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# Prevention Science in Emerging Adulthood: a Field Coming of Age

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Emerging adulthood is commonly defined as the age period between the end of compulsory schooling and the onset of adult commitments such as gainful employment, permanent partnership, and parenthood (Arnett 2000, 2007). As a transitional period between adolescence and full adulthood, emerging adulthood is characterized by peak levels of risk-taking—such as binge drinking, illicit drug use, drunk or drugged driving, and casual sexual behavior (Claxton and van Dulmen 2013; Krieger et al. 2018; Li et al. 2016; National Institute on Drug Abuse 2017). Mental health problems, such as depression and suicidality, may also be prominent during emerging adulthood (Rohde et al. 2013; Salmela-Aro et al. 2008). These trends are worrisome and suggest that increased preventive attention is warranted for this age group. The present special issue reports a number of much-needed studies relevant to intervention development, delivery, and evaluation for emerging adults from a variety of backgrounds. Such an approach is essential if we are to recognize and attend to the escalations in risky behavior that occur during the emerging adult years. The strengths of prevention science, in terms of interrupting the progression of potentially harmful behaviors, dovetail well with emerging adulthood as a developmental context for such progression. We further discuss the developmental significance of emerging adulthood in the next section.

## Emerging Adulthood as a Context for Risky Behavior

Society provides normative expectations for adolescents (e.g., compulsory schooling) and for adults (e.g., full-time work, permanent partnership, parenthood), but such expectations are largely absent for emerging adults. To some extent, emerging adults exist within a social fog comprised of old expectations, new realities, and little guidance. Role transitions established in the mid-twentieth century, when most people married and entered the workforce shortly after finishing high school, have become increasingly delayed across a range of Western countries (Côté and Bynner 2008; MacMillan 2007). With the dramatic increase in professional and technological occupations requiring at least a bachelor's degree, and with the rising average age at first marriage and acceptability of premarital sex, an increasingly large gap has developed between the end of adolescence and the beginning of adulthood (see Schwartz 2016, for a review). This gap represents emerging adulthood in many Western contexts, and in an increasing number of non-Western contexts as well (at least for certain segments of the population; Arnett 2016). The amorphousness of emerging adulthood increases the importance of individualized decision-making and of finding one's way into adulthood—tasks at which some individuals are likely to be more successful than others (Nurmi 2005; Shirai et al. 2012). In turn, individuals who experience difficulties in developing a sense of identity that will guide them into adulthood may be most likely to engage in risky and reckless behavior (Schwartz et al. 2011). Unclear social expectations may also compromise the quality and availability of strong mentorship. A robust body of research has established a clear association between the resiliency of at-risk adolescents and emerging adults and the presence of at least on caring adult in their lives, who can provide sound guidance and support (e.g., Garmezy 1985; Greeson et al. 2010; Rhodes and Boburg 2009; Rutter 1987).

There is also evidence that brain development is incomplete during emerging adulthood (see Thompson Jr. 2014, for a review). The regions of the brain that are associated with desires and impulsivity are more developed than the regions that are associated with reasoned decision-making and future orientation—and development of executive functioning (reasoned problem solving and decision-making) is inversely linked with risk-taking behavior during this age period (Pharo et al. 2011). So societal, psychosocial, and biological factors may all be at least partially responsible for the peak levels of risk taking, and perhaps of suicidal behavior, in emerging adulthood.

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Certain segments of the population are likely to be most vulnerable to these problematic outcomes. Demographically speaking, certain ethnic and sexual minority groups may bear a disproportionate amount of the burden of risk-taking behavior and mental health problems. Regarding ethnicity, for example, although whites are more likely to use and abuse substances than other ethnic groups (Chen and Jacobson 2012), the consequences of substance use (e.g., arrests, car accidents, emergency room visits) are often more severe for non-white groups (e.g., Mulia et al. 2009). Hispanic emerging adults may be more likely than whites to engage in unprotected sex (Finer and Zolna 2011; Rangel et al. 2006) and to be killed in drunk-driving crashes (National Highway Traffic Safety Administration 2010). Suicidal ideations and attempts are higher among Hispanics—and especially Hispanic women—than among other ethnic groups (Zayas 2011). Further, among Hispanic and Asian American emerging adults, those who struggle with acculturation and experiences of discrimination may be more likely to drive drunk and to attempt suicide (Gomez et al. 2011; Hunter et al. 2006).

Sexual minorities are also more likely to experience negative behavioral health consequences in emerging adulthood. For example, Talley et al. (2010) found that sexual minorities engaged in more tobacco, alcohol, and marijuana use compared with their heterosexual counterparts. Haas et al. (2011) reviewed research indicating that sexual minority individuals were more likely than heterosexuals to attempt suicide. Further, specific groups of sexual minority emerging adults may be most at risk—such as those who are rejected by their families of origin (Ryan et al. 2009) and those who are bullied or victimized in middle and high school (Fish et al. this issue; Russell et al. 2011).

Other subgroups of emerging adults may also be at heightened risk for problem outcomes. Individuals who experienced adverse childhood experiences (Schilling et al. 2007), dropped out of high school (Maynard et al. 2015), or suffered from mental illness (Sheidow et al. 2012) are more likely than other emerging adults to engage in a wide variety of health-compromising behaviors. Further, the transition from high school to college is often associated with increases in alcohol and marijuana use (White et al. 2006).

Some knowledge has been accumulated about mechanisms and conditions that protect against health-compromising behavior in emerging adulthood. Although emerging adulthood represents a time of increased independence from family members, research indicates that parenting remains important. For example, parents' mentoring activities regarding alcohol can help to decrease the favorability of emerging adult college students' attitudes toward drinking (Ichiyama et al. 2009); and closeness to mothers and fathers was associated with lower levels of illicit drug use, casual sex, and impaired driving among an ethnically diverse sample of college students (Schwartz et al. 2009). Further, parental monitoring regarding emerging adults' drinking and drug use is protective against emerging adult engagement in these behaviors, but only in cases where the parent-emerging adult relationship was close and strong (Padilla-Walker et al. 2008).

Peers also contribute to risky behavior in emerging adulthood. Young people whose peer groups consider drinking to be central to the "peer group culture" are likely to drink heavily, whereas those whose peers disapprove of drinking are less likely to drink (Borsari and Carey 2006). Further, White et al. (2008) found that several types of social affordances predict alcohol use—peer alcohol use, peer approval of alcohol use, and social opportunities to drink with peers. In turn, peers may serve as casual, unprotected sex partners, especially under the influence of alcohol or drugs (Lyons et al. 2014). Suicidal and self-injurious behavior also often occurs within a peer context: many emerging adults reporting self-injuries attest that their friends engaged in these behaviors before they did, and/or that they engaged in self-injury with friends present (Heath et al. 2009). Thus, interventions that utilize the power that young people have in their social groups, and aim to shift peer norms and behaviors, may be essential if we are to improve the health and well-being of emerging adults at large. In particular, preventive interventions, applied at the population level, may draw on social ties to decrease the prevalence of risky behavior.

## Implications for Intervention

The current special issue provides some guidance regarding preventive interventions for emerging adults. College drinking interventions have perhaps the longest history of any emerging adult intervention modality (Carey et al. 2007). As a result, the majority of studies in this special issue do not focus on college populations. However, for college students, who tend to engage in more problematic drinking and drunken driving compared with their non-college counterparts (Bingham et al. 2005; White et al. 2006), university-sponsored alcohol-free programming may help to reduce alcohol use (Layland et al. this issue).

Given the increased risk for unprotected casual sex under the influence of alcohol, it may be essential to provide personalized feedback (regarding comparisons between their behavior and "normative" behavior for people their age and gender) to young people. Indeed, many young people overestimate their peers' risk-taking behavior (Lewis and Neighbors 2004). In light of the importance of peer norms in emerging adult drinking behavior (White et al. 2006), it may be important to correct misconceptions about the percentage of one's peers who are engaging in risky sexual behavior while intoxicated. As described by Lewis and Neighbors (2004), broadening the focus of personalized feedback interventions to include both alcohol use and risky sexual behavior can provide short-term reductions in both domains of risk outcomes.

Drawing on the literature on the importance of family relationships in emerging adulthood, family-based preventive interventions—involving parents in helping young people avoid or desist from substance use or high-risk sexual behavior—may have great potential in promoting healthy behavior in young people (Stormshak et al. this issue). Indeed, family-based interventions have shown great promise in adolescence (Velleman et al. 2005), but they have not been widely used for emerging adults. Although there are clear challenges in delivering family-based programs in emerging adulthood—including young people who live away from home, diminished parental authority over youth, and logistical issues—Stormshak et al. provide compelling evidence that such interventions are essential to develop and deliver.

Villanti et al. (this issue) focus on the concept of prevescalation, namely the goal of preventing escalation in problem behavior rather than seeking only to prevent initiation. Prevescalation represents an important advance in prevention science because individuals who begin or continue engaging in the behavior are not considered to be intervention failures. Rather, the goal is to interrupt the progression of risky behaviors—such as moving from weekly to daily drug use.

An essential component of prevention science is ensuring that individuals, families, and communities receive the services that they need. Indeed, unmet mental health service needs are rampant across the globe. Cadigan et al. (this issue) provide a much-needed examination of barriers to service utilization. Ironically, the very groups (e.g., women, sexual minorities, individuals with elevated depressive symptoms) who tended to utilize services were also often the same individuals who still had unmet mental health service needs. These findings suggest that the primary concern may not be whether people access services at all, but rather whether they access sufficient services to meet their level of needs.

It is also worth noting that emerging adults face many barriers to mental health care (see McGorry et al. 2013, for a review). Many emerging adults are unemployed or work in low-wage jobs and do not have access to their own health insurance plans, and many university health centers and insurance plans provide only limited coverage for mental health services. Improving emerging adults' access to mental health and substance abuse services is a critical public health priority.

A major gap in prevention science, as it relates to emerging adulthood, is the development of culturally specific interventions for specific ethnic groups. Hafner and Rushing (this issue) report a study focused on promoting sexual health among Native American emerging adults. Similar efforts are needed for other ethnic groups, such as Hispanics, African Americans, and Asian Americans—as well as for other segments of the population such as sexual minorities, individuals with adverse childhood experiences, and high school dropouts.

In sum, emerging adulthood represents a new frontier for prevention science. As Arnett (2016), Schwartz (2016), and others have argued, emerging adulthood is developmentally distinct from adolescence and from full adulthood. As a result, preventive efforts—including etiological work, intervention design and evaluation, and implementation—must be tailored and adapted to the developmental realities of this life stage. These realities include increasing autonomy from parents and other family members, relationships with peers and romantic partners, and college attendance and/or employment, among others. Subgroup differences such as gender, ethnicity, and sexual orientation also must be taken into account when developing, testing, and implementing interventions for emerging adult populations. We hope that the present special issue, along with other similar efforts, continues to advance prevention science into emerging adulthood.

## Compliance with Ethical Standards

**Conflict of Interest** The authors declare that they have no conflict of interest.

**Research Involving Human Participants** No empirical research was conducted for this paper.

**Informed Consent** No informed consent was obtained because no data were collected.

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