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Tailoring health-related messages for young adults with adverse childhood experiences (ACEs)

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ABSTRACT

The goal was to identify factors that might affect likelihood of seeking health-related interventions for young adults with adverse childhood experiences (ACEs). We tested whether ACEs were associated with (1) regulatory focus (tendency toward promoting good outcomes versus preventing bad outcomes), and (2) patient activation (the intention to take active charge of one's health). We further tested whether promotion and prevention and patient activation were associated with each other and with health. Students at a public university ($N = 321$) completed online questionnaires assessing ACEs, regulatory focus, patient activation, and health. Greater childhood adversity showed small but significant associations with being a less activated patient and being less focused on promoting good outcomes. In contrast, greater childhood adversity had a much stronger association with focusing on preventing negative outcomes. Students with a more significant mental health history were more likely to have been exposed to childhood adversity, to be less activated patients, and to focus more on prevention. Results suggest that using a prevention focus may be effective in health messages aimed to reach individuals with high levels of ACEs. Furthermore, individuals with high levels of ACEs may benefit from interventions aimed at increasing patient activation.

1. Introduction

Adverse childhood experiences (ACEs), such as maltreatment, exposure to violence, and parental incarceration, are stressful and potentially traumatic events during childhood (Felitti et al., 1998). ACEs are associated with a large number of health risk behaviors and mental and physical health outcomes (Larkin, Shields, & Anda, 2012); as well as greater use of emergency and mental and physical health services (Chartier, Walker, & Naimark, 2010; Herrenkohl et al., 2010; Yanos, Czaja, & Widom, 2010); and greater use of psychotropic medications (Anda et al., 2007; Björkenstam et al., 2013; Korkeila et al., 2010). If individuals with high levels of ACEs utilize more health care services but are less healthy, there may be a disconnect between what they need and how health care services are being marketed to them. These individuals may also be utilizing services in a sub-optimal manner, for example, to address health issues after they have turned into significant problems rather than relying on preventive strategies.

ACEs are a significant risk factor in public health. ACEs have been estimated to account for 25–30% of all psychiatric disorders in adults in the U.S. (Green et al., 2010) and in 21 countries surveyed by the World Health Organization (Kessler et al., 2010). Exposure to two or more ACEs has been estimated to reduce lifespan by 7–15 years (Kiecolt-Glaser et al., 2011). Maltreatment, which only includes a few of the ACEs, doubles health care costs (Rovi, Chen, & Johnson, 2004). In their seminal study (Felitti et al., 1998) of the

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relationship of ACEs to "many of the leading causes of death in adults," Felitti and colleagues examined health risk behaviors as one potential mediator of the relationship between ACEs and poor health outcomes, adding that there may be other mediators of this relationship, such as "attitudes and behaviors toward health and health care" (p. 251). Nevertheless, there has been little research on this hypothesis in the intervening two decades. Thus, identifying factors that can specifically enhance their likelihood of seeking and effectively utilizing health-related help, particularly before problems become more serious, can significantly improve the health of individuals with high levels of ACEs, leading to substantial savings for society in terms of both human and financial costs.

In this study, we examined the relationship of two such factors to ACEs and to each other: (1) regulatory focus (i.e., the types of health goals that individuals are likely to pursue), which may be useful in framing health-related messages to fit the health-related motivations of individuals with high levels of ACEs; and (2) patient activation, that is, the beliefs, knowledge, confidence, and skills necessary to take charge of one's health, which may be useful in designing health-related interventions for individuals with high levels of ACEs.

1.1. ACEs and regulatory focus

To examine motivations regarding health, we assessed regulatory focus, or the type of goals that individuals are likely to pursue. An extensive body of work points to two types of goals: promotion and prevention (Higgins, 1997). A promotion focus involves an eager pursuit of gains or successes, whereas a prevention focus implies vigilant avoidance of losses or failures (Higgins, 1997; Lockwood, Jordan, & Kunda, 2002). Importantly, people become more motivated to pursue a behavior if their regulatory focus matches or "fits" the strategy involved or the message promoting it (Higgins, 1997; Lockwood et al., 2002). Thus, the audience's regulatory focus is important for the effective tailoring of persuasive messages (Lee & Aaker, 2004), in particular health related messages (Gomez, Borges, & Pechmann, 2013; Keller, 2006; Uskul, Sherman, & Fitzgibbon, 2009; Zhao & Pechmann, 2007). For example, a message focused on the energy-creating properties of a juice was more persuasive for promotion-focused adults, whereas a message focused on disease-fighting abilities of the same juice was more persuasive for their prevention-focused counterparts (Adler, Epel, Castellazzo, & Ickovics, 2000). In another study (Gomez et al., 2013), promotion-focused middle-schoolers reported higher intentions to use sunscreen when they viewed a message focusing on how easy it was to use the product and showed them how to integrate it with their daily routine, whereas prevention-focused students were more persuaded when the message highlighted the sun's damaging effects and presented sunscreen as the best way to protect against them.

Regulatory focus has not been related to ACEs; however, studies point to a relationship between maltreatment and hyper-vigilance, that is, a persistent assumption that the world is a dangerous place (Curtis & Cicchetti, 2011; Kendall-Tackett, 2002). ACEs are also associated with excessive anxiety regarding one's health (Reiser, McMillan, Wright, & Asmundson, 2014). Regulatory focus is thought to be a stable trait rooted in early parent-child interactions, although it is amenable to situational manipulations, such as priming or framing (Higgins, 1997; Lockwood et al., 2002). Exposure to ACEs may create a mindset focused on ensuring security and preventing even more adversities from happening, rather than achieving positive outcomes. Thus, we tested whether ACEs are associated with greater focus on prevention. This information can be useful for tailoring health messages for maximal effectiveness to populations with high rates of ACEs.

1.2. ACEs and patient activation

Patient activation refers to the constellation of beliefs, knowledge, confidence, and behavioral skills people need to successfully manage their health. Patient activation is conceptualized in terms of four stages, from least to most activated (Hibbard, Stockard, Mahoney, & Tusler, 2004). The first stage involves believing in the importance of taking charge of one's own health. The second stage involves developing the knowledge and confidence necessary to manage one's health. Knowledge might include being educated about the nature of one's health conditions and when to seek help and understanding treatment options and lifestyle changes that would lead to better health. Confidence can include a level of comfort in seeking help and in actively collaborating with one's healthcare provider, and having faith in one's ability to follow recommendations. The third stage involves taking action to manage one's health, such as maintaining changes in one's lifestyle and managing one's symptoms. The final stage involves being able to maintain one's health even under stress and to prevent chronic health conditions from interfering unduly with one's life. Depending on a patient's level of activation, interventions can be developed to increase, for example, belief in the importance of taking charge of one's health, knowledge about one's conditions, confidence in working with care providers, or skills in managing health under stress (Hibbard, Greene, & Tusler, 2009).

Greater levels of activation are associated with better overall health (Fowles et al., 2009; Hibbard et al., 2004), patient-doctor communication and quality of health care (Alegría, Sribney, Perez, Laderman, & Keefe, 2009), self-management of health in medical (Rask et al., 2009) and psychiatric conditions (Salyers et al., 2009), less fatalism about one's health (Hibbard et al., 2004), better preventive care (Hibbard & Cunningham, 2008), treatment adherence (Skolasky et al., 2011), and reduced health care costs (Greene, Hibbard, Sacks, Overton, & Parrotta, 2015).

Although there is no research on patient activation and ACEs, ACEs have been related to factors associated with reduced activation (Hibbard & Cunningham, 2008; Hibbard & Mahoney, 2010). For example, maltreatment is associated with low self-esteem and self-efficacy (Flynn, Cicchetti, & Rogosch, 2014), and poor interpersonal skills (Kendall-Tackett, 2002). Both childhood abuse (Liu, Choi, Boland, Mastin, & Alloy, 2013) and victimization by peers (Cole et al., 2014) are related to the development of depressive self-schemata. Mental health problems commonly associated with ACEs, such as depression (Scott, Smith, & Ellis, 2010a), would also be expected to reduce activation. Thus, we predicted that individuals with higher levels of ACEs would show less activation, which