeat, see Selten et al., 2016)¹⁶ nonetheless leaves the hypothesis open to alternative explanations that should be considered.

A strength of the social defeat hypothesis is that it provides a common mechanism linking a variety of well-replicated psychosocial risk factors to psychosis, namely migration, childhood trauma exposure, urban upbringing, low intelligence, and substance use.² Recent epidemiological research in the United States has identified additional risk factors for psychosis associated with social determinants of health that (1) operate through similar mechanisms, and (2) are also indicative of structural inequities in power and consequent exposure to racism and other forms of marginalization^{6,9,17,18}; a recent meta-analysis now substantiates these findings.¹⁰ While structural and systemic inequality is also evident in Northern Europe, factors such as ethnoracial discrimination are more pronounced in the United States,^{5,7,8,19–22} and other factors such as police violence exposure are exceedingly less common in European nations but have likewise been linked to psychosis risk.^{6,17,18,23,24} Though there are other notable models that consider the impact of social and ecological factors on mental health and other social outcomes (eg, Minority Stress Theory, Bronfenbrenner's Ecological model) social defeat has been a prominent theory in our understanding of the etiology of psychosis for 2 decades and has been highly influential in studies of social epidemiology of psychosis. In social defeat literature, however, many approaches still fall short of fully addressing how historical factors (such as the legacy of police violence specific to the United States) have been profoundly entrenched in societal structures and institutions over centuries in a way that is not comparable to other contexts.

The impact of structural racism in the United States appears to extend beyond the impact of discrimination itself, as it contributes to inequities in direct and indirect risk exposures across the life course.⁵ For example, police violence in the United States is fundamentally rooted in over 400 years of subjugation tied directly to chattel slavery. Numerous scholars have traced a direct historical lineage from slave patrols—the earliest documented forms of policing that targeted enslaved Africans—to modern-day policing of ethnoracially marginalized populations, demonstrating a clear throughline to their influence on contemporary law enforcement structures and their role in legitimizing the violent policing of other marginalized groups.^{25–28} This distinction underscores the ways in which the US context diverges from that of Northern Europe, despite the presence of systemic inequity in both regions. Therefore, while social defeat provides a valuable framework that is largely consistent with European epidemiological findings, its generalization to other contexts may

benefit from a reconceptualization that places greater primacy on systemic/structural factors as drivers of the individual-level experience of defeat, particularly in light of evidence that such factors (eg, ethnoracial discrimination, police violence) disproportionately influence risk for psychosis in the United States.^{5,10}

To contribute to this perspective, this study aims to replicate the findings of the Social Defeat Hypothesis in the United States while simultaneously considering whether it serves as the most appropriate conceptualization for these associations within this context. While numerous studies have demonstrated associations between risk factors linked to experiences of marginalization (eg, race/ethnicity in the context of ethnoracial marginalization, sexuality in the context of sexuality-based marginalization), no study utilizing social defeat has *additionally* accounted for structural factors such as police violence, or the impact of racial identity beyond that of direct experiences of discrimination. Thus, the aim of this study is to both test how the social defeat hypothesis may extend into the US context and to examine how structural indicators like police violence fit (or do not fit) specifically into the context of social defeat.

Through our critical reconceptualization of the framework, we aim to center this approach and intentional inclusion of structural dynamics through using primary survey data of young adults, oversampling individuals with marginalized identities (ethnoracial, gender, sexuality, and more), to examine associations between PEs and social defeat factors. Psychotic experiences are defined here as sub-clinical experiences of hallucinations and delusions that may be of lesser intensity, persistence, or associated impairment compared to diagnosed psychotic disorders.^{29,30} Social defeat factors analyzed in this study include demographics emphasizing marginalized identities, as well as urbanicity, substance use, discrimination exposure, childhood abuse exposure, and police violence exposure.⁶ In doing so, our primary aim is to determine whether the social defeat hypothesis would benefit from modification or reconceptualization when applied to the US context.

Methods

Data Source and Sample

Data used in the current study were from the nonprobability subsample of the National Survey of Poly-victimization and Mental Health, a cross-sectional study of adults ages 18–29 across the United States. This study used a Qualtrics-powered quota sampling procedure to recruit a nonprobability general population sample with an oversampling of American Indian/Alaska Native, African American, Latino, and LGBTQ individuals ($N = 1\,584$). These data were collected as part of a 2-part survey project that also included a national probability sample, published previously.⁶ We focus here on the quota sample given its oversampling of participants

with marginalized identities, which was collected as a supplement intended to test hypotheses related to social adversity and marginalized statuses. Given that items were forced choice (excepting those assessing sensitive information) and missing data was limited, the study used a complete case analysis methodology and excluded participants from the sample who had missing data for any of the outcome and predictor variables ($n = 29$; 1.8%), resulting in a final sample of $N = 1\,555$.

Measures

The Violence Exposure and Suicide Risk study evaluated 11 predictors to create model estimates for 1 outcome variable. These variables, described below, were (1) identified based on prior conceptual work on the social defeat hypothesis,^{1,2} and (2) supplemented with risk factors that have been identified as being central to psychosis risk in the United States—particularly those indicative of ethnoracial discrimination.⁵

Outcome Variable

Psychotic Experiences The current study measured PEs using the World Health Organization (WHO)—Composite International Diagnostic Interview (CIDI) psychosis screener³¹ to examine the 12-month prevalence of PEs (suspiciousness/paranoia, thought control, and hallucinations). We use 3 of the 4 items (suspiciousness/paranoia: “A feeling that people were too interested in you or that there was a plot to harm you?”; thought control: “a feeling that your thoughts were being directly interfered with or controlled by another person, or your mind was being taken over by strange forces?”; and hallucinations: “an experience of seeing visions or hearing voices that others could not see or hear when you were not half asleep, dreaming, or under the influence of alcohol or drugs?”) were included in this study’s outcome variable. We excluded the first item (“A feeling something strange and unexplainable was going on that other people would find hard to believe?”) as it may be prone to “false positive” responses. Recent psychometric data has shown that this item is both the most commonly endorsed item on the PE screen and also the only item that is self-reported as “not-distressing” by most respondents. Taken together, this means that its inclusion will bias the screen toward, at best, the lesser severity end of the psychosis spectrum and, more concerning, toward the overinclusion of misclassified “normative” experiences.³² Past-year PEs were coded as a binary variable indicating “none” or “one or more.”

Predictor Variables

Race Racial and ethnic categories included in the assessment were White non-Hispanic/Latine (Latine and

Latinx are often used as gender-inclusive alternatives to Latino/a. While various reasons exist for the usage of these terms, reflecting different contexts and histories^{33, 34}, this study has elected to use “Latine” as it is a more linguistically accessible option in both English and Spanish for broader gender neutrality.), Black/African American, Hispanic/Latine, American Indian/Alaska Native, Asian, multiracial, and other. Race and ethnicity were coded as a dichotomous variable to reflect whether participants were (0) “White” (non-Hispanic/Latine) or (1) “BIPOC (Black Indigenous People of Color).” The BIPOC category consists of participants who indicated that they identify as Black, American Indian/Alaskan Native (Indigenous), Hispanic/Latine, Asian/Pacific Islander, or multiracial. Previous literature demonstrating that these specific populations face an increased risk for PEs and psychosis justifies the use of a dichotomous variable.^{19,23,35}

Gender Identity Gender was recorded per the assessment in 7 self-reported categories: male, female, transgender (male-to-female), transgender (female-to-male), transgender (do not identify as male or female), third gender or nonbinary, and unsure. In the final analysis, we recoded this variable to reflect whether participants identified as (0) “cisgender” (self-reported male or female) or (1) “transgender, nonbinary, or unsure.” Considering the limited sample size of transgender/gender-expansive participants within each group, condensing transgender, nonbinary, and unsure individuals into 1 category was deemed necessary to provide adequate statistical power for analyses with this variable.

Sexual Orientation Sexual orientation was recorded from the assessment in 7 categories: heterosexual/straight, gay/lesbian/homosexual, bisexual, asexual, queer, sexual orientation not specified, and not sure. Sexual orientation not specified was a response option that could be selected by participants; it was not intended to indicate a lack of selection or missing data for this item. Participants who selected “Sexual orientation not specified” as LGBTQ+ were categorized based on item placement and their intentional nonselection of “Heterosexual,” suggesting alignment with a nonheterosexual identity. These categories were recoded into a dichotomous variable reflecting whether participants were (0) “Heterosexual” or (1) “LGBTQ+” for the final analysis. Similarly to the gender variable, queer identities were merged into 1 category to preserve statistical robustness.

Household Income Participants were asked to identify 1 of 9 brackets for which their household income was in, ranging from “less than \$9 999” to “more than \$175 000.” In the final analysis, this was recoded into a dichotomous variable to reflect those who reported being in an (0) income bracket of \$20 000 or higher and those whose (1) income was below \$20 000. A \$20 000 threshold was used

as an approximation of the US national poverty line. This rough value was chosen instead of the precise poverty line measure due to regional and family size variations, as well as the likelihood that respondents would be unable to reliably report their family income to an exact figure.

Community Setting (Urbanicity) Community setting data was self-reported in response to the question: “How would you describe the community you live in now?,” which included the response options of “urban,” “rural,” and “suburban.” Urbanicity of participants’ communities was captured from the assessment using these categories: (0) “Urban,” (1) “Rural,” and “Suburban.”

Childhood Abuse Childhood abuse and trauma were assessed using the Adverse Childhood Experiences Questionnaire Abuse Short-Form (ACE-ASF),³⁶ which captures incidences of neglect, physical, verbal/emotional, and sexual abuse under the age of 18 at the hands of an adult in their life. The final variable used in the present study is dichotomous and reflects participants with scores in the highest quartile of total ACE-ASF scores in the sample.

Substance Use The NIDA-Modified Alcohol, Smoking, and Substance Involvement Screening Test (NM-ASSIST)³⁷ was used to assess participant substance use frequency. The final analysis variable includes 3 items from this scale inquiring about the frequency of marijuana, prescription drugs, and heroin use in the past year. Responses to these items were summed and recoded into a dichotomous variable reflecting those whose drug use scores are within the highest quartile of the sample.

Childhood Bullying The Juvenile Victimization Questionnaire, 2nd Revision (JVQ-R2) with Supplemental Items³⁸ was used to assess experiences of childhood bullying and victimization. Questions included in the final analysis assessed incidences of peer and sibling sexual and nonsexual victimization when they were under the age of 18. Responses were summed and recoded as a dichotomous variable indicating scores in the highest quartile of the sample.

Police Violence Experiences of police violence were assessed using 4 items from the Police Practices Inventory (PPI). Four dichotomous items from the PPI were included in the present study’s variable¹⁸ for final analysis: (1) “Has a police officer ever hit, punched, kicked, dragged, beat, or otherwise used physical force against you?”; (2) “Has a police officer ever used a gun, baton, taser, or other weapon against you?”; (3) “Has a police officer ever forced inappropriate sexual contact on you, including while conducting a body search in a public place?”; (4) “Has a police officer ever engaged in non-physical aggression toward you, including threatening, intimidating, stopping you without probable cause, or

using slurs?” These 4 items were selected because prior studies have utilized these 4 items as the primary exposure variables, aligning with established research conventions.^{6,39} Responses were recoded into a dichotomous variable reflecting any exposure to police violence.

Discrimination The shortened Everyday Discrimination Scale⁴⁰ was used as a continuous variable in this study to capture routine experiences of interpersonal discrimination. Responses to the 5-item scale are summed for a possible score of 20, with higher scores reflecting a higher number of discriminatory experiences and higher chronicity of these experiences. For the final analysis, the variable was dichotomized using the highest quartile with categories reflecting, (0) “Low,” and (1) “High” (highest 25% of score distribution).

Analytic Strategy

This study measures the past-year prevalence of PEs at the time of data collection. Our analytic approach consisted of exploratory steps before regression model building and analysis. The first step was an assessment of univariate descriptive statistics and bivariate correlational analyses between the theorized predictors and the dichotomized PE variable. Then, a series of bivariate logistic regression analyses were conducted, including individual predictors and the dependent variable. Finally, multivariable logistic analyses assessed the full and partial model, including the predictors and the dependent variable. To control for the possibility of collider bias, we reran the full logistic regression model with the exclusion of independent variables that may have reciprocal effects (ie, causality and reverse causality) with PEs, based on prior longitudinal cohort data; specifically, educational attainment, income, and substance use (see Table S2 for results).^{41,42} Excluding potential collider variables did not meaningfully affect the odds ratios or statistical significance of the remaining coefficients.

All analyses were assessed using STATA/BE 17.0. We first conducted bivariate correlational analyses of all predictors against the outcome using a series of *t*-tests for continuous predictors and chi-square tests for categorical predictors, along with descriptive statistics, including final sample means, frequencies, and standard deviations. A Pearson’s correlation analysis was conducted between all the variables to test for collinearity between the independent variables and evaluate relationships with the outcome variable (none were identified as collinear [$r \leq 0.80$, $P < .05$], Table S1). All predictors were subjected to bivariate logistic regression analyses with the dichotomized dependent variable. All independent variables, including demographics, may be indicative of marginalization or minoritization and, as such, are considered exposures of interest (rather than confounders) for analytic purposes.

The constructed full logistic model includes all hypothesized predictors. Statistical significance was reported based on a 2-tailed $\alpha = .05$.

Results

Descriptive Statistics

Table 1 presents the characteristics of our estimation sample of 1 555 participants. Participants in our sample were predominantly BIPOC (60.5%), cisgender (93.4%), heterosexual (74.2%), have achieved at least a high-school level of education (93.1%), and live in urban environments (42.3%). About a third of the participants in the sample have an income below \$20 000 (32.7%; median household income bracket of \$30 000 to \$39 999). Finally, a third of

the sample reports at least 1 incident of police violence in the past year (32.7%).

Bivariate Analysis

Table 1 also presents the bivariate results between our predictors and PEs. *t* tests and chi-square tests revealed significant unadjusted associations between several predictors and the dichotomous outcome. There were significant relationships found between race ($\chi^2(1, 1\ 555) = 32.38, P = .000$), gender ($\chi^2(1, 1\ 555) = 4.09, P = .04$), sexual orientation ($\chi^2(2, 1\ 555) = 5.62, P = .02$), household income ($\chi^2(1, 1\ 555) = 12.84, P = .00$), urbanicity ($\chi^2(1, 1\ 555) = 23.48, P = .000$), childhood abuse ($\chi^2(1, 1\ 555) = 184.47, P = .000$), childhood bullying ($\chi^2(1, 1\ 555) = 154.98, P = .00$), substance

Table 1. Descriptive Statistics of Estimation Sample by Psychotic Experiences (PEs)^a

	Total	Psychotic experiences (PEs)	
		None	One or more
Sample size (%)	1 555 (100)	866 (55.7)	689 (44.3)
Predictors (IV)^{b,c}			
Race ^{**}			
BIPOC	940 (60.5)	469 (49.9)	471 (50.1)
White	615 (39.6)	397 (64.6)	218 (35.4)
Gender [*]			
Cisgender	1 453 (93.4)	819 (56.4)	634 (43.6)
Transgender, nonbinary, etc	102 (6.6)	47 (46.1)	55 (53.9)
Sexual Orientation [*]			
Heterosexual (Straight)	1 154 (74.2)	663 (57.4)	491 (42.6)
LGBQ+	401 (25.8)	203 (50.6)	198 (49.4)
Education status			
Completed high school	1 448 (93.1)	814 (56.2)	634 (43.8)
Did not complete high school	107 (6.9)	52 (48.6)	55 (51.4)
Household income ^{**}			
\$20k and above	1 047 (67.3)	616 (58.8)	431 (41.2)
Below \$20k	508 (32.7)	250 (49.2)	258 (50.8)
Community setting ^{**}			
Urban	658 (42.3)	333 (50.6)	325 (49.4)
Rural	346 (22.3)	181 (52.3)	165 (47.7)
Suburban	551 (35.4)	352 (63.9)	199 (36.1)
Childhood abuse (ACEs) ^{**}			
High ACE scores	429 (27.6)	120 (28.0)	309 (72.0)
Childhood bullying ^{**}			
High bullying score	363 (23.3)	99 (27.3)	264 (72.7)
Substance use ^{**}			
High substance use	467 (30.0)	166 (35.5)	301 (64.5)
Police violence (past year) ^{**}			
No incidents	1 047 (67.3)	690 (65.9)	357 (34.1)
One or more incidents	508 (32.7)	176 (34.6)	332 (65.4)
Perceived discrimination ^{**}			
Low	1 143 (73.5)	745 (65.2)	398 (34.8)
High	412 (26.4)	121 (29.4)	291 (70.6)

^aObservations with incomplete data are excluded from the estimation sample. Numbers represent *n* (with percentages in parentheses) or means (with standard deviations in parentheses).

^bBivariate statistical significance tests were conducted using chi-square tests for categorical predictors or *t* tests for continuous predictors against the outcome variable. Asterisks denote significant associations: * $P < .05$ and ** $P < .01$.

^cAbuse, bullying, substance use, and discrimination scores fall approximately within the highest quartile of the distribution for the respective variable.

use ($\chi^2(1, 1\ 555) = 109.77, P = .000$), police violence ($\chi^2(1, 1\ 555) = 135.42, P = .000$), discrimination ($\chi^2(1, 1\ 555) = 157.38, P = .000$), and having psychotic experiences in the past year.

Compared to their respective counterparts, a higher proportion of participants who were BIPOC (50.11%, $n = 471$), transgender (53.92%, $n = 55$), LGBQ+ (49.40%, $n = 198$), had low income (50.80%, $n = 258$), lived in urban environments (49.40%, $n = 325$), experienced high amounts of childhood abuse (72.0%, $n = 231$) and bullying (72.70%, $n = 264$), had high reported substance use scores (64.50%, $n = 301$), and reported police violence (65.40%, $n = 332$) indicated that they had PEs in the past year. Additionally, a higher proportion of participants with especially high amounts of perceived discrimination reported PEs in the past year (70.6%, $n = 291$). Education status was not significantly associated with PEs.

Regression Analysis

Bivariate and Multivariable Logistic Regression Models **Table 2** presents the results of a full multivariable logistic regression model, which exhibits significant relationships between the predictors and outcomes when controlling for all other factors in the model.

Participants who identify as BIPOC have 60% higher odds of reporting PEs in the past year (OR 1.60; 95% CI, 1.27–2.03; $P = .003$). Experiencing high amounts of child abuse is associated with 116% higher odds of reporting PEs in the past year (OR 2.16; 95% CI, 1.60–2.94; $P = .000$). Participants who have experienced high amounts of bullying in their childhood have 89% higher odds of reporting PEs (OR 1.89; 95% CI, 1.36–2.61; $P = .000$). Participants who report high frequency of substance use have 51% higher odds of reporting PEs (OR 1.51; 95% CI, 1.15–1.99; $P = .003$). Participants who had at least 1 experience of police violence in the past year have 52% higher odds of reporting PEs (OR 1.52; 95% CI, 1.16–2.00; $P = .003$). Participants with higher amounts of perceived discrimination have 177% higher odds of reporting PEs in the past year (OR 32.77; 95% CI, 2.12–3.63, $P = .000$). Urbanicity, sexual orientation, gender, and income were not found to have statistically significant associations with PEs.

We also present the marginal effects of the full multivariable logistic regression model for further interpretation of our results. The average predicted probability of reporting PEs in the past 12 months is 44%. On average, the probability of reporting PEs is 9% higher for BIPOC ($P = .000$), 15% higher for those who experienced high amounts of child abuse ($P = .000$), 12% higher for people who have experienced high amounts of childhood bullying ($P = .000$), 8% higher for participants with a high frequency of substance use ($P = .002$), 8% higher for those who reported police violence in the past year

($P = .002$), and 20% higher for those with higher amounts of perceived discrimination ($P = .000$).

Discussion

Main Findings

This study aimed to replicate and expand upon prior findings on social defeat and psychosis and to examine whether this hypothesis is sufficient to understand social risk for psychosis in the United States, or if it may need to be revised to consider and include structural and systemic factors in this context. Our main findings were primarily consistent with the previous European social defeat literature, and with prior epidemiological studies in the United States, indicating that specific factors potentially indicative of social defeat predict PEs in the United States. ^{1,2,5,6,9,10,17,18,23,24} Specifically, individuals with high levels

Table 2. Results of Multivariable Logistic Regression Model^a

	Full multivariable model	
	OR [95% CI]	P
Race		
White (Ref.)		
BIPOC	1.60 [1.27–2.03]	.003
Gender		
Cisgender (Ref.)		
Transgender, NB, unsure	1.07 [0.64–1.79]	.78
Sexual orientation		
Heterosexual (Ref.)		
LGBQ+	1.12 [0.84–1.49]	.44
Education status		
Completed high school (Ref.)		
High school incomplete	1.11 [0.71–1.73]	.67
Household income		
≥ \$20 000 (Ref.)		
< \$20 000	1.16 [0.91–1.49]	.23
Community setting		
Urban (Ref.)		
Rural	.93 [0.69–1.25]	.63
Suburban	.77 [.59–.99]	.05
Childhood abuse		
Low child abuse scores (Ref.)		
High child abuse scores	2.16 [1.60–2.94]	.000
Childhood bullying		
Low bullying scores (Ref.)		
High bullying scores	1.89 [1.36–2.61]	.000
Substance use		
Lower substance use frequency (Ref.)		
High substance use frequency	1.51 [1.15–1.99]	.003
Police violence		
No incidents (Ref.)		
At least 1 incident	1.52 [1.16–2.00]	.003
Perceived discrimination		
Low < 11 (Ref.)		
High ≥ 11	2.77 [2.12–3.63]	.000
Likelihood ratio	359.24	

^aNumbers represent odds ratios with respective confidence intervals in brackets. Blank rows indicate reference groups.

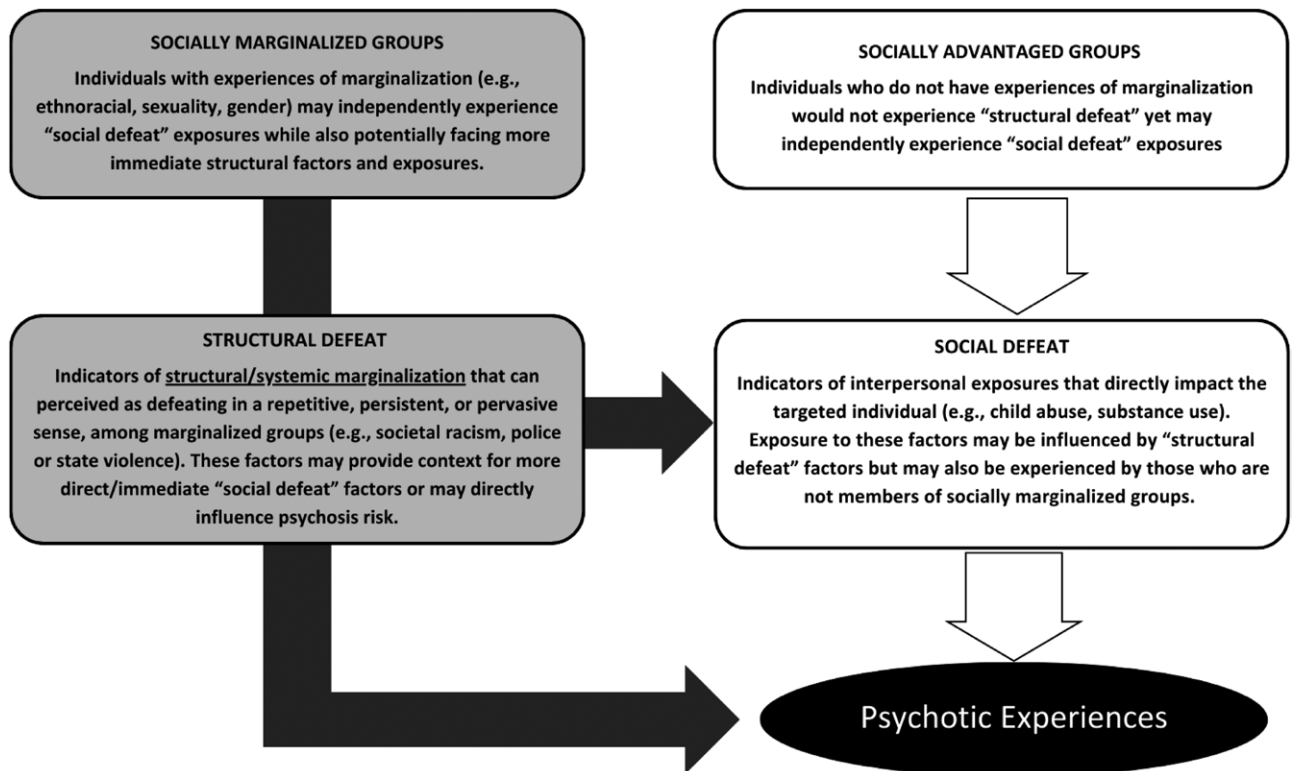


Figure 1. Preliminary Conceptual Model of an Expanded “Structural and Social Defeat Hypothesis.” In this framework, structural defeat may exert a direct influence on psychosis risk (long black arrow) or increase the likelihood of exposure to social defeat factors, which in turn may increase psychosis risk (short black arrow). Individuals from nonmarginalized groups may still experience psychosis risk due to exposure to social defeat factors, despite lack of exposure to structural defeat (white arrows).

of childhood trauma, high substance use, experiences of discrimination, and ethnoracially marginalized individuals (BIPOC) had substantially increased odds of reporting psychotic experiences. This pattern aligns with key factors in the social defeat hypothesis² and with findings on police violence, which has previously been shown in the United States.^{6,17,24} but rarely studied in Europe. The present study did not find significant associations between PEs and urban living, gender identity, sexual orientation, income, and education status.

Consistency With the Social Defeat Hypothesis

Despite contextual variation with respect to variables such as police violence, the broad alignment of this study’s results with prior literature on social defeat in the European context affirms the value of the social defeat hypothesis as a potential mechanism linking disparate social risk factors for psychosis. However, the predominance of structural/systemic risk factors in our adjusted models, including (1) identity with an ethnoracially marginalized group (which may be considered a proxy for racism)⁴³ and (2) exposure to police violence suggest a central role to structural/systemic factors that may not be fully captured by the social defeat hypothesis’ emphasis on individual-level interpretation or experience (Figure 1). This is supported by prior US studies showing that

individual-level exclusion is frequently tied to race/ethnicity and appears to be strongly driven by systemic and structural factors.^{5,6,9,10,17,18}

Moreover, it is essential to weigh the relative merits of understanding psychosis etiology through the existing social defeat hypothesis and adapting it for contexts more defined by systemic and structural factors, rather than relying solely on broader theories outside of psychosis (eg, Minority Stress Theory) that integrate structural considerations. While the work of theories like minority stress provides crucial context, it is equally important—as with any foundational theory—to examine social defeat’s origins, and the underlying assumptions of its framework. Social defeat has been widely used in psychiatry for over 2 decades, and while it offers significant strengths, it also poses a substantial risk of overlooking broader systemic implications. In short, it is critical to recognize the ways that history and structural context shape the conditions we study. This consideration is vital in determining how we apply the social defeat framework and whether it would benefit from further refinement or contextualization.

The US Context: Specific Results of Interest

Recent conceptual work in the United States has centered the role of racism as a primary social driver of psychosis

risk,^{5,19,44–46} which has been supported through meta-analysis.^{10,21} Our results support the argument for the centrality of racism and related factors by identifying race, discrimination, and police violence exposure as key correlates of psychotic experiences in our adjusted models. Examining police violence within the American context is frequently overlooked in epidemiologically but conceptually critical as a mechanism through which structural racism operates in the United States.^{23,25,47} The United States has a distinctive history linking the origins of policing to chattel slavery (eg, slave patrols and Black codes) and the direct historical linkages to discriminatory groups such as the Ku Klux Klan.^{26,48–50} As a result, socially marginalized groups in the United States are often portrayed as greater “threats” to public safety,^{51–53} a portrayal especially salient for Black and Latine populations, who disproportionately experience police violence (and its mental health sequelae) in the United States compared to non-Black/Latine populations.^{54–57}

Notably, the significant association between racial identity and PEs, even adjusting for police violence exposure and discrimination, suggests that the influence of racial inequities on mental health outcomes extends beyond that which could be explained by those specific factors, as has been suggested in recent theoretical work.⁵ It is crucial to clarify the interpretive context, here, particularly when assessing whether an individual perceives their experience as defeatist; care must be taken to avoid conflating identifying as BIPOC with experiencing ethnoracial marginalization more broadly as inherently defeatist. This highlights the need to integrate measures such as police violence into US-specific studies, as these measures help account for structural considerations and the broader context of how police violence impacts ethnoracially marginalized individuals; it also suggests the need to expand our concept of “social defeat” to provide greater emphasis on power structures and systemic oppression. While the end result of these power structures may be a feeling of defeat, and it is tempting to embrace the simpler model in accordance with parsimony, to leave structural factors out of the model obscures *why* factors such as ethnoracial marginalization may be experienced as defeatist and therefore places the onus for change on the individual rather than on society. As such, understanding the broader historical context of structural racism embedded in US policing is essential for comprehending the dynamics between police violence and racial identity as predictors of increased PEs, and avoids inappropriately concluding that either of these factors can be intervened with independently, particularly at the individual-level, without also addressing the structural context of the other.

Social Defeat in Context: Toward a Structural Defeat Framework?

To advance applications of social defeat, researchers must consider individuals within the historical context of their environment and examine how structural and systemic

inequities—particularly those unique to the United States—aggregate over time to shape an individual’s current experience of defeat. Furthermore, integrating structural considerations into social defeat also helps to address critical issues concerning perception and resilience.^{58,59} While social defeat posits incorporating the idea of navigating high levels of “social competition” in examining social exclusion, there is limited direct consideration of how external power structures shape dominant perspectives on social hierarchies and the ways that this, in turn, can influence individuals’ perception of something as “defeatist” or not. As such, we propose that the systemic/structural influences that are indeed implied by the social defeat hypothesis be given due and equal consideration as the individual-level experience of defeat. Potential discrepancies between external and internal perceptions of discrimination and exclusion must be accounted for in analyses utilizing social defeat, emphasizing the importance of “structural defeat” as a distinctive pathway underlying systemic marginalization. Finally, while some structural factors in the model (eg, urban living, gender, sexual orientation, income, and education) were not significantly related to PEs, it is possible that the effects of these variables manifest through more proximate pathways, such as discrimination, rather than operating as direct predictors in our models. Given the complexity of structural influences, further research is needed to disentangle these relationships, and we see this as an important direction for future work.

Limitations

This study should be considered an initial exploration of a novel expansion of the social defeat hypothesis, and as such has several potential limitations. This study was conducted via online survey and in English, which may exclude those who do not have limited English literacy and access to reliable internet, although this conceptually may have conservatively biased our analyses toward underestimates of the effects of social adversity rather than toward false positives. As with all self-report survey data, responses may be influenced by recall bias (particularly for childhood exposures, eg, bullying) and social desirability biases (particularly for stigmatized symptoms and experiences, eg, psychotic symptoms or police violence), which may contribute to underestimation of prevalence rates but would not be expected to meaningfully influence associations between exposures and outcomes. Additionally, while we assessed discrimination using the EDS, this may not have been sensitive to more structural forms of discrimination (eg, Major Experiences of Discrimination, such as being denied a bank loan),⁶⁰ which should be assessed in future studies of structural risk for psychosis in the United States. However, research exhibits inconsistent reporting when using the Major Discrimination scale among populations particularly relevant to the present study’s sample (Black, younger adults, and low income).⁶¹

Furthermore, the proportion of participants with clinically significant psychotic experiences is unclear, as prevalence estimates captured by the WHO CIDI psychosis screener³¹ may result from normative experiences being conflated with concerning ones,³² although risk factors for psychosis, and clinical/functional correlates, are typically consistent across the spectrum of psychosis severity, including the preclinical range.²⁹ Future studies examining the social defeat hypothesis should additionally consider qualitative methods for a more narrative, in-depth exploration of the experience of “defeat” and its social and societal drivers, and use multilevel quantitative approaches to statistically differentiate the impact of structural and individual-level exposures. In particular, a more complete test of the hypothesis presented here will require primary data collection at multiple levels of exposure to potentially defeating factors, which can then be modeled independently using hierarchical approaches to determine the relative contribution of individual-level and societal-level risk exposure. Recent studies have increasingly taken this approach, and synthesis of this emerging literature will be able to further inform the relative contribution of structural and individual level factors in the future.^{62,63,64}

Conclusion

While numerous European studies have used social defeat to look at risk factors for psychosis, this study’s results highlight some US-context-specific inconsistencies in risk factors such as police violence. Returning to our original question of how researchers might differentially operationalize social defeat and consider its implications, our results reinforce the need to encompass structural determinants at the root of factors that may be individually experienced as social defeat. Given this complexity, a critical reconceptualization of social defeat must be grounded in theories that address and account for the influence of multiaxial systems of power and oppression when understanding defeat as a predictor of psychotic experiences, in order to encourage the development of interventions that address societal contributors (as well as individual-level mechanisms) to psychosis risk. The explication of specific pathways connecting structural and social defeat to psychosis may be a promising direction for future research that may in turn guide public health interventions. The US context illustrates the ways dominant ethnoracial groups inherently carry power and privilege that make them less susceptible to certain risk factors than others, and that the burden of “defeat” bestowed by potentially defeating risk factors is not shared equally.

Supplementary Material

Supplementary material is available at <https://academic.oup.com/schizophreniabulletin>.

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