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Loneliness

Conceptualized and Categorized

Loneliness is defined as a negative emotional state that occurs when an individual feels that his/her social relationships are not what he/she wants, in terms of quality or quantity (Peplau & Perlman, 1982). For most people, loneliness is a transient experience because it is influenced by changes in circumstances (i.e. moving away from home) that people adapt to. However, some people experience prolonged loneliness, which is a painful experience that has detrimental mental and physical health outcomes (Hawkley & Capitanio, 2015).

The most prominent theory of loneliness is the evolutionary theory of loneliness (Cacioppo & Hawkley, 2009). Cacioppo and Hawkley posited that loneliness is the social equivalent of physical pain, hunger, and thirst; the pain of social disconnection motivates the maintenance and development of social relationships necessary for the survival of human genes. That means feelings of loneliness generally succeed in motivating people to reconnect with others following geographic relocation or bereavement. Thus, just as physical pain is an aversive signal that evolved to motivate humans to take action to minimize damage to the physical body, within the evolutionary model of loneliness, loneliness is seen as an aversive state that evolved to motivate humans to minimize damage to the social body.

It has been argued that the protection of the social body occurs through the activation of an evolutionary mechanism known as the Re-Affiliation Motive (RAM; Qualter et al., 2015); the RAM is activated by the negative emotional state felt when lonely. Activation of the RAM increases people's attention to social stimuli to promote reconnection to others, and there is evidence from adult and child studies that lonely people show increased vigilance of social cues. Contrary to expectation, activation of the RAM also causes people to withdraw from social encounters, enabling attention to be focused on social cues, which leads to social reconnection.

But, why do some people stay lonely? There are risk factors for prolonged loneliness. Qualter et al. (2015) summarized the research thus far and noted that prolonged loneliness during childhood and adolescence appeared to have its origins in low self-worth and low trust. There are other risk factors, but these two have been shown to be particularly important because prolonged loneliness among older adults is also, consistently, related to a perceived lack of control, and low self-esteem. Other studies have shown biological and genetic underpinnings in the development of loneliness in adolescence (Goossens et al., 2015). The genes that have been found to be associated with the development of loneliness are often associated with attention processing, including sensitivity to emotional or social information, disengagement difficulties, and specific reward mechanisms in the brain. It is possible that there are genetic characteristics that interfere with the RAM that lead to prolonged loneliness: having specific genes may mean that some people are overly sensitive to emotional or social information or have problems disengaging from threat stimuli. Intervention work is beginning to focus on disruptions to the RAM that may be associated with prolonged loneliness.

Trajectories of Loneliness

There are changes in people's social experiences and expectations across development, and these changes can increase loneliness. There are specific points across development when loneliness peaks, and they appear to be during periods in development when there are changes to the social environment that are also accompanied by major physical and psychological developmental shifts. Specifically, the percentage of people feeling lonely "sometimes" or "often" is highest during adolescence when youths enter puberty and are

faced with the challenge of establishing their own identity, and during old age when there is increasing frailty and decreased mobility accompanied by the loss of loved ones.

In addition to normative changes in loneliness across the lifespan, there is a small group of people who experience prolonged loneliness. In several longitudinal studies that are summarized in Qualter et al. (2015), researchers have found between 3% and 22% of people of different ages experiencing prolonged loneliness over time. In all of those studies, individuals following a trajectory of prolonged loneliness showed relatively poor mental and physical health.

Prolonged Loneliness and Poor Health Outcomes

Prolonged loneliness has been found to have deleterious effects on mental and physical health across development. Hawkley and Capitanio (2015) summarized the research so far. They noted the fact that depressive symptoms are a well-established outcome of prolonged loneliness, with the pattern being seen in people as young as 6 years of age. They also note the considerable research that shows prolonged loneliness predicts poor sleep, self-reported poor health, poor immune functioning, and poor neuroendocrine functioning in people aged 18 years and above, and early mortality in people aged 50+ years. There is little agreement about why there is a relationship between loneliness and depressive symptoms, but there is much better agreement regarding the mechanism that explains the relationship between loneliness and poor physical health.

In support of the evolutionary model of loneliness (Cacioppo & Hawkley, 2009), evidence shows that lonely people are hyper-vigilant of social threats. And, while that enables most lonely people to re-engage with others, being lonely and on high alert for too long leads to poor health through an increased activation of threat surveillance mechanisms, such as (1) the

hypothalamic–pituitary–adrenal (HPA) axis and (2) the cardiovascular systems. Activation of these systems explains the relationship between loneliness and poor health.

Dysfunctions of the cardiovascular system are associated with loneliness. Lonely people display elevated peripheral resistance (i.e. resistance to blood flow) and lower cardiac output (i.e. the amount of blood pumped by the lower heart chambers in 1 minute). These dysfunctions lead to increased risk of cardiovascular disease in lonely people.

It appears that the health effects of loneliness in adulthood are the result of an interaction between loneliness and typical age-related effects on physiological systems in adulthood to old age. Given that health effects (i.e. disturbed sleep, poor subjective health, and increased frequency of childhood illnesses) are evident in children and adolescents who experience prolonged loneliness, it is important that physiological mechanisms underpinning poor health in lonely children are examined. The findings implicate the HPA axis as a functional mechanism that may be involved in the interaction between loneliness and health, but, to date, no published studies have reported on that during childhood and adolescence.

Cross-Cultural Differences in Loneliness

Even though loneliness is a universal experience, it is likely to be influenced by cultural factors, including cultural beliefs on the virtues and purposes of solitude. Cross-cultural research on loneliness, however, is not yet widespread. From research to date, there appears to be little difference in the prevalence of transient or prolonged loneliness across different cultures. There is also no consistent evidence that there are cross-cultural differences in relation to the experiences of loneliness within a country. One might expect that living in a country with a different cultural background may lead to loneliness, but research does not suggest that. There is a need to establish the cultural equivalence of the measure used, and such research is limited.

Measuring Loneliness

Several loneliness measures have been used in research. Each assesses loneliness in a different way. There are single item measures (e.g. “how often do you feel lonely?”), uni-dimensional scales (e.g. the UCLA Loneliness Scale), and multi-dimensional scales (e.g. the Social and Emotional Loneliness Scale for Adults). Some scales include the word “lonely,” whereas others try to measure loneliness more indirectly and avoid using that term. Although several measures can be used with different age groups, most measures are used with a specific age category, such as children (e.g. the Children’s Loneliness Scale), adolescents (e.g. the Loneliness and Aloneness Scale for Children and Adolescents), or the elderly (e.g. Rasch-Type Loneliness Scale). Having different measures for different age groups means that appropriate language can be used and suitable vignettes can be included, but they make it difficult, in longitudinal research, to monitor change and stability in loneliness. When comparing studies conducted with different age groups, it is also important to keep in mind that these studies may have used different loneliness measures.

Some researchers have argued for the use of measures that focus purely on the experience of loneliness. Most current measures include items that ask about the hypothesized causes of loneliness, such as perceptions of one’s social competence (e.g. “it’s easy for me to make new friends”) or perceptions of whether one has friends (e.g. “I have a lot of friends”). It is important to avoid overlapping content in items between the assessment of loneliness and the assessments of potentially related variables, and there is a call to strengthen measures so they are clearly measuring loneliness and not related constructs.

Interventions for Prolonged Loneliness

There has been an increase in the understanding that loneliness is a risk factor for adverse psychological and physical health. This has meant there has been interest in interventions

that might reduce prolonged loneliness. For instance, several governments have launched campaigns designed to increase awareness of the growing problems of loneliness and social isolation. In the United Kingdom, there is the Campaign to End Loneliness (<http://www.campaigntoendloneliness.org/about-the-campaign>); in Denmark, there is a campaign by the Crown Princess and her Mary Foundation (<http://www.maryfonden.dk/en/loneliness>); in Canada there is a campaign by the Canadian Seniors Council (<http://www.seniorscouncil.gc.ca/eng/home.shtml>), and in the United States, among others, Oprah Winfrey has launched a loneliness campaign (<http://www.oprah.com/health/Just-Say-Hello-FightLoneliness>). Such campaigns are not limited to these countries, and they all raise awareness of loneliness and attempt to stop the stigma surrounding it. But, they represent only a first step. Effective interventions are also needed.

A meta-analysis conducted in 2011 by Masi et al. suggested that interventions designed to modify maladaptive social cognition may be especially worth pursuing in relation to loneliness. This is supported by others (Qualter et al., 2015), who suggest that attention re-training and priming acceptance are also likely to be effective. However, there have been no randomized controlled studies in the field of loneliness to examine the effectiveness of such treatments at reducing loneliness.

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