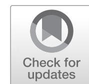

Discrimination, Prejudice, and Oppression and the Development of Psychopathology

Esha Vaid and Amy Hughes Lansing

Abstract

Experiences of discrimination, prejudice, and oppression across the life span have been evidenced to impact developmental processes, including the development of psychopathology. Potential mechanisms and links underpinning this impact were reviewed in this chapter. First, a developmental framework was reviewed to provide a life span developmental context to marginalization experienced by children and their parents. Experiences of discrimination, prejudice, and oppression were also conceptualized within previously studied stress models, including the diathesis-stress model and biopsychosocial stress processes. Then important biological and psychosocial mechanisms were discussed. This review highlights the importance of examining marginalization, as well as coping skills, formation of racial/cultural identity, and institutionalized/systemic marginalization from a developmental psychopathology perspective. Future directions proposed include conducting research that examines the impact of discrimination, prejudice, and oppression from an intersectional perspective, which incorporate an individual's culture, multiple identities, and statuses in addition to biosocial systems that explain trajectories of risk and resilience of psychopathology.

Keywords

Discrimination · Prejudice · Stress · Developmental psychopathology

Discrimination, Prejudice, and Oppression and the Development of Psychopathology

Discrimination, prejudice, oppression, and related experiences across childhood, adolescence, and adulthood are known to play a key role in human development and health disparities, including the developmental of psychopathology (Stuber, Meyer, & Link, 2008). In this chapter, we will discuss evidence supporting the ways in which perceptions of discrimination, prejudice, and oppression in ethnically and racially marginalized groups contribute to the development of psychopathology. First, we will describe discrimination, prejudice, and oppression and provide a developmental context for considering the experience of marginalization across the life span. We will also introduce the diathesis-stress model, which is frequently used

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to link discrimination, prejudice, and oppression with impairments in health in ethnically and racially marginalized groups. Second, we will discuss evidence linking perceived discrimination, prejudice, and oppression with psychopathology in multiethnic children, adolescents, and adults. Third, we will describe research that has begun to elucidate the biopsychosocial stress processes that link perceptions of discrimination, prejudice, and oppression with the development of psychopathology across the life span. Finally, we will draw conclusions from this evidence and discuss future directions for research examining discrimination, prejudice, and oppression and the development of psychopathology in ethnically and racially marginalized groups.

Discrimination, Prejudice, Oppression, and Psychopathology

Discrimination, prejudice, and oppression may be key to understanding disparities in the development of psychopathology in marginalized groups, i.e., groups that are kept in an unimportant, peripheral, or powerless position in society. Prejudices, biased attitudes and beliefs about an individual's characteristics that are based on their social group, discrimination, engaging in biased behaviors that are based on those prejudices, oppression, and institutional and systemic social inequalities comprised of discrimination and prejudice all contribute to the daily lived experiences of marginalized individuals and groups (Stuber et al., 2008). Perceptions of discrimination, prejudice, and oppression are theorized to influence the development of psychopathology via changes in psychological, biological, and social stress processes across the life span, and we will discuss these mechanisms throughout this chapter.

Developmental Context of Discrimination, Prejudice, and Oppression

As we consider the role of discrimination, sigma, prejudice, and oppression in the development of psychopathology, it is critical to understand the age at which children first begin to understand and process the experience of discrimination, prejudice, and oppression, which provides a developmental time frame for this research. Children are able to develop an understanding of discrimination and prejudice at an early age (Quintana, 1998; Spears Brown & Bigler, 2005). For example, research suggests that exclusion based on membership of a social group is recognized as unfair by preschool-age children (Theimer, Killen, & Stangor, 2001). By elementary school age, children are able to define the word discrimination and are able to report experiencing discrimination (Verkuyten, Kinket, & van der Wielen, 1997). Further, among 10–12-year-old African American children, research has found that the majority report experiences of at least one incident of racial discrimination (Simons et al., 2002). Not only are school-age children able to define discrimination, but many children of marginalized groups report having experienced discrimination, prejudice, and oppression by middle school. Thus, children's experiences of discrimination, prejudice, and oppression may begin to influence developmental trajectories, including those related to psychopathology, at a young age.

At the same time, a key component of the child's developmental context also includes the parent. Parental experiences of discrimination, prejudice, and oppression will also affect the health of their children throughout development, possibly beginning at the earliest perinatal stages where stress is known to affect genetic and biological development (Dunkel Schetter & Tanner, 2012). Thus, links between discrimination, prejudice, and oppression and psychopathology can be considered from the developmental perspective of the child's perceptions of discrimination, prejudice, and oppression, as well as how parental experiences of discrimination, prejudice, and oppression may influence the health of the parent and, in turn, their child. As we explore the association of experiences of discrimination, prejudice, and oppression with the development of psychopathology and the biopsychosocial mechanisms that might explain those links in this chapter, it will be beneficial to keep both of these developmental perspectives in mind.

Diathesis-Stress Model

There is increasing research, largely grounded in the diathesis-stress model, that has examined and supported the link between discrimination, prejudice, and oppression and psychopathology in children and adolescents, as well as adults. The diathesis-stress model is highly relevant to perceptions of discrimination, prejudice, and oppression as those perceptions are known to exacerbate psychological and physiological stress systems. For example, merely the anticipation of potential experiences of prejudice has been found to lead to responses consistent with psychological stress (Meyer, 2003). Further, adolescents of all minority ethnicities in the U.S. report experiencing distress related to discrimination both from their peers and educational institutions (Fisher, Wallace, & Fenton, 2000). Research has also found that by middle childhood, biological changes to stress regulatory systems, such as changes in cortisol regulation, are associated with mothers' reports of racial and socioeconomic disadvantage (Tackett, Herzhoff, Smack, Reardon, & Adam, 2017). These findings highlight the importance of understanding how increased environmental stress related to experiences of discrimination, prejudice, and oppression might increase the risk for psychopathology. Specifically, the diathesis-stress model purports that perceptions of discrimination, prejudice, and oppression contribute to the onset and maintenance of psychopathology by increasing environmental stress in biologically vulnerable individuals from marginalized groups (Krieger, 1990). Research on this model has begun to identify multiple psychological, biological, and social stress processes that may mediate the link between discrimination, prejudice, and oppression and psychopathology.

Drawing on this diathesis-stress model research, we will first begin by describing studies that link perceptions of discrimination, prejudice, and oppression with psychopathology across the life span. Then we will discuss research that examines the biopsychosocial stress processes that have been found to link perceptions of discrimination, prejudice, and oppression with psychopathology. It should be noted that most of this research has used measures of perceived discrimination, prejudice, and oppression as research and theory suggest that perceptions of discrimination, prejudice, and oppression (as opposed to "actual experiences") are most proximal and relevant to individuals' experiences of stress and distress (Pascoe & Richmond, 2009). Further, this research has employed largely cross-sectional and longitudinal methodologies as experimental designs that subject youths to repeated discrimination across time to study specific causal downstream effects on the development of psychopathology would be unethical.

Perceptions of Discrimination, Prejudice, and Oppression and Development of Psychopathology Across the Life Span

Multiple studies have found a link between perceptions of discrimination, prejudice, and oppression and internalizing symptoms in youths and adults from ethnically and racially marginalized groups. For example, in a sample of African American adolescents, perceptions of racial discrimination were linked with lower levels of psychological functioning, including increased perceived stress, increased depression symptoms, and poorer general psychological well-being (Sellers, Copeland-Linder, Martin, & Lewis, 2006). Similar evidence has also been found in African American boys where perceived experiences of racism have been linked with internalizing symptoms broadly (Nyborg & Curry, 2003) and with depressive symptoms specifically (Simons et al., 2002). Additionally, research in a sample of Puerto Rican adolescents found associations between perceived discrimination and both increased depression and stress (Szalacha et al., 2003). Research also suggests that some ethnic groups may be at greater risk. For example, Caribbean Black youth in the US evidence greater vulnerability to depressive symptoms when reporting greater perceived experiences of discrimination compared to African American and White American youth (Seaton, Caldwell, Sellers, & Jackson, 2008). Last, these associations with internalizing symptoms persist, with longitudinal

research examining Black, Latino, and Asian adolescents finding evidence that perceptions of discrimination from both peers and adults was associated with increased depressive symptoms across time (Greene, Way, & Pahl, 2006).

In addition, researchers have also linked perceptions of discrimination, oppression, and stigma with increases in externalizing behavior in young people. For example, in African American adolescent boys, perceived experiences of racism have been linked with not only internalizing symptoms but also increases in externalizing behaviors (Nyborg & Curry, 2003). Early perceptions of discrimination have also been linked with conduct disorder diagnoses in African American children (Gibbons et al., 2007). Among African American families, perceptions of racism have been linked to substance use in both parents and children in the family (Gibbons, Gerrard, Cleveland, Wills, & Brody, 2004). Perceptions of discrimination have also been linked with increases in violent behavior of female and male African American emerging adults (Caldwell et al., 2005). The diathesis-stress model theorizes that perceptions of discrimination, prejudice, and oppression may serve as catalysts for externalizing symptomatology (Gibbons et al., 2004). For example, increased stress might potentiate violent behaviors and substance use, and, in turn, these behaviors may be further reinforced by buffering the effects of stressful experiences.

Further, Prelow, Danoff-Burg, Swenson, and Pulgiano (2004) explored these same links while attempting to clarify if perceived discrimination or cumulative ecological risk (i.e., neighborhood disadvantage and ecologically salient stressful events) might each be uniquely linked with psychopathology in African American and European American adolescents. Cumulative ecological risk evidenced unique associations with internalizing and externalizing symptoms across both groups. However, in African American adolescents only, perceived discrimination moderated the link between ecological risk and externalizing symptoms, in particular delinquency. Higher perceived discrimination exacerbated the link between greater ecological risk and greater delinquency.

Research examining discrimination, prejudice, oppression, and psychopathology in adult populations supports the robustness of the link between perceptions of discrimination, prejudice, and oppression and psychopathology, as well as the likely continuity of the link between these perceptions and the development of psychopathology from childhood into adulthood. For example, perceptions of racism have been found to have both immediate and cumulative impacts on physical and mental health in African American adults (Jackson et al., 1996). Perceived racial discrimination has been suggested to significantly increase the likelihood of mental health symptomatology in marginalized adults including explaining upward of 15% of the variance in African American adults' psychopathology symptoms and increase psychopathology rates in Asian, Hispanic, and African American adults (Chou, Asnaani, & Hofmann, 2012; Klonoff, Landrine, & Ullman, 1999). A meta-analytic review of 138 empirical studies examining racism and health in adults noted consistent links between racism and negative mental health and health-related behaviors (Paradies, 2006). For example, greater perceptions of racism have been linked with both greater psychiatric symptoms and increased frequency of cigarette smoking (Landrine & Klonoff, 1996).

These findings linking perceptions of discrimination, prejudice, and oppression with internalizing and externalizing symptoms in childhood, adolescence, and adulthood support the importance of better understanding the developmental processes by which discrimination, prejudice, and oppression are linked with psychopathology in ethnically and racially marginalized groups. Specifically, research points to biopsychosocial stress processes as key mechanisms that might underlie links between discrimination, prejudice, and oppression and psychopathology.

Biopsychosocial Stress Processes Linking Discrimination, Prejudice, Oppression, and Psychopathology

Consistent with the diathesis-stress model, psychological perceptions of stress and changes in biological stress regulatory systems have been the primary foci of research examining biopsychosocial mechanisms that might explain the

link between discrimination, prejudice, and oppression and psychopathology. Psychological research on perceived stress has also examined intrapersonal, interpersonal, and institutional social factors that might exacerbate perceived stress in the context of experiences of discrimination, prejudice, and oppression, further increasing the risk for psychopathology. Factors examined in this research include poor coping skills, internalized discrimination, in which marginalized individuals internalize, and integrate into their own identity and schemas, the social biases (prejudice and discrimination) levied against their group, racial/cultural identity, how one develops their identity associated to their race and culture, impaired family and peer relationships, and institutionalized oppression, in which marginalization via methods of discrimination and prejudice occurs systemically at an institutional level, including employment and access to education and healthcare. Similarly, biological research on stress mechanisms linking discrimination, prejudice, and oppression and psychopathology has examined multiple mechanisms of risk, including cumulative changes in stress regulatory systems (i.e., allostatic load), impairment in specific stress systems (e.g., cortisol regulation, heart rate variability), and gene by environment interactions in genes associated downstream with stress regulatory systems. This research suggests that a complex, transactional, and biopsychosocial process must be further elucidated to better understand the stress mechanisms linking discrimination, prejudice, and oppression with psychopathology in ethnically and racially marginalized groups.

Psychological Mechanisms

With regard to perceived stress, research in African American children and adolescents has found that greater discrimination serves to increase the strength of the association between higher cumulative perceived stress and poorer psychological well-being (Murry, Brown, Brody, Cutrona, & Simons, 2001). Further, increases in perceived stress related to discrimination are also associated with increased anxiety and depression (Gaylord-Harden & Cunningham, 2009). Among Hispanic youth, increased acculturative stress, defined as the stress that is experienced by immigrants, refugees, and other nonnatives as they are adapting to the new surrounding cultures, is associated with both increased experiences of discrimination and greater symptoms of anxiety (Suarez-Morales & Lopez, 2009). In African American children, problems with emotion dysregulation, including increased feelings of anger and sadness, an overlapping construct with perceived distress, have also been found to explain the association between perceived discrimination and increased delinquency (Simons, Chen, Stewart, & Brody, 2003). Similarly, among African American adolescents, perceived discrimination and increased distress (measured as negative affect) have also been associated with increased affiliation with deviant peers and more frequent engagement in risky sexual behaviors (Roberts et al., 2012). In Black American adults, similar associations are found where perceived racial discrimination is associated with increased psychological distress and likelihood of experiencing depression (Brown et al., 2000). An ecological momentary assessment study in multiethnic adults also supported that even daily perceptions of discrimination are directly associated with known predictors of psychopathology, increased negative mood states, and negative interpersonal events at a daily level (Broudy et al., 2007). These findings support that perceived stress is a critical psychological mechanism linking discrimination, prejudice, and oppression and psychopathology.

Moreover, psychological research suggests that individuals' coping skills, self-control, internalization of discrimination, and formation of racial/cultural identity may serve to further mediate, buffer, or exacerbate the link between discrimination, prejudice, and oppression; perceived stress; and psychopathology. For example, among African American adults, research has found that the use of avoidance coping, i.e., making efforts to avoid dealing with or escape a stressor, in response to perceptions of race-related marginalization, was associated with exacerbations in race-related perceived stress, lower self-esteem, and poorer quality of life (Utsey, Ponterotto,

Reynolds, & Cancelli, 2000). Among African American adolescents, increased discrimination has been associated with reductions in self-control capacity, along with increased reports of anger and, in turn, increased substance use (Gibbons et al., 2012). Acceptance or internalization of negative stereotypes, commonly held and maintained in American culture, may also contribute to increased stress and psychopathology via increased negative self-evaluations (King, 2005; R. Williams & Williams-Morris, 2000). For example, among Latino adolescents, perceived ethnic discrimination in early high school predicted changes in self-esteem across high school and worse self-esteem for males, as well as increased depressive symptoms in early high school (Zeiders, Umaña-Taylor, & Derlan, 2013). Finally, among African American young adults, there is also evidence that low centrality of race to identity is associated with worse psychological well-being in part through exacerbations in perceived stress in response to discrimination (Sellers, Caldwell, Schmeelk-Cone, & Zimmerman, 2003).

There is also research to suggest that high-centrality race identity, positive race identity, and level of acculturation may be protective with regard to stress and psychopathology. For example, although African Americans who report higher centrality for race identity report more frequent experiences of discrimination, those experiences do not result in similar increases in perceived stress or impairment in psychological well-being (Hunter & Schmidt, 2010; Sellers et al., 2003). Similarly, among African American adolescents, the association between perceived discrimination and poor academic performance is buffered by a positive connection to racial identity (Wong, Eccles, & Sameroff, 2003). Among adults of Mexican origin, U.S. native vs. immigrant status moderated the link between acculturation and perceived discrimination, which in turn predicted depression symptoms, with high acculturation protective for native but not immigrant individuals and moderate acculturative stress a risk for U.S. native individuals (Finch, Kolody, & Vega, 2000). These studies support the importance of cognitive, behavioral, and emotional processes, such as coping skills, self-control, racial identity, acculturation, and internalized discrimination, in predicting and moderating the links between discrimination, prejudice, and oppression; perceived stress; and psychopathology. More research is needed to clarify how these processes function in different marginalized groups and across the life span in explaining psychopathology.

Social Mechanisms

Research also provides evidence that family and peer relationships, as well as institutionalized/systemic oppression, are intricately associated with stress and the development of psychopathology. For example, parental support was shown to buffer the association of perceived discrimination and increased anger in African American adolescents, where increased parental support was associated with lower anger and, in turn, decreased engagement in violent behaviors (Simons et al., 2006). Similarly, active parental communication about positive self-worth and interracial equality and coexistence, as well as family engagement in activities or behaviors involving the minority culture, were associated with enhanced academic achievement in African American adolescents, perhaps counteracting experiences of discrimination (Neblett, Philip, Cogburn, & Sellers, 2006). Research also suggests that problematic peer relationships might exacerbate the link between discrimination, prejudice, and oppression and externalizing behaviors. For example, early experiences of racial discrimination have been associated with increased cannabis use in adolescence, and this association is partially explained via increased affiliations with friends who also use drugs (Gibbons et al., 2007). Attentive parenting, though, may buffer the link between discrimination, greater affiliation with deviant peer groups, and greater engagement in risk behaviors (Roberts et al., 2012). Healthy interpersonal relationships may provide a buffer to the negative outcomes of discrimination, prejudice, and oppression, while unhealthy interpersonal relationships may exacerbate those problematic outcomes, including via

increased perceptions of distress or associated changes in behaviors (e.g., substance use) that are linked with psychopathology.

Moreover, institutional and systemic oppression in broader social ecosystems may serve to foment discrimination and prejudice and exacerbate the associations of those experiences with perceived stress and psychopathology (Pearlin, Schieman, Fazio, & Meersman, 2005). For example, research has suggested that observed disparities in the mental and physical health of Black and White Americans that are explained by discrimination and perceived stress are diminished in higher educated and higher income Black families (Williams, Yan Yu, Jackson, & Anderson, 1997). Disparities in the use of mental health services (i.e., less frequent access to services, greater use of emergency departments, and experiencing more coercive referrals) to prevent or treat psychiatric symptoms among minority individuals in the U.S. have also been linked to neighborhood poverty (Chow, Jaffee, & Snowden, 2003). Research also suggests that racial segregation, or separation based on race, above and beyond education and income, may further exacerbate health disparities for Black Americans (Subramanian, Acevedo-Garcia, & Osypuk, 2005). Systemically maintained differences in the socio-economic status of Black, and other minority groups, compared to White Americans may exacerbate the risk for psychopathology and limit access to preventive and treatment services. Although upward social mobility may buffer that risk, systemic oppression continues to limit opportunities for upward mobility by hindering access to important health resources and healthy living conditions that are associated with improved physical and mental health (R. Williams & Williams-Morris, 2000).

Further, there is also evidence that systemic oppression and family relationships interact across development in explaining adolescent psychopathology. In a longitudinal study of youths in families of Mexican origin, evidence was found that mothers' experiences of economic stress were associated with more harsh parenting style, which, in turn, was associated with greater externalizing problems for adolescents (White, Liu, Nair, & Tein, 2015). Similar associations were also found for fathers' experiences of economic and neighborhood stress, which led to decreased paternal warmth and greater internalizing problems for adolescents. Yet when mothers portrayed a strong orientation to the value of family, the association between experiences of economic pressure and changes in parenting style were decreased, providing a protection to the adolescent in terms of the development of psychopathology.

Psychosocial research clearly supports that perceived stress is a critical psychological mechanism linking discrimination, prejudice, and oppression and psychopathology; however, knowledge about key psychological and social factors that might exacerbate or mitigate that risk is more limited. Further research is needed to better elucidate the intrapersonal, interpersonal, and institutional/systemic social processes by which marginalized groups experience increased risk for psychopathology across the life span.

Biological Mechanisms

Research on changes in biological stress regulatory systems in marginalized individuals has also provided evidence for physiological pathways that link discrimination, prejudice, and oppression with the development of psychopathology (Berger & Sarnyai, 2015). For example, allostatic load is an index that is often used to measure cumulative dysregulation in biological stress regulatory systems. High allostatic load is theorized as a key mechanism underlying the development of psychopathology (Koss & Gunnar, 2018). By age 20, African American youths who have reported experiencing high levels of discrimination as adolescents evidenced elevated allostatic load, as indexed by impairment across cardiovascular, metabolic, immune, and neuroendocrine systems (Brody et al., 2014). Among African American adults, increased frequency of perceived everyday experiences of discrimination remain associated with increased allostatic load (Ong, Williams, Nwizu, & Gruenewald, 2017). Similarly, midlife African American women with less income and lower education are more likely

to experience discrimination and perceived stress and, in turn, greater allostatic load (Upchurch et al., 2015). Notably, the link between marginalization in adolescence and allostatic load in African American emerging adults was buffered by the provision of high levels of emotional support from parents and peers during the transition to emerging adulthood (Brody et al., 2014). This research suggests that transactional associations between discrimination, prejudice, and oppression, social support, and later health outcomes associated with high allostatic load will be important to elucidate in understanding how discrimination, prejudice, and oppression are linked with the development of psychopathology.

In addition, specific biological stress subsystems, including heart rate variability and patterns of cortisol regulation, have also been examined in marginalized populations toward understanding health disparities. For example, research has found that in young Latino children, economic hardship and acculturation interacted to predict average salivary cortisol levels, with greater economic hardship or low economic hardship, along with high acculturation associated with lower mean cortisol levels (Mendoza, Dmitrieva, Perreira, Hurwich-Reiss, & Watamura, 2017). Lower mean cortisol levels have been suggested to contribute to greater impairments in psychological functioning (Gunnar & Vazquez, 2001). In addition, research conducted in a sample of preschool-aged Hispanic children found that greater economic stress was associated to greater cortisol reactivity during a challenging task, suggesting impaired stress regulation, with the effect strongest for children of Hispanic immigrants, a population experiencing high levels of marginalization and economic stress (McFadyen-Ketchum et al., 2016). In African American young adults, a greater burden of discrimination has been associated with lower resting heart rate variability, an indicator of impairment in the responsivity of the stress regulatory system, which may exacerbate emotion dysregulation and psychopathology (Hill et al., 2017).

Last, evidence from gene by environment studies suggests that biological vulnerabilities in genes that affect the functioning of neural systems involved in the experience and regulation of stress interact with repeated discrimination, prejudice, and oppression to exacerbate the risk for the development of psychopathology. For example, the 5-HTTLPR gene is known to promote the encoding of proteins related to serotonin transportation and to impact social processing via the amygdala. Among African American adolescent males, individuals carrying the higher risk variants of the 5-HTTLPR gene (i.e., one or two copies of the short allele) evidenced stronger associations between perceived discrimination and conduct problems (Brody et al., 2011). Similarly, among multiethnic adolescent males, research found that gene polymorphisms associated with low MAOA enzyme production, which is involved in the processing of dopamine and serotonin and affects frontal neural processes, exacerbated the association between perceptions of prejudice and probability of being arrested, a key indicator of externalizing psychopathology in the youth (Schwartz & Beaver, 2011).

These findings from biological research suggest strong associations between discrimination, prejudice, and oppression and impairments in biological stress regulatory systems, which are then linked with impairments in physical and mental health (Causadias, Telzer, & Lee, 2017). These studies also highlight the role that genetic biological vulnerabilities might have in explaining differential susceptibility to the development of psychopathology in response to discrimination, prejudice, and oppression across childhood and adolescence. Although there are robust findings related to biological stress mechanisms, it is important to note that there are many subtle dimensions of the experience of discrimination, prejudice, and oppression that are not captured by biological metrics alone. For example, Brody et al., 2014, found that emotional support from family and peers might mitigate the effects of perceived discrimination on allostatic load. Thus, a multifaceted biopsychosocial approach to understanding discrimination, prejudice, and oppression and psychopathology is critical (Harrell, Hall, & Taliaferro, 2003; Lewis, Cogburn, & Williams, 2015).

Conclusions and Future Directions

Research on psychological perceptions of stress and biological stress regulatory processes support the diathesis-stress model, wherein increased stress is a key mechanism through which discrimination, prejudice, and oppression are linked with the development of psychopathology in ethnically and racially marginalized groups. In addition, this research suggests that individuals' coping skills, internalization of discrimination, and formation of racial/cultural identity, as well as family and peer relationships, and institutionalized/systemic marginalization also mediate and exacerbate the links between discrimination, prejudice, and oppression; increased perceived stress; changes in biological stress regulatory systems; and psychopathology. Although the focus of this chapter is on psychopathology outcomes, it is worth noting that changes in psychological and biological stress regulatory systems drive not only changes in psychopathology but also disparities in physical health (Everson-Rose et al., 2015), which may, in turn, place marginalized individuals at even greater risk for psychopathology.

Intergenerational Transmission of Risk for Psychopathology

Returning to the developmental context, not only is there evidence that discrimination, prejudice, and oppression affect perceived stress, biological stress systems, and psychopathology in children and adolescents—this process is simultaneously occurring among parents, too. Intergenerational transmission of risk for psychopathology is highly relevant to the study of discrimination, prejudice, and oppression and psychopathology (Bifulco et al., 2002; Goodman & Gotlib, 1999; Serbin & Karp, 2004). For example, in African American mothers, research has found that mothers' perceptions of discrimination were associated with increased stress-related health problems and symptoms of depression in mothers (Brody et al., 2008), as would be expected given the body of work reviewed above. Notably, those symptoms of depression in African American mothers were then, in turn, associated with greater impairments in parenting, a key contributor to intergenerational transmission of psychopathology (Hammen, Shih, & Brennan, 2004). Researchers have also theorized that stress experiences of marginalized groups, such as acculturation stress in first-generation Hispanic Americans, might explain intergenerational transmission of chronic health conditions via prenatal changes in fetal programming in metabolic, immune, and neuroendocrine systems (Fox, Entringer, Buss, DeHaene, & Wadhwa, 2015). Continued research on intergenerational transmission is needed to better understand how disparities in psychopathology and other chronic health conditions are transmitted via biopsychosocial mechanisms across generations in ethnically and racially marginalized families.

Future Directions

First, future research examining how discrimination, prejudice, and oppression lead to the development of psychopathology must continue to elucidate the complex, transactional, and developmental biopsychosocial mechanisms that confer risk or protection. In particular, there have been increased calls to examine not only discrimination, prejudice, and oppression but also culture and cultural identity from the developmental psychopathology perspective (Causadias, 2013). The developmental psychopathology approach examines the transactional associations of biological vulnerabilities, psychological functioning, and the environment across time to identify trajectories of risk and resilience for psychopathology (Cicchetti & Rogosch, 2002).

Second, beyond adopting a developmental psychopathology approach, future research should also aim to examine subgroup differences, as well as intersectionality in multiethnic groups, including differences by race/ethnicity, gender, and native vs. immigrant vs. refugee status, and for immigrants, the number of generations in the U.S. Causadias (2013) provides a framework for future developmental psychopathology research to address these complexities in the links between

culture and psychopathology. In addition, research must also expand to understudied groups. For example, research indicates that adolescent refugees in the U.S. also experience increased stress and psychopathology in response to experiences of discrimination, prejudice, and oppression; however, there are limited studies on biopsychosocial mechanisms in this group (Ellis, MacDonald, Lincoln, & Cabral, 2008).

Third, research should also aim to clarify the overlapping and unique processes that link discrimination, prejudice, and oppression and psychopathology to facilitate the development of tailored prevention and intervention programs. In this regard, there has been limited research on interventions that might directly combat the impact of discrimination, prejudice, and oppression on the development of psychopathology. However, social emotion learning and character development programs for minority and low socioeconomic status youths have been shown to provide resources to children and adolescents to better cope with and respond to experiences of marginalization by allowing them to better find and use their own voice. Although the extent to which these programs specifically address discrimination, prejudice, and oppression are not well documented, it has been noted that these programs are helpful for youths at risk of developing psychopathology (Kroeger et al., 2016; Sellman, 2009).

Fourth, the life span developmental context for discrimination, prejudice, and oppression and the development of psychopathology suggest that prevention and intervention approaches should begin early in life, perhaps even prenatally (Braveman & Barclay, 2009). For example, recommendations have been made for preventive interventions to limit health disparities for children to focus on increasing parents' behavioral skills for reducing their own and their child's stress, especially related to experiences of discrimination, prejudice, and oppression, rather than providing parenting education only (Finch et al., 2000). Preventive models in childhood should also focus on systemic or institutional oppression and barriers to upward social mobility. For example, food supplementation programs in schools have been shown to reduce the association between low socioeconomic status and a key developmental outcome linked with the development of psychopathology and poor academic performance (Weinreb et al., 2002).

Finally, given the likely importance of intergenerational transmission of disparities in psychopathology among ethnically and racially marginalized groups, research should also aim to enhance prevention among multiethnic parents with psychopathology (Beardslee, Gladstone, & O'Connor, 2011). Research on such programs is positive, suggesting that prevention is effective in reducing the development of psychopathology in youths (for a review, see Siegenthaler, Munder, & Egger, 2012), although adaptations may be needed to address parents' experiences specific to discrimination, prejudice, and oppression and related distress.

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