



Recent Incarceration and Other Correlates of Psychological Distress Among African American and Latino Men Who Have Sex with Men

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Abstract

There is a dearth of research on the intersection of incarceration and psychological distress among men who have sex with men including African American (AAMSM) and Latino MSM (LMSM), populations which bear a large burden of HIV in the U.S. Recent incarceration is an important context to examine psychological distress given the critical implications it has on health outcomes. Using baseline data from the Latino and African American Men's Project (LAAMP), a multi-site randomized HIV behavioral intervention trial, this paper examined the association between previous incarceration within the past three months (i.e., recent incarceration) and psychological distress in the past four weeks, assessed by the Kessler Psychological Distress Scale (K10). Among 1482 AAMSM and LMSM (AAMSM: 911, LMSM: 571), we found 768 (52%) were previously incarcerated, but not in past three months and 138 (9.3%) had been recently incarcerated. After adjusting for race, education, access to resources, current living arrangement, HIV status, and substance use, participants who had been recently incarcerated were more likely to have mild psychological distress i.e., K10 score 20–24 (aRRR: 1.43, 95% CI 1.20, 1.71) or severe psychological distress, i.e., K10 score > 30 (aRRR: 1.89, 95% CI 1.22, 2.93) in the past four weeks than those never incarcerated and those previously incarcerated, but not in past three months. Our findings have implications for mental health and HIV prevention services for AAMSM and LMSM with previous incarceration within the past three months.

Keywords HIV prevention · Incarceration · Men who have sex with men · Mental health · Psychological distress

Background

While the U.S. correctional system has seen population declines since 2008, African American and Latino populations continue to represent more than half of adults incarcerated (Karstedt et al., 2018). There continues to be an expanding population of minority men who have previously experienced incarceration (Phelps, 2017). Among African American males, an estimated 33% report a felony conviction charge in their lifetimes, and 15% have ever been to prison; data among Latinos are lacking due to failures to collect and report ethnicity data (Shannon et al., 2017). Sexual minority men are also negatively impacted by incarceration. Gay and bisexual men are three times as likely to be incarcerated compared to general U.S. adult population (Meyer et al., 2017). Typically, the time leading up to incarceration is predicated by a series of stressful events including interactions with police, arrest, and conviction that may impact mental health (Constantine et al., 2010; Rich & Grey, 2005). Thus, incarceration often manifests as

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a significant life event that may lead to negative physical and mental health outcomes (Decker et al., 2015; Fazel et al., 2016; Jäggi et al., 2016). Prior studies indicate an elevated risk of mortality after incarceration (Binswanger et al., 2013; Lim et al., 2015), particularly in the immediate weeks after release (i.e. recently incarcerated individuals). Two of the leading causes of death post-release from correctional settings are mental health-related, i.e., suicide and drug overdose (Barry et al., 2018; Merrall et al., 2010). Understanding mental health outcomes of those previously incarcerated may have important implications for mental health and HIV prevention services.

Incarcerated populations often face an intersection of multiple health conditions including a greater prevalence of psychological distress, substance use, and HIV than their peers (Baidawi, 2016; Wildeman & Wang, 2017). Psychological distress measures assess for anxiety and depressive symptoms and high reported levels can warrant clinical assessment and treatment (Drapeau et al., 2012). The prevalence of psychological distress among the general U.S. population is about five percent (Bronson & Berzofsky, 2017; Ronald C Kessler et al., 2003a, 2003b). According to the Bureau of Justice Statistics, 26% of people incarcerated in jail and 14% in prison reported psychological distress in the past 30 days (Bronson & Berzofsky, 2017). While African American and Latino men have similar and often lower rates of mental disorders than white men, the clinical onset and impact is often more persistent among minorities (Blumberg et al., 2015; Budhwani et al., 2015). Several factors can negatively impact the psychological wellbeing of people who have experienced incarceration (Jäggi et al., 2016; Wolff & Caravaca Sánchez, 2019). Although there is evidence that incarceration can improve the physical health of some individuals (e.g., HIV care provided during incarceration) (Iroh et al., 2015; Mohan et al., 2018; Schneider et al., 2017), data suggest that incarceration can exacerbate mental disorders upon release (Western et al., 2015; Wildeman & Wang, 2017). Incarceration may contribute to disparities in mental disorders such as psychological distress (Begun et al., 2016; Hatzenbuehler et al., 2015; Matejkowski & Ostermann, 2015) among racial and sexual minority men, particularly African American men who have sex with men (AAMSM) and Latino MSM (LMSM) (Iroh et al., 2015; Latkin et al., 2012; Milloy et al., 2014; Wilson et al., 2014). Individuals with prior incarceration are disproportionately at risk for HIV infection (Barnes & Meyer, 2012) and estimates suggest a 50% lifetime risk of HIV infection among AAMSM and 25% among LMSM; in contrast, the lifetime risk for HIV acquisition among white MSM is 9% (Hess et al., 2017).

There is a need to expand research on mental disorders, including psychological distress among AAMSM and LMSM to inform future programs that can improve access

of mental health services among AAMSM and LMSM populations, particularly those with experiences of adversity such as incarceration (English et al., 2018). Much of the literature on formerly incarcerated individuals has focused on all-cause mortality (Zlodre & Fazel, 2012), substance use (Binswanger et al., 2013; Chang et al., 2015; Fazel et al., 2017) and experiences of violence (Hotton et al., 2019; Lim et al., 2012). Little is known about the impact of incarceration on psychological distress among sexual minority men including AAMSM and LMSM (Barragán et al., 2018; Quinn et al., 2016). To address this gap, the goal of the current paper is to examine the association between incarceration in the past three months (i.e., recent incarceration) and psychological distress in the past four weeks (i.e., recent psychological distress) among AAMSM and LMSM. We hypothesized that recent incarceration was significantly associated with elevated severity of recent psychological distress experienced by AAMSM and LMSM after incarceration.

Methods

Baseline data from the Latino and African American Men's Project (LAAMP), a Centers for Disease Control and Prevention (CDC)—funded multi-site randomized HIV behavioral intervention study of 1482 (AAMSM: 911, LMSM: 571) were analyzed. AAMSM were enrolled from Baltimore, Chicago, greater Milwaukee region, greater Detroit region, and New York City. LMSM were enrolled from Miami and New York City. Data reported here are from baseline interviews conducted from June 2007 through December 2009. This study was approved by institutional review boards at each of the study sites. Participants received tokens of appreciation and the amount varied by study site, ranging from \$25.00 to \$40.00.

Recruitment

The recruitment methods for the study have been previously documented (Zaller et al., 2017). Passive recruitment via flyers were utilized to engage potential participants. Local study staff informed organizations about the study and when possible posted flyers. Participants were recruited from gay bars, dance clubs, college campuses, health departments, community-based organizations that serve MSM populations as well as referrals from participants and local health providers. Recruitment flyers included the local study site name and a telephone number to call for screening. A brief screening was conducted to identify eligible men for the studies. Eligibility criteria included: (1) being at least 18 years of age; (2) identifying as African American or Hispanic/Latino; (3) having at least two sexual partners in the past three months (at least one of whom must have been male); and

(4) engaging in condomless anal sex with a man in the past three months. Participants were ineligible to participate if they identified as transgender, or did not reside in the cities of the study sites.

At the baseline visit, participants confirmed eligibility and provided written informed consent. Participants completed a behavioral assessment using audio computer-assisted self-interview (ACASI) technology. Following completion of the assessment, all participants received HIV risk-reduction counseling. A rapid HIV antibody test was offered if participants reported being HIV-negative or did not know their current HIV status. For the five African American sites, participants were required to take an HIV-test if they indicated their HIV-status as negative or unknown. If they provided documentation that they had been diagnosed with HIV infection, testing was not conducted. HIV-testing was available to all participants at the Latino sites, but it was not conditional for participation in the study. One of the goals at the Latino sites was to examine if participants took an HIV test after completing the intervention. Latino participants had to be 18 to 49 years of age and report being HIV-negative or unknown status during the eligibility screener. Preliminary positive rapid test results at the baseline visit were confirmed by Western blot testing. Newly diagnosed persons were referred to medical and social services. The full methods have been previously reported elsewhere (Latkin et al., 2012).

Measures

Psychological distress was assessed by the Kessler Psychological Distress Scale (K10) (Kessler et al., 2002), a 10-item scale of distress based on questions about anxiety and depressive symptoms experienced in the most recent four week period. The K10 is a screening instrument and practitioners should make a clinical judgment if an individual needs treatment (Kessler et al., 2002). The K10 has been used to assess psychological distress among AAMSM (Du Bois et al., 2018), Latinos (Chae & Ayala, 2010) as well as gay and bisexual men in the U.S. (Burgess et al., 2018). The K10 has demonstrated reliability and temporal stability in a variety of treatment and non-treatment seeking samples (R. C. Kessler et al., 2003a, 2003b). In the current sample, the K10 had a Cronbach's alpha of 0.91, indicating excellent reliability consistent with previous studies (Boone et al., 2016; Torres & Wallace, 2013). We added up the participant responses to the 10 questions in the K10, and constructed a four-level nominal variable using cut-off scores consistent with published literature (Kessler et al., 2002) to assess severity of psychological distress as follows: <20: likely to have no psychological distress; 20–24: likely to have mild psychological distress; 25–29: likely to have moderate

psychological distress, 30 and above: likely to have severe psychological distress.

History of incarceration was assessed by asking “have you ever spent at least one night in jail or prison?” If the answer was affirmative, participants were asked the follow-up question, “was this in the past three months” for the recent history of incarceration. A categorical variable of history of incarceration (never incarcerated; previously incarcerated but not in past three months; and previously incarcerated within the past three months) was created. Sociodemographic factors included age, race/ethnicity (Latino vs. African American), and education (Grade 12, GED or less vs. College, associate or technical degree). Access to resources in the household was assessed by asking the frequency (Never or once in a while vs. fairly often or very often) of not having enough money for rent, food or utilities, such as gas, electric and phone. Current living arrangement was assessed with response options “Your own house or apartment,” “Your parent(s) or another family member's house or apartment,” “At someone else's house or apartment”, “In a rooming, boarding, halfway house, or a shelter/welfare hotel,” “On the street(s) (vacant lot, abandoned building, park, etc.)” or “other.” Given the high rates of housing instability among criminal justice involved populations and racial/ethnic and sexual minority males, a binary variable for current living arrangement was constructed for living in own, family member's or someone else's house or apartment vs. others (Anderson-Carpenter et al., 2017). Current HIV status was assessed by one question “What was the result of your most recent HIV test before today?” For participants who never had an HIV test, their HIV status was coded as “unknown.”

Participants were asked about the frequency of substance use, including alcohol, marijuana, ecstasy, powdered cocaine, rock/crack cocaine, methamphetamines etc. The current analyses focused on frequent binge drinking and crack/cocaine use over the last three months. Frequent binge drinking was assessed using one of the items from the Alcohol Use Disorders Identification Test (AUDIT)-C (Frank et al., 2008) “Over the last three months, how often did you have six or more drinks on one occasion?” Frequency of crack/cocaine use was assessed by one question “Over the last 3 months, how often did you use powdered cocaine/rock or crack cocaine?” Response options for both questions being “never,” “less than once a month,” “once a month,” “2 or 3 days a month,” “once a week,” or “2 or 3 days a week.” If participant responded “once a week” or “2 or 3 days a week” to any of these questions, they were classified as frequent binge drinker or frequent crack/cocaine users. A four-level nominal variable was constructed as “0-not frequent binge drinker or frequent crack/cocaine user,” “1-frequent binge drinker, but not frequent crack/cocaine user,” “2- frequent crack/cocaine user, but not frequent binge drinker,” and

“3-frequent binger drinker and frequent crack/cocaine user” (Zaller et al., 2017).

Data Analysis

Bivariate associations between psychological distress and history of incarceration, sociodemographic characteristics, HIV status, and substance use were examined using chi-square statistics. Multinomial logistic regression models were used to assess the relative risk ratio (RRR) for participants previously incarcerated within the past three months for mild, moderate, or severe psychological distress as compared to those never incarcerated and those previously incarcerated, but not in past three months at baseline. Relative risk allows for the comparisons of probability of an outcome occurring within a group or subpopulation, while odds ratios compare the likelihood of an outcome between two groups (Anderson-Carpenter et al., 2017). Other covariates that were associated with psychological distress ($p < 0.05$) in the bivariate models were entered into a multivariate model. Generalized estimating equations (GEE) were used to account for clustering from the same study site. Statistical analyses were performed using Stata Version 15.0 (College Station, TX).

Results

Data from a total of 1,482 participants were included in the current analysis. Overall, 768 participants (52%) had previously been incarcerated, 630 (43%) had been incarcerated more than three months ago and 138 (9.3%) had been incarcerated in the past three months (i.e., recent incarceration). Among the 138 who were recently incarcerated, 32 (23%) were AAMSM and 106 (77%) were LMSM. Recent psychological distress was reported by 610 participants (41%), 270 participants (46%) reported that it was mild. Among the 138 participants with recent incarceration, 78 participants (57%) reported any recent psychological distress. Of the 1344 (90%) participants without recent incarceration, 532 (40%) reported any recent psychological distress. Participants' socio-demographic and behavioral background information is provided in Table 1.

Results of the adjusted multinomial logistic regression model are presented in Table 2. After adjusting for race, education, access to resources, current living arrangement, HIV status, and substance use, participants who had recent incarceration were more likely to have mild recent psychological distress, (aRRR: 1.43, 95% CI 1.20, 1.71) or severe recent psychological distress, (aRRR: 1.89, 95% CI 1.22, 2.93) than those never incarcerated. As compared to those who never or once in a while had insufficient resources, participants with high frequency of insufficient money for rent,

food or utilities were more likely to have mild recent psychological distress (aRRR: 1.43, 95% CI 1.04, 1.98), moderate recent psychological distress (aRRR: 2.14, 95% CI 1.30, 3.54), or severe recent psychological distress (aRRR: 3.57, 95% CI 2.40, 5.32). African American race was associated with severe psychological distress (aRRR: 2.08 (1.05, 4.39) compared to those with Latino ethnicity. Participants with an unstable living environment were more likely to have severe recent psychological distress (aRRR: 1.79, 95% CI 1.14, 2.81) than those with stable living environment. In addition, college, associate or technical degree or higher was associated with moderate recent psychological distress (aRRR: 0.81, 95% CI 0.69, 0.96) and severe recent psychological distress (aRRR: 0.67, 95% CI 0.57, 0.80) than those with high school or lower education. Finally, frequent binge drinking use was associated with mild recent psychological distress (aRRR: 1.78, 95% CI 1.17, 2.73), moderate recent psychological distress (aRRR: 2.69, 95% CI 1.76, 4.11) and severe recent psychological distress (aRRR: 2.29, 95% CI 1.37, 3.82).

Discussion and Conclusions

Our findings contribute to a growing body of literature that indicate psychological distress has important implications for HIV prevention among MSM (Krueger et al., 2020) and particularly among AAMSM and LMSM with recent incarceration. Psychological distress has critical implications for physical health (Drapeau et al., 2012; Scott et al., 2016) and has been associated with antiretroviral adherence (Adewuya et al., 2010; Waldrop-Valverde & Valverde, 2005). These factors inform HIV outcomes and the physical health of these populations. Moreover, data suggests that most adults with mental health disorders in the U.S. do not receive the care they need with African Americans and Latinos utilizing mental health services at about one-half the rate of white Americans (SAMHSA, 2015). Previous studies have assessed psychological distress among AAMSM and among LMSM, but none within the contexts of recent release from incarceration (e.g., probation, parole, community re-entry). Incarceration has been found to negatively impact housing stability (Geller & Curtis, 2011) and economic stability (Harris et al., 2011; Sobol, 2017). Another finding from the current study is that participants who reported financial insecurity, housing instability, or substance use had a greater likelihood of having elevated severity of psychological distress. This is consistent with previous studies that have examined the intersection of mental health status, housing, and financial stability among those with histories of recent incarceration (Turney & Schneider, 2016). Differences in incarceration rates among AAMSM and LMSM could be informed by several individual, community and or structural

Table 1 Socio-demographic characteristics, psychological distress, and history of incarceration of 1482 Latino and African-American men who have sex with men (LAAMP)

	Total sample value* (n = 1482)	No psychological distress (n = 872)	Mild psychological distress (n = 279)	Moderate psychological distress (n = 167)	Severe psychological distress (n = 164)	p-value
<i>History of incarceration</i>						
Never incarcerated	714	464 (65%)	126 (17%)	69 (10%)	55 (8%)	
Previously incarcerated, but not in past 3 months	630	348 (55%)	120 (19%)	80 (13%)	82 (13%)	
Previously incarcerated within the past 3 months	138	60 (43%)	33 (24%)	18 (13%)	27 (20%)	<0.001
<i>Race/ethnicity</i>						
Latino	571	376 (66%)	94 (16%)	61 (11%)	40 (7%)	
AA/Black	911	496 (54%)	185 (20%)	106 (12%)	124 (14%)	<0.001
<i>Age (years)</i>						
18 ≤ 24	288	161 (56%)	57 (20%)	38 (13%)	32 (11%)	
25–34	292	172 (59%)	55 (19%)	32 (11%)	33 (11%)	
35–44	504	297 (59%)	99 (20%)	56 (11%)	52 (10%)	
≥45	398	242 (61%)	68 (17%)	41 (10%)	47 (12%)	0.945
<i>Education</i>						
Grade 12, GED or less	793	433 (55%)	156 (20%)	97 (12%)	107 (13%)	
College, associate or technical degree	689	439 (64%)	123 (18%)	70 (10%)	57 (8%)	0.001
<i>How often was there not enough money in the household for rent, food or utilities</i>						
Never or once in a while	1162	738 (63%)	216 (19%)	116 (10%)	92 (8%)	
Fairly often or very often	320	134 (42%)	63 (20%)	51 (16%)	72 (22%)	<0.001
<i>Current living arrangement</i>						
House/apartment (own, family member's or some else's)	1273	772 (61%)	235 (18%)	138 (11%)	128 (10%)	
Rooming, boarding, halfway house/shelter/welfare hotel, street or others	209	100 (48%)	44 (21%)	29 (14%)	36 (17%)	0.001
<i>Sexual identity</i>						
Homosexual/gay/same gender loving	950	570 (60%)	173 (18%)	105 (11%)	102 (11%)	
Heterosexual/straight	47	25 (53%)	8 (17%)	7 (15%)	7 (15%)	
Bisexual	426	240 (57%)	91 (21%)	47 (11%)	48 (11%)	
Queer/not sure/ questioning/ other	59	37 (63%)	7 (12%)	8 (13%)	7 (12%)	0.743
<i>HIV status</i>						
Positive	426	219 (52%)	91 (21%)	59 (14%)	57 (13%)	
Unknown	394	227 (58%)	77 (19%)	39 (10%)	51 (13%)	
Negative	662	426 (64%)	111 (17%)	69 (10%)	56 (9%)	0.001
<i>Substance use</i>						
Not frequent binge drinker or frequent stimulant use (cocaine/crack)	1063	700 (66%)	181 (17%)	95 (9%)	87 (8%)	
Frequent binge drinker	181	84 (46%)	39 (22%)	31 (17%)	27 (15%)	
Frequent stimulant use (cocaine/crack)	166	66 (40%)	39 (23%)	31 (19%)	30 (18%)	
Frequent binge drinker and stimulant use	72	22 (30%)	20 (28%)	10 (14%)	20 (28%)	<0.001

*Chi-square statistics

Table 2 Adjusted multinomial logistic regression models for psychological distress among Latino and African-American men who have sex with men ($n = 1482$) (LAAMP)

	Mild psychological distress aRRR (95% CI)	Moderate psychological distress aRRR (95% CI)	Severe psychological distress aRRR (95% CI)
<i>History of incarceration</i>			
Never incarcerated	Reference	Reference	Reference
Previously incarcerated, but not in past 3 months	0.97 (0.84,1.13)	1.12 (0.73,1.74)	1.22 (0.85,1.75)
Previously incarcerated within past 3 months	1.43 (1.20,1.71)**	1.36 (0.69,2.69)	1.89 (1.22,2.93)**
<i>Race/Ethnicity</i>			
Latino	Reference	Reference	Reference
African American/Black	1.13 (0.78,1.64)	0.72 (0.25,2.11)	2.08 (1.05, 4.39)*
<i>Education</i>			
Grade 12, GED or less	Reference	Reference	Reference
College, associate or technical degree or higher	0.86 (0.64,1.16)	0.81(0.69,0.96)*	0.67 (0.57,0.80)**
<i>How often was there not enough money in the household for rent, food or utilities</i>			
Never or once in a while	Reference	Reference	Reference
Fairly often or very often	1.43 (1.04,1.98)*	2.14 (1.30, 3.54)*	3.57 (2.40, 5.32)**
<i>Current living arrangement</i>			
House/apartment (own, family member's or some else's)	Reference	Reference	Reference
Rooming, boarding, halfway house/shelter/welfare hotel	1.33 (0.71,2.50)	1.48 (0.84,2.62)	1.79 (1.14,2.81)*
<i>HIV status</i>			
Positive	Reference	Reference	Reference
Unknown	0.83 (0.51,1.35)	0.67 (0.41, 1.10)	0.95 (0.37, 2.48)
Negative	0.75 (0.37,1.52)	0.53 (0.23,1.24)	1.12 (0.34, 3.72)
<i>Substance use</i>			
Not frequent binge drinker or frequent stimulant use (cocaine/crack)	Reference	Reference	Reference
Frequent binge drinker	1.78 (1.17,2.73)**	2.69 (1.76, 4.11)***	2.29 (1.37, 3.82)***
Frequent stimulant use (cocaine/crack)	2.00 (1.43,2.82)***	3.05 (2.09, 4.45)***	2.77 (2.27, 3.37)***
Frequent binge drinker and stimulant use	2.99 (1.32, 6.75)**	2.59 (0.78, 8.63)	4.36 (1.32,14.46)*

* $p < .05$ ** $p < .10$ *** $p < .001$

factors as study sites were located in differing U.S. jurisdictions (Whiteside et al., 2017). In community re-entry, social supports such as community health workers (Zaller et al., 2008) or peer navigators (Shangani et al., 2017) and culturally competent clinic environments (Grieb et al., 2018) may assist AAMSM and LMSM in addressing their mental health while building trust between these populations and their health care providers. Furthermore, studies have found those with co-occurring substance use and mental disorders are more likely to be re-incarcerated (Jaffe et al., 2012; Wilson et al., 2011). Individual stressors such as housing stability and financial stability may influence initiation of HIV risk behaviors or negative coping responses (i.e., substance use) (German & Latkin, 2012a, 2012b). Future educational and harm reduction programs for AAMSM and LMSM with history of incarceration should consider these factors (U.S. Department of Health and Human Services, 2021).

Despite these adverse outcomes for AAMSM and LMSM, evidence suggest improved or positive health outcomes are possible given the reduced burden of HIV seen among White MSM due to biomedical interventions (Whiteside et al., 2017). These disparities are longstanding and may have implications for resilience and resilience-based interventions among AAMSM and LMSM. Limitations of the current study should be noted. Participants were recruited using convenience sampling and thus may not be representative of AAMSM and LMSM communities in the study sites. The data presented are from a multi-site study of urban cities and therefore may not be representative of rural areas or other cities. The current study presents urban cities in the Northeast, Mideast, and South; thus, there is geographic diversity among the sample population. This study relied on participants' reports of their behaviors, which are subject to recall and social desirability bias. Cross-sectional data limit

our ability to draw a causal inference between incarceration and mental health. Focusing on recent psychological distress may not capture changes in mental health over time that predate the onset of incarceration. In addition, reasons for incarceration were not explored in the current study. An additional limitation of the study is that incarceration measure combines experiences in jails and prisons which are two very different settings. There also could be unique implications for AAMSM and LMSM who were incarcerated for various lengths of time. For public health interventions with limited resources, we need to identify sub-populations at elevated risk. Individuals who have experienced recent incarceration often face reduced social support (Cochran et al., 2016), family breakdown (Western et al., 2015), social rejection and stigma (Moore et al., 2013; Whiteside et al., 2017). The reported associations between recent incarceration and psychological distress in the past four weeks among AAMSM and LMSM suggests a need for targeted strategies to engage these populations with HIV prevention and mental health promotion.

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Data Availability Not applicable.

Declarations

Conflict of interest The authors declare that they have no competing interests.

Ethical Approval Institutional review boards at each of the study locations and the Centers for Disease Control and Prevention approved the questionnaire, data collection and study procedures.

Consent for Publication Not applicable.

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