

The clinical significance of loneliness: A literature review

Liesl M. Heinrich *, Eleonora Gullone

*School of Psychology, Psychiatry, and Psychological Medicine, Faculty of Medicine, Nursing, and Health Sciences,
Monash University, VIC 3800, Australia*

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Abstract

Satisfying social relationships are vital for good mental and physical health. Accordingly, we recommend that the alleviation and prevention of social relationship deficits be a key focus of clinicians. In this review, we focus on loneliness as a crucial marker of social relationship deficits and contend that loneliness should command clinicians' attention in its own right—not just as an adjunct to the treatment of other problems such as depression. With a particular focus on the adolescent developmental period, this review is organized into five sections: Drawing on developmental and evolutionary psychology theories, the nature of social relationships and the function they serve is first discussed. In the second section, loneliness is introduced as an exemplar of social relationship deficits. Here a definition of loneliness is provided, as well as an explanation of why it may pose a situation of concern. This is followed by a review of the prototypic features of loneliness through examination of its affective, cognitive, and behavioral correlates. The fourth section includes a review of theories related to the antecedent and maintenance factors involved in loneliness. Finally, methodological and theoretical considerations are addressed, and conclusions and proposals for future research directions are put forth.

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The longing for interpersonal intimacy stays with every human being from infancy throughout life; and there is no human being who is not threatened by its loss... the human being is born with the need for contact and tenderness (Fromm-Reichmann, 1959, p. 3).

Human beings are social by nature. Indeed, Baumeister and Leary (1995) have proposed that as humans we possess a *need to belong* which constitutes a fundamental motivation—driving our thoughts, emotions, and interpersonal behavior. This need to belong comprises “a pervasive desire to form and maintain at least a minimum quantity of lasting, positive, and significant interpersonal relationships” (Baumeister & Leary, 1995, p. 497). While individual differences exist in the strength of belongingness needs, and how they are met (e.g., see McAdams & Bryant, 1987, for

* Corresponding author. Tel.: +61 3 9905 1209; fax: +61 3 9905 3948.
E-mail address: Liesl.Heinrich@med.monash.edu.au (L.M. Heinrich).

a discussion of intimacy motivation), satisfying these needs necessarily involves frequent, positive interactions with other people in an enduring context in which relatedness is associated with concerns for one another's welfare (Baumeister & Leary, 1995). Consequently, people who experience persistent difficulties in establishing and maintaining satisfying relationships with others, and thus have difficulty satisfying their belongingness needs, are likely to experience a sense of deprivation, manifested in disturbances such as loneliness, depression, anxiety, and anger (Baumeister & Leary, 1995; Cacioppo et al., 2000; Chipuer, 2001; Hagerty, Williams, Coyne, & Early, 1996).

In this review, it is contended that satisfying social relationships are vital for good mental and physical health. It is further asserted that the alleviation and prevention of social relationship deficits should be a key focus of clinicians. Indeed, the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR; American Psychiatric Association, 2000) highlights the fact that relational problems sometimes warrant the focus of clinical attention because they may cause clinically significant distress, and/or complicate the treatment of, or intensify mental disorders/general medical conditions. Accordingly, this literature review is organized into five sections: Drawing on developmental and evolutionary psychology theories, the nature of social relationships and the function they serve is first discussed. In the second section, loneliness is introduced as an exemplar of social relationship deficits. Here a definition of loneliness is provided as well as an explanation of why it may pose a situation of concern (particularly for adolescents). This is followed by review of the prototypic features of loneliness through examination of its affective, cognitive, and behavioral correlates. The fourth section includes a review of theories related to the antecedent and maintenance factors involved in loneliness, and in the final section, methodological and theoretical considerations are addressed in addition to discussion of future research directions. Consequently, this literature review differs from previous reviews of the loneliness literature (e.g., Jones & Hebb, 2003; Marangoni & Ickes, 1989) by placing loneliness within the broader contextual frameworks of social relationships and the universal need to belong, as well as by adopting a clinically oriented focus.

1. Social relationships and their function

1.1. Motivation

The idea that human beings are fundamentally motivated by a need to belong is not a novel concept. Erikson's (1963) psychosocial theory of development centers on the importance of social relationships as a driving force in human development. Erikson proposed that human development consists of eight stages, each of which requires the resolution of particular social relationship conflicts. Successful resolution is purportedly necessary for the development of trust, security, a strong sense of self-identity, and the capacity to develop deep and meaningful relationships with others. A need to foster positive relationships is also the central tenet of Bowlby's (1969) attachment theory. Bowlby proposed that, in infancy, children form attachment bonds with their parents that provide them with a sense of warmth, intimacy, and security, and that secure early relationships are necessary for developing the capacities of warmth and closeness in social bonding. Mijuskovic (1988) has also taken a strong stance on the motivational force of social relationships, arguing that:

the fear of loneliness and the desire to avoid it constitutes the ultimate primary motivational principle in man... the drive to escape isolation accounts for all our passion, thought, and action. In all we think, say, and do, we are animated by a fear of loneliness [references omitted] (p. 508).

Further highlighting the universality of human belongingness needs, Rokach (1989) has argued that:

People need intimacy, warmth, a sense of worth, and frequent confirmation of their identities. Because the lack of quality human contact is so painful, they will go to great length to fulfill their need for others. Although the human race is made up of many different peoples, and despite the diversity of age, sex, culture, language, and religious beliefs, there are fundamental similarities. One of those similarities is our yearning for love, acceptance, and understanding, and conversely, our hedonistic nature and aversion to such painful experiences as loneliness [reference omitted] (p. 382).

Building on these theories, and drawing on a wealth of empirical evidence, Baumeister and Leary (1995) have demonstrated that across cultures and the life span, a human need to belong exists, and that humans are fundamentally motivated by a need to belong, and accordingly, their cognitive activity, emotional reactions, and interpersonal behavior

are inextricably tied to the satisfaction of this need. For example, human thought often revolves around interpretations of relationship implications of situations and events, and perceived changes to a person's belongingness status give rise to positive or negative affect depending on whether belongingness is respectively increased or decreased. To illustrate this point, Gardner, Pickett, and Brewer (2000) experimentally manipulated social acceptance in computer chat rooms, and demonstrated that social rejection leads to selective retention of social (as opposed to non-social) information. Hagerty et al. (1996) have also shown that a lower sense of belongingness is associated with depression, anxiety, and loneliness. Furthermore, goal-directed behavior is elicited to satisfy belongingness needs, such that much time and effort is invested in the formation and maintenance of social bonds, and the dissolution of bonds (even those offering little material or practical advantage) is strongly resisted (Baumeister & Leary, 1995).

At this point, it is important to emphasize the distinction between 'needs' and 'wants'. Here *needs* refer to necessities, whereas *wants* denote desires. According to Baumeister and Leary (1995), unsatisfied *wants* lead to temporary distress (e.g., negative affect), whereas unsatisfied *needs* result in pathological consequences (e.g., anxiety, depression, poor health). Since a lower sense of belonging has been found to be associated with pathology (see Baumeister & Leary, 1995; Hagerty et al., 1996, for a discussion), belongingness would appear to be a *need* as opposed to a *want*. Thus, as well as having immediate and direct implications for psychological functioning, belongingness needs have long-term functioning implications. It is also noteworthy that mere social contact is not sufficient in itself to satisfy belongingness needs (Baumeister & Leary, 1995). For example, loneliness arises when "belongingness needs are being insufficiently met" (Baumeister & Leary, 1995, p. 507), however, lonely and nonlonely people have been found to not differ significantly in their activities, or the amount of time spent with other people (e.g., Hawkley, Burleson, Berntson, & Cacioppo, 2003; Wheeler, Reis, & Nezlek, 1983). Therefore, social contact does not necessarily buffer one against loneliness because the experience of loneliness seems to have more to do with an individual's perceptions of the *quality* of social interactions (Wheeler et al., 1983). In order to appreciate why social contact alone is not sufficient to satisfy belongingness needs, we need a better understanding of the basis and functions of these needs.

1.2. *An evolutionary perspective on the need to belong*

It has been proposed that the need to belong is evolutionally prepared since it likely promoted survival of the human species by bestowing evolutionary advantages on our ancient ancestors (Baumeister & Leary, 1995). Ancestral groups undoubtedly were more able than individuals to coordinate hunting and gathering activities, share food, build shelters, and protect resources and themselves. Moreover, groups afford more opportunities for meeting a mate with whom to reproduce, and recruit assistance in raising children. Therefore, children would be more likely to reach a reproductive age if they were biologically predisposed to stay close to their group because they would receive more care, food, and protection. In turn, adults desiring attachments would be more likely to reproduce and raise offspring to maturity. Indeed, Baumeister and Leary have argued that natural selection likely resulted in the propagation of internal mechanisms that affectively reward positive social contact and punish social deprivation. As a consequence, it would appear that the establishment and maintenance of positive interpersonal relationships has become central to being human.

1.3. *The importance of social relationships in modern society*

Whereas for our ancient ancestors the primary significance of social relationships lay in their survival and reproductive value, in modern society the significance of social relationships has arguably expanded. Weiss (1974) has argued that there are six types of provisions offered by social relationships: (1) *attachment*, derived from relationships that provide a sense of security and commitment; (2) *social integration*, gained from relationships that provide a sense of companionship, shared concerns, and activities; (3) *opportunity for nurturance*, obtained from relationships that provide a sense of being needed, and of being responsible for another's well-being; (4) *reassurance of worth*, drawing from relationships that provide a sense of competence, and being valued; (5) *reliable alliance*, stemming from relationships that provide a sense of continuing assistance; and (6) *guidance*, arising from relationships in which individuals can obtain trustworthy advice.

While other authors (e.g., Parkhurst & Hopmeyer, 1999) have contended that this list of relational provisions should be expanded to include for example, 'intimacy and affection', 'social comparison', 'a sense of meaning', and 'enjoyable stimulation', there is a general agreement with Weiss' (1973, 1974) notion that different kinds of relationships offer

different provisions, and that the importance of specific provisions varies across individuals and the life cycle. Accordingly, Weiss (1974) has asserted that it is unlikely that any single relationship can satisfy all types of relational provisions, and thus relationships tend to be specialized in their provisions. For example, attachment is most often satisfied by marital or equivalent relationships or relationships with close friends or family members; social integration—by a social network; opportunity for nurturance—by relationships with one's child; reassurance of worth—by relationships with one's co-workers, family, or acquaintances; reliable alliance—by relationships primarily with kin; and guidance—by relationships with parental figures, mentors and teachers.

Given that we derive a great deal from satisfying social relationships, it is not surprising that when people experience difficulty establishing and maintaining satisfying social relationships they may encounter feelings of depression, anxiety, loneliness, and anger. It is also in the context of social relationships that we learn many skills, such as communication skills, conflict management and resolution, reciprocity, friendship skills, as well as normative behavior. Therefore, when people experience social relationship difficulties, their socioemotional development may also suffer (Boivin, Hymel, & Bukowski, 1995). For example, Rubin, LeMare, and Lollis (1990) have argued that peer relationship difficulties in childhood characterized by either aggressive and inappropriate behaviors, or withdrawn, inhibited, and shy behaviors, can set children on trajectories towards externalizing and internalizing difficulties, respectively. Boivin and Hymel (1997) have contended that such relationship difficulties may result in limited social involvement or negative peer interactions, which consequently lead to negative self-perceptions, and fewer opportunities to practice and refine social skills.

1.4. *The social function of emotions*

Given the importance of social relationships, the function, then, of some emotions, may be to draw our attention to possible threats to our likelihood of meeting belongingness needs (e.g., guilt, anxiety), or to deficiencies in our meeting of these needs (e.g., frustration) (for a discussion of the social function of emotions, see Averill et al., 1994; Campos, Mumme, Kermoian, & Campos, 1994). Put another way, certain emotions may serve to prompt cognitive reassessment of situations and events, such that behavior modifications can be made to thwart threats to belongingness needs and motivate behaviors aimed at addressing these threats (Baumeister & Tice, 1990). For instance, the emotions associated with loneliness may serve to alert people that their belongingness needs are not being adequately met, and prompt them to take action to more satisfactorily meet their belongingness needs, and thereby alleviate their loneliness.

However, perceptions of threat are sometimes unwarranted, and behavior modifications are not always successful in alleviating threats to belongingness needs. For example, Hawkey et al. (2003) found that lonely people perceived threats in everyday events that failed to elicit threat appraisals in nonlonely people. Furthermore, Jones and colleagues (Jones, 1982; Jones, Hobbs, & Hockenbury, 1982) have argued that the behaviors of lonely people can have a negative impact on interpersonal communication, thereby reducing the likelihood of forming satisfying relationships with others. Therefore, while loneliness draws attention to a failure to meet belongingness needs, for some people, the chronic experiencing of loneliness may impede the future meeting of belongingness needs through faulty or dysfunctional cognitions, emotions, and behaviors. Thus, the purpose of this literature review is to examine loneliness, as a key marker of social relationship difficulties, in order to offer some insights into the underlying cognitive, emotional, and behavioral mechanisms that may impede people's ability to meet their need to belong.

2. Loneliness

2.1. *What is loneliness?*

Loneliness has been defined as the aversive state experienced when a discrepancy exists between the interpersonal relationships one wishes to have, and those that one perceives they currently have (Peplau & Perlman, 1982). Such a definition highlights the affective character of loneliness. Specifically, that it is an emotionally unpleasant experience. But it also emphasizes the cognitive element. That is, that loneliness requires the *perception* that one's social relationships are not living up to some expectation. As such, loneliness signals that one's personal relationships are in some way inadequate, and it is therefore a key marker of social relationship difficulties.

However, being an 'internal emotional state' (Asher & Paquette, 2003, p. 75), it is important to note that while loneliness is influenced by quantitative or objective characteristics of social relationships (such as frequency of social

contact or number of friends), it is more greatly influenced by the qualitative or subjective appraisals of these relationships, such as satisfaction with the relationship or perceived social acceptance (Asher & Paquette, 2003; Cutrona, 1982; Jones, 1982; Wheeler et al., 1983). For example, Fischer and Phillips (1982) have shown that not all people with small social networks are lonely, and Jones (1982) has demonstrated that a person's total number of friends is not a good predictor of their loneliness. Indeed, Parker and Seal (1996) have found that (for children, at least) predicting loneliness on the basis of one's total number of friends simply amounts to distinguishing between children without friends, and those with one or more friends. Thus, children with only one friend are no lonelier than children with many friends, but are less lonely than children without any friends (Parker & Seal, 1996).

In studies with college students, Cutrona (1982) and Jones (1981) have also found that subjective satisfaction ratings of social relationships and contact are much better predictors of loneliness than frequency of contact. Moreover, amount of social contact and loneliness have been found to be relatively independent of one another (Wheeler et al., 1983). One possible reason why quantitative measures, such as frequency of social contact, fail to be good predictors of loneliness may lie in their inability to capture the nature of the social relationships people engage in. Jones (1982) has shown that while the total amount of social contact may not vary between lonely and nonlonely people, the type of contact does. So whereas nonlonely people may engage in more interactions with family and friends, lonely people may engage in fewer interactions with intimates, and more interactions with strangers and acquaintances (Jones, 1982), the latter being people who are less likely to satisfy belongingness needs.

Empirical evidence also suggests that lonely and nonlonely people do not differ in either the daily activities they engage in, or in the amount of time they spend alone (e.g., see Hawkey et al., 2003). Thus, loneliness is clearly distinguishable from the objective state of solitude, social isolation, or being alone. Indeed, in a study examining adolescents' perceptions of loneliness and aloneness, Buchholz and Catton (1999) found that loneliness was described as an aversive state arising from a sense of yearning for another person(s), and associated with negative feelings such as sadness and hopelessness. In contrast, however, aloneness was not viewed negatively. In fact, whereas loneliness is by definition an undesirable condition, aloneness or solitude may actually be a desirable or positive condition fostering creativity, facilitating self-reflection, self-regulation, identity formation, concentration, thinking, and learning (Buchholz & Catton, 1999; Fromm-Reichmann, 1959; Larson, 1999; Larson, Csikszentmihalyi, & Graef, 1982; Storr, 1988; Winnicott, 1958). Burger (1995) and Larson (see Larson, 1999, for a review) have shown that college students and adolescents, respectively, may seek and appreciate solitude for such positive reasons, rather than as a means of avoiding possibly anxiety-provoking social interactions. However, Larson has also shown that while solitude may be associated with cognitive benefits, such as increased concentration, these benefits come at the cost of lowered mood states (e.g., sadness, irritability, loneliness, and boredom). This association has been reported to be magnified amongst adolescents who are alone on Friday and Saturday nights (very likely owing to the sociocultural expectation that adolescents will be socializing with peers during this time). Nonetheless, after spending time alone, moods return to normal or may even be elevated (Larson et al., 1982).

Many authors (e.g., Hymel, Tarulli, Hayden Thomson, & Terrell-Deutsch, 1999; McWhirter, 1990; Medora & Woodward, 1986; Peplau & Perlman, 1982; Rotenberg, 1999a) have contended that loneliness is a basic fact of life and thus experienced to differing extents by everyone at some stage in their life. Wood (1986) has even suggested that "failure to experience loneliness appropriately calls into question one's very nature as a social being" (p. 184). Loneliness does not respect the boundaries of age, gender, race, marital status, socioeconomic status, or health status (Medora & Woodward, 1986; Neto & Barros, 2000). Thus, loneliness is a universal experience, a consequence of the universal human need to belong (Rotenberg, 1999a). Feelings of loneliness may be either persistent or short-lived (Peplau & Perlman, 1982). However, while transient feelings of loneliness are often situationally determined and normative, chronic feelings of loneliness are a cause for concern (Asher & Paquette, 2003; Neto & Barros, 2000). Indeed, Neto and Barros (2000) have contended that "some people feel loneliness in many different settings and so frequently that it comes to resemble an enduring personality trait" (p. 504). Nonetheless, loneliness may not necessarily be recognized for what it is. Rokach (1998) has suggested that six stages are involved in the experience of loneliness: (i) pain and awareness (of a problem), (ii) denial, (iii) alarm and realization, (iv) searching for causes and self-doubt, (v) acceptance, and (vi) coping. Furthermore, Rokach has proposed that a sufferer's recognition and appreciation of the fact that they are lonely depends upon the particular stage they are in.

Loneliness is also a multidimensional phenomenon, varying in intensity, and across causes and circumstances. For example, the loneliness of a child who has lost their mother is experienced differently to the loneliness of a child who has no playmates. So, in order to capture this multidimensional nature of loneliness, Weiss (1973) has proposed a

typology of loneliness which is based on the notion that different social relationship (or relational provision) deficiencies give rise to different forms of loneliness and loneliness-related affect. According to Weiss's typology, emotional loneliness "results from the lack of a close, intimate attachment to another person" and gives rise to feelings of emptiness and anxiety, whereas social loneliness "results from the lack of a network of social relationships in which the person is part of a group of friends who share common interests and activities" and gives rise to feelings of marginality, boredom, and aimlessness (Russell, Cutrona, Rose, & Yurko, 1984, p. 1314). However, Weiss's predictions regarding the affective correlates of the two types of loneliness have not been found to be entirely correct. For example, DiTommaso and Spinner (1997) found anxiety to be more greatly associated with social loneliness than with emotional loneliness. Nevertheless, the distinction between social and emotional loneliness would still appear to be a useful one.

Numerous studies have shown that despite some overlap in the variability of emotional and social loneliness scores, people do tend to distinguish between emotional and social loneliness, with attachment predicting emotional loneliness, and social integration predicting social loneliness (see DiTommaso & Spinner, 1997, for a review). The distinction between social and emotional loneliness captures the notion that loneliness differentially manifests itself depending on the context within which an individual's needs are unmet (Chipuer, 2001). For example, an adolescent may be satisfied with their relationships with peers, but lonely in their relationships with their parents or family (Goossens & Marcoen, 1999). The converse may also be true. Alternatively, the adolescent may feel lonely (or satisfied) in both relationships with peers, and relationships with parents/family. It follows, then, that loneliness cannot be alleviated by substituting one type of relationship or relational provision for another since the particular type of loneliness will only end when the specific unmet need is satisfied (Weiss, 1973).

2.2. Prevalence

Loneliness is a common experience as supported by a newspaper survey conducted by Rubenstein, Shaver, and Peplau (1979). From a sample of 25,000 respondents, it was observed that 79% of people occasionally felt lonely, 15% felt lonely most or all of the time, and only 6% said they never felt lonely. Drawing on other surveys (e.g., Andersson, 1982; Bradburn, 1969; Sermat, 1980) it would appear that approximately 15–30% of people experience persistent feelings of loneliness. However, it should be noted that loneliness prevalence studies are quite dated, and therefore may not accurately reflect the current incidence of loneliness.

Not surprisingly, numerous studies have shown that loneliness is also experienced by both males and females. Nonetheless, in a comprehensive review of gender difference in adult loneliness research, Borys and Perlman (1985) observed that females are more likely than males to admit to being lonely. Borys and Perlman revealed that studies using self-labeling loneliness measures (i.e., those which require people to respond to statements such as "I am a lonely person") tend to find that women report being lonelier than men. However, sex differences in loneliness are much less commonly reported when loneliness measures are used that do not include the word 'lonely', or require people to label themselves as lonely. An example of one such measure is the UCLA Loneliness Scale (Russell, 1982, 1996; Russell, Peplau, & Cutrona, 1980; Russell, Peplau, & Ferguson, 1978), which is the most commonly used loneliness measure. Such findings indicate that the reported female predominance of loneliness may, in part at least, be an artifact of method of assessment.

Koenig and Abrams (1999) have reviewed studies into child and adolescent loneliness and investigated possible sex differences. They concluded that sex differences were not apparent in childhood loneliness. However, there was some evidence to suggest that sex differences may emerge during adolescence. Statistically significant differences in the loneliness scores of males and females were found in only 50% of adolescent samples, and where they were found, they consistently indicated that adolescent males were slightly lonelier than adolescent females. In a review of adult samples, Borys and Perlman (1985) also reached the conclusion that significant sex differences were not consistently found, but that when they were, males tended to be lonelier than females.

Moreover, contrary to popular belief and depictions, loneliness more frequently occurs during earlier developmental periods compared to old age (Peplau, Bikson, Rook, & Goodchilds, 1982; Perlman & Landolt, 1999). For example, in a large-scale survey, Parlee (1979) found that 79% of participants aged under 18 years reported feeling lonely sometimes or often, as opposed to 71% of 18- to 24-year-olds, 69% of 25- to 34-year-olds, 60% of 35- to 44-year-olds, 53% of 45- to 54-year-olds, and 37% of those aged 55 years and older. Schultz and Moore (1988) have also observed high school students to be lonelier than college students, although loneliness has been reported to be widespread during the initial

college transition (Cutrona, 1982; Shaver, Furman, & Buhrmester, 1985). Indeed, Culp, Clyman, and Culp (1995) found that 66% of high school students considered loneliness to be a problem that they had experienced in the past year. In a review of mean loneliness scores, Perlman and Landolt (1999) concluded that the prevalence of loneliness appears to peak during adolescence, drop between young adulthood and middle age, and then perhaps rise slightly in old age. Nonetheless, large scale studies conducted by Ostrov and Offer (1978), and Brennan and Auslander (1979, cited in Brennan, 1982), suggest that while more than 50% of adolescents experience recurrent feelings of loneliness, for 10% to 20% of adolescents loneliness is persistent and painful (Brennan, 1982).

2.3. *Loneliness during adolescence*

Thus it appears that loneliness is most prevalent during the adolescent years. Indeed, according to Sippola and Bukowski (1999) loneliness in adolescence may be a normative experience and thus, to some degree expected because during this time the social expectations, roles, relationships, and personal identities of adolescents undergo significant changes. As children move into adolescence they develop greater expectations about their social relationships, wanting loyalty, support, and intimacy, as well as to exchange beliefs, values, and ideologies with friends, rather than merely wanting to share activities (although activity-sharing still remains important; Parker, Saxon, Asher, & Kovacs, 1999; Parkhurst & Hopmeyer, 1999). Indeed, despite more recent research showing that even young children can feel lonely (e.g., see Asher & Paquette, 2003, for a review), for decades it was believed that loneliness could not be experienced until adolescence when the interpersonal need for intimacy arises (e.g., see Sullivan, 1953; Weiss, 1973). Adolescents are also likely to develop a preoccupation with their social status (Parkhurst & Hopmeyer, 1999). Thus loneliness can arise if adolescents have not acquired the necessary social skills to cope with their changing social environment, or if they hold unrealistic expectations concerning their social relationships (Peplau & Perlman, 1982). Moreover, since the establishment of intimate relationships becomes increasingly important during adolescence (Erikson, 1963), being unattached may also induce loneliness in adolescents (Neto & Barros, 2000; Rubenstein & Shaver, 1980).

The transition from childhood to adolescence also sees adolescents spending less time with family, and more with peers (Larson, 1999). As such, adolescents seek to gain independence from their parents (Blos, 1961, cited in Erikson, 1968; Larson et al., 1982), establish their individuality (Koenig & Abrams, 1999), and replace their parents as their primary attachment figures (Ostrov & Offer, 1978; Weiss, 1973). Simultaneously, adolescents are trying to define themselves amidst physiological, emotional, and intellectual changes which may render their childhood self-concepts obsolete (Brennan, 1982). Personal identities become salient during this time (Erikson, 1968), and with maturing cognitive abilities (Elkind, 1968, Rappoport, 1972, cited in Brennan, 1982), adolescents are able to conceptualize themselves in an increasingly complex, and abstract manner. This involves the formulating of identities not only on the basis of physical characteristics, but also based on psychological characteristics (e.g., traits, thoughts, beliefs, and values), and with respect to their social relationships (Parkhurst & Hopmeyer, 1999; Sippola & Bukowski, 1999). The adolescent must then strive to achieve an integrated and coherent sense of self by “consolidating the many different aspects of one’s private and public persona” (Koenig & Abrams, 1999, p. 297). However, with this drive towards autonomy, individuality, and identity formation, comes the risk of “increased feelings of separateness and responsibility, and hence to stronger needs for affiliation and vulnerability to emotional and social loneliness” (Brennan, 1982, pp. 285–286). Thus adolescence is a period of high risk for loneliness. However, while some loneliness during this period is to be expected, persistent and painful feelings of loneliness are not normative. Moreover, failure to resolve loneliness before moving out of adolescence may pose significant concerns for future social relationships and mental health.

2.4. *The significance of loneliness for mental health*

As already noted, while loneliness can be a normative experience, it also has the potential to be pathological (Asher & Paquette, 2003). Indeed numerous researchers (e.g., Blai, 1989; Fromm-Reichmann, 1959; Kupersmidt, Sigda, Sedikides, & Voegler, 1999; Page, Wyre, & Cole, 1986) have asserted that loneliness has a major influence on psychosocial problems, mental health, and physical well-being. For example, loneliness has been found to be significantly associated with shyness, neuroticism, social withdrawal, and a lower frequency of dating, as well as extracurricular and religious participation (Hojat, 1982b; Horowitz, French, & Anderson, 1982; Jones, Freemon, & Goswick, 1981; Russell et al., 1980; Stephan, Faeth, & Lamm, 1988). Associations between loneliness and poorer

social interaction quality have also been demonstrated (Hawkley et al., 2003, Jones et al., 1982, Rotenberg, 1994; Segrin, 1998; Wheeler et al., 1983). For example, Hawkley et al. (2003) found loneliness to be related to less positive and more negative feelings during social interactions. More specifically, loneliness was significantly correlated with less intimacy, comfort, and understanding, and more caution, distrust, and conflict. Importantly, Hawkley et al. also demonstrated that these effects of loneliness on social interaction quality were present after controlling for depressed affect and neuroticism.

Perhaps not surprisingly then, loneliness has also been linked to low social competence, peer rejection and victimization, a lack of high quality friendships, and more negative appraisals of social support (Crick & Ladd, 1993; Kochenderfer & Ladd, 1996; Parker & Asher, 1993; Riggio, Watring, & Throckmorton, 1993; Rubin & Mills, 1988). Larson (1999) has also observed that lonely adolescents are rated by parents and teachers as less well-adjusted. Moreover, loneliness has been found to be associated with higher school dropout rates (Asher & Paquette, 2003), poor academic performance (Larson, 1999; Rotenberg, 1999b; Rotenberg & Morrison, 1993), and juvenile delinquency (Brennan, 1982). However, perhaps most pertinent to the issue of psychosocial problems is the consistent finding that loneliness is associated with low self-esteem (Brage, Meredith, & Woodward, 1993; Hymel, Rubin, Rowden, & LeMare, 1990; Jones, 1982; Larson, 1999; Moore & Sermat, 1974; Olmstead, Guy, O'Mally, & Bentler, 1991; Paloutzian & Ellison, 1982; Schultz & Moore, 1988). Yet, despite the typically lower self-esteem of lonely people, Cacioppo et al. (2000) have reported that lonely people have no less social capital to offer than nonlonely people.

Also supporting the contention that satisfying social relationships are vital for good mental health, loneliness has been found to be inversely correlated with life satisfaction (Schultz & Moore, 1988; Schumaker, Shea, Monfries, & Groth-Marnat, 1993). That is, lonely people seem to be less satisfied with their lives. That loneliness is also adversely related to mental health is therefore not surprising, although the direction of causality is difficult to determine. Consistent with Goswick and Jones' (1981) observation that loneliness is associated with poor personality integration, the DSM-IV-TR (American Psychiatric Association, 2000) notes that loneliness is an associated feature of both Avoidant Personality Disorder, and Borderline Personality Disorder. Overholser (1992) has also found loneliness to be associated with a dependent personality style.

Other empirical investigations have linked loneliness to anxiety (Mijuskovic, 1986), and more specifically, social anxiety (Anderson & Harvey, 1988; Moore & Schultz, 1983), as well as to schizophrenia (DeNiro, 1995; Neeleman & Power, 1994). Numerous studies have also demonstrated substantially sized correlations (coefficients ranging from the .40s to the .60s) between loneliness and depression in both adolescents (Kirkpatrick-Smith, Rich, Bonner, & Jans, 1991; Koenig & Abrams, 1999; Koenig, Isaacs, & Schwartz, 1994; Mahon, Yarcheski, & Yarcheski, 2001; Moore & Schultz, 1983), and adults (Anderson & Arnoult, 1985; Anderson & Harvey, 1988; Goswick & Jones, 1981; Jackson & Cochran, 1990; Nolen-Hoeksema & Ahrens, 2002; Weeks, Michela, Peplau, & Bragg, 1980) with interpersonal difficulties being implicated in both. Indeed, Weeks et al. (1980) have asserted that loneliness and depression may share some common causes such as poor social skills, shyness, and a maladaptive attribution style (Dill & Anderson, 1999). Yet despite the apparent overlap in common features of depression and loneliness, they appear to be distinct phenomena (for example, see Anderson & Harvey, 1988; Anderson, Horowitz, & French, 1983; Koenig & Abrams, 1999; Weeks et al., 1980). In distinguishing between the two, it has been noted that whereas loneliness involves appraisals across the social domain of one's life, depression is a more global and heterogeneous condition involving appraisals across multiple domains (Boivin et al., 1995). Furthermore, several studies have indicated that loneliness may play a causative role in the development and maintenance of depression. For example, loneliness at the start of a college semester has been found to be predictive of depression later in the semester (Rich & Scovel, 1987). After controlling for initial symptoms, loneliness during mid-adolescence has been shown to predict an increase in depression two and half years later (Koenig & Abrams, 1999). In addition, a prospective study of depression in elderly people has revealed that loneliness predicts the experiencing of depression 3 years later (Green et al., 1992).

Loneliness may also be a vulnerability factor for suicide ideation, parasuicide (suicide attempts/self-inflicted injury), and suicide completion. In research conducted with people who have attempted suicide, loneliness has often been described as a prompting factor for the attempt (Bancroft, Skrimshire, & Simkins, 1976; Birtchnell & Alarcon, 1971; Maris, 1981; Nordentoft & Rubin, 1993; Wenz, 1977). Loneliness has also been identified by Conroy and Smith (1983) and Peck (1983) as a factor contributing to suicide completion. Numerous studies with high school and college students have established associations between loneliness, suicide ideation, and parasuicide (e.g., Garnefski, Diekstra, & de Heus, 1992; Rich, Kirkpatrick-Smith, Bonner, & Jans, 1992; Roberts, Roberts, & Chen, 1998; Rossow & Wichstroem, 1994; Weber, Metha, & Nelsen, 1997; Yang & Clum, 1994). Moreover, higher rates of suicide ideation and parasuicide

amongst the lonely were demonstrated in [Stravynski and Boyer's \(2001\)](#) population-based survey of Canadians over the age of 15 years.

In addition to suicide risk, several studies (e.g., [Page & Cole, 1991](#); [Sadava & Pak, 1994](#)) have found loneliness to be associated with alcohol abuse. However, recent studies by [Cacioppo and colleagues](#) have found lonely college students to be either less likely to consume alcohol ([Cacioppo et al., 2000](#)), or no different from nonlonely students in their alcohol consumption patterns ([Cacioppo, Hawkley, Crawford et al., 2002](#)). Despite the lack of a relationship with alcohol consumption, [Cacioppo, Hawkley, Crawford et al. \(2002\)](#) did find that recreational drug use was higher amongst lonely students. Loneliness has also been linked to dietary restraint ([Rotenberg & Flood, 1999](#)), eating disorders ([Coric & Murstein, 1993](#); [Gilbert & DeBlasie, 1984](#)), and obesity ([Schumaker, Krejci, Small, & Sargent, 1985](#)).

It follows that the alleviation of loneliness may improve physical health and decrease psychosomatic complaints. In addition to the mental health problems just described which have obvious negative influences on physical wellbeing (e.g., eating disorders, obesity, alcohol and drug abuse), loneliness has been linked to nausea, headaches, and eating disturbances ([Page & Cole, 1991](#); [Ponzetti, 1990](#)), sleep disturbances ([Cacioppo et al., 2000](#); [Cacioppo, Hawkley, Berntson et al., 2002](#)), fatigue ([DiTommaso & Spinner, 1997](#)), poorer immune functioning ([Kiecolt-Glaser, Garner et al., 1984](#); [Kiecolt-Glaser, Ricker et al., 1984](#)), poorer cardiovascular functioning (even after controlling for depression; [Cacioppo, Hawkley, Crawford et al., 2002](#)), and serious illness ([Lynch, 1977](#)). Following their review of five prospective studies that controlled for baseline health status, [House, Landis, and Umberson \(1988\)](#) went so far as to conclude that the effects of unsatisfactory social relationships on health rival “the effects of well-established health risk factors such as cigarette smoking, blood pressure, blood lipids, obesity, and physical activity” (p. 541).

Several mechanisms have been proposed to explain the influence that loneliness has on health (e.g., see [Cacioppo, Hawkley, Crawford et al., 2002](#)). These include, for example, the effect that loneliness may have on health practices and health-promoting behaviors. Some support for this proposition has been found in studies with both adolescents ([Mahon et al., 2001](#); [Schwarzer, Jerusalem, & Kleine, 1990](#)), and adults ([Mahon, Yarcheski, & Yarcheski, 1998](#)), in which loneliness was found to be associated with poorer health practices (e.g., alcohol and drug use, smoking) and fewer health-promoting behaviors (e.g., less exercise, less relaxation, poor nutrition). However, [Cacioppo, Hawkley, and colleagues \(Cacioppo, Hawkley, Crawford et al., 2002; Hawkley et al., 2003\)](#) have failed to find significant differences in the health behaviors of lonely and nonlonely college students.

Another mechanism through which loneliness may influence health is by reducing the potency of restorative behaviors such as sleep ([Cacioppo et al., 2000](#)). Compared to nonlonely people, [Cacioppo and colleagues \(Cacioppo et al., 2000; Cacioppo, Hawkley, Berntson et al., 2002\)](#) have observed that lonely people take longer to fall asleep and have a poorer sleep quality, as measured subjectively and objectively (i.e., using polysomnography). The objective measures also suggested that lonely people sleep less efficiently and awaken more frequently. It is no wonder then that the lonely participants also perceived greater impairment in their daily lives as a result of sleepiness. Therefore, loneliness appears to be associated with sleep debt which may undermine health ([Cacioppo, Hawkley, Crawford et al., 2002](#)). However, [Hawkley et al. \(2003\)](#) have pointed out that the effects of loneliness on health may not appear until later in life. It should also be noted that as with all the associations between loneliness and health, it is difficult to establish the direction of causality.

Nonetheless, several studies have demonstrated that lonely people make greater use of the health care system compared to nonlonely people. [Geller, Janson, McGovern, and Valdin \(1999\)](#) conducted an investigation with 164 emergency department patients, and observed a significant correlation between loneliness and the total number of hospital emergency department visits made in the space of 1 year. While loneliness was not associated with chronic disease, severity of illness, number of hospital admissions, or differing reasons for visiting the emergency department, lonely patients visited the emergency department 60% more often than nonlonely patients. There also appears to be a preponderance of lonely people amongst the callers of crisis centre hotlines. In addition to pregnancy, family problems, and drug addiction, [Saks \(1974\)](#) and [Bleach and Claiborn \(1974\)](#) determined that loneliness was one of the most frequently cited reasons why youths sought help via a crisis centre hotline. Indeed, [Sermat's \(1980\)](#) research suggests that loneliness is a complaint of as many as 80% of crisis centre callers. These findings emphasize that loneliness is cause for serious concern.

Thus, in summary, loneliness has been demonstrated to be associated with a number of psychosocial difficulties (e.g., low self-esteem, low social competence, poorer quality social interactions), as well as mental health problems (e.g., anxiety, depression, suicidal behaviors), and physical health issues (e.g., poorer immune and cardiovascular

functioning, sleep deficiencies). Moreover, some sufferers of loneliness exhibit problematic behaviors such as alcohol or drug abuse, and symptoms including eating or sleep disturbances, fatigue, headaches, as well as disorders including anxiety, or depression, without even realizing the possible involvement of social problems (Murphy & Kupshik, 1992; Rook & Peplau, 1982; Young, 1982). Nevertheless, irrespective of whether it is recognized as such, chronic loneliness has the potential to substantially interfere with psychosocial functioning, mental health, and physical health, and should therefore be the subject of intervention efforts.

3. The lonely prototype

Despite only passing references to loneliness in the DSM-IV-TR (American Psychiatric Association, 2000) in relation to Avoidant Personality Disorder [i.e., “[individuals with Avoidant Personality Disorder] are described by others as being... ‘lonely,’” (p. 719) and “[they] feel their loneliness deeply” (p. 720)], and Borderline Personality Disorder [i.e., “Borderline Personality Disorder is distinguished [from Histrionic Personality Disorder] by... chronic feelings of deep emptiness and loneliness” (p. 709)], the preceding discussion has illustrated that loneliness is a significant, multi-faceted phenomenon which has significant implications for mental health. Unfortunately, while loneliness can be objectively defined, it is a subjective experience which cannot be observed directly by researchers and clinicians (Peplau & Perlman, 1982). So in concluding that ‘I feel lonely,’ or ‘my client is lonely,’ one must necessarily summarize a constellation of feelings, thoughts, and behaviors (Horowitz et al., 1982; Peplau, Miceli, & Morasch, 1982). Thus, loneliness is an abstract summary of a cluster of specific feelings, thoughts, and behaviors (Horowitz et al., 1982).

Every person’s experience of loneliness is unique, and so ‘being lonely’ will not have exactly the same meaning for everyone. Reflecting this, Horowitz et al. (1982) have suggested that a ‘prototype’, comprised of common affective, cognitive, and behavioral features, is the best way to conceptualize the *experience* of loneliness. Hence, the prototype of a lonely person, as outlined herein, is comprised of the common characteristics of lonely people, which taken individually, may or may not be representative of any one specific lonely person. So what are the common features of a prototypical lonely person?

3.1. Affective features

Numerous studies, including those with children (e.g., Hymel et al., 1999; Johnson, LaVoie, Spenceri, & Mahoney-Wernli, 2001), adolescents (e.g., Inderbitzen-Pisaruk, Clark, & Solano, 1992; Johnson et al., 2001; Kirkpatrick-Smith et al., 1991; Mahon et al., 2001; Moore & Schultz, 1983; Neto & Barros, 2000), college students (e.g., Hojat, 1982b, 1983; Horowitz et al., 1982; Neto & Barros, 2000; Paloutzian & Ellison, 1982; Russell et al., 1978; Yang & Clum, 1994), and older adults (Perlman, Gerson, & Spinner, 1978), have investigated the typical feelings that are associated with loneliness. Past research has consistently revealed that lonely people experience a host of negative emotions. For example, Paloutzian and Ellison (1982) found loneliness scores to be most strongly related to feeling unwanted, unloved, worthless, rejected, and depressed. Similarly, in a large-scale survey, Rubenstein and Shaver (1982) observed that when people are lonely, more than 50% report feeling sad, and approximately 50% report feeling depressed, self-pity, and a ‘longing to be with one special person.’ Offering a list of 27 adjectives, Rubenstein and Shaver asked participants to indicate which of these feelings they experienced when lonely. Moreover, Rubenstein and Shaver discovered that these adjectives reliably factor-analyzed to reveal four interpretable factors: ‘Desperation,’ ‘Depression,’ ‘Impatient Boredom,’ and ‘Self-Deprecation.’ The first factor, *desperation*, accounted for the largest proportion of variance (76.5%), and consisted of feeling desperate, panicked, helpless, afraid, without hope, abandoned, and vulnerable. The second factor, *depression*, was comprised of feeling sad, depressed, empty, isolated, sorry for self, melancholy, alienated, and longing to be with one special person. The third factor, *impatient boredom*, included feeling impatient, bored, desire to be elsewhere, uneasy, angry, and unable to concentrate. Finally, the fourth factor, *self-deprecation*, incorporated feeling unattractive, down on self, stupid, ashamed, and insecure.

Most of the adjectives used in Rubenstein and Shaver’s (1982) study have been coupled with loneliness by previous and subsequent research. In addition, it is conceivable that the affective correlates of loneliness revealed in other research also fall neatly into the clusters observed by Rubenstein and Shaver. For example, anxiety (Hojat, 1982b, 1983; Russell, 1982; Russell et al., 1984; Russell et al., 1980), social anxiety (Inderbitzen-Pisaruk et al., 1992; Johnson et al., 2001; Jones et al., 1981; Moore & Schultz, 1983; Neto & Barros, 2000; Solano & Koester, 1989), pessimism

(Bradburn, 1969; Perlman et al., 1978), less optimism (Neto & Barros, 2000), and neuroticism (Hojat, 1983; Neto & Barros, 2000; Stokes, 1985) may load onto the *desperation factor*. Feeling unloved (Horowitz et al., 1982; Paloutzian & Ellison, 1982), separated from others (Horowitz et al., 1982; Hymel et al., 1999), different (Horowitz et al., 1982), anhedonic (Hojat, 1982b), less happy (Bradburn, 1969; Perlman et al., 1978), less satisfied (Bradburn, 1969; Neto & Barros, 2000; Perlman et al., 1978; Russell, 1982), self-enclosed (Perlman et al., 1978; Russell, 1982; Russell et al., 1978), rejected (Hymel et al., 1999; Paloutzian & Ellison, 1982), unwanted (Paloutzian & Ellison, 1982), and misunderstood (Paloutzian & Ellison, 1982) may load onto the *depression factor*. Whereas feeling tense (Perlman et al., 1978), restless (Perlman et al., 1978), frustrated (Paloutzian & Ellison, 1982), and hostile (Check, Perlman, & Malamuth, 1985; Jones et al., 1981; Moore & Sermat, 1974; Russell et al., 1980) may load onto *impatient boredom*. Finally, feeling inferior (Horowitz et al., 1982), worthless (Paloutzian & Ellison, 1982), and awkward (Perlman et al., 1978; Russell et al., 1978) may load onto *self-deprecation*. Thus, it would appear lonely people experience predominantly negative affect, which can be summarized as four clusters of feelings: desperation, depression, impatient boredom, and self-deprecation.

3.2. Cognitive features

As previously noted, low self-esteem is perhaps one of the most prominent cognitive characteristics of lonely people. Poor self-esteem has been consistently linked to loneliness in studies with children (Fordham & Stevenson-Hinde, 1999; Hymel et al., 1990; Kirova-Petrova, 2000; Rubin & Mills, 1988), adolescents (Brage & Meredith, 1994; Brage et al., 1993; Inderbitzen-Pisaruk et al., 1992; Larson, 1999; McWhirter, Besett-Alesch, Horibata, & Gat, 2002; Olmstead et al., 1991; Prinstein & La Greca, 2002; Schultz & Moore, 1988), and adults (Cutrona, 1982; Davis, Hanson, Edson, & Ziegler, 1992; Jones, 1982; McWhirter, 1997; Nurmi, Toivonen, Salmela-Aro, & Eronen, 1997; Olmstead et al., 1991; Paloutzian & Ellison, 1982; Schultz & Moore, 1988). However, while longitudinal investigations (e.g., Brage & Meredith, 1994; Cutrona, 1982; Olmstead et al., 1991) have suggested that low self-esteem plays a causal role in the development and maintenance of loneliness, it is likely that a reciprocal relationship exists between loneliness and low self-esteem (Peplau, Miceli et al., 1982). To elaborate, since social relationships constitute a major aspect of people's self-conceptions (Parkhurst & Hopmeyer, 1999; Peplau, Miceli et al., 1982; Sippola & Bukowski, 1999), and given its relationship with social relationship deficiencies, loneliness may lead to negative self-conceptions thereby undermining one's self-regard (Peplau, Miceli et al., 1982), and resulting in a vicious cycle wherein low self-esteem and loneliness reinforce one another.

Not surprisingly then, lonely people have been found to view themselves in a negative and self-deprecating manner, believing that they are inferior, worthless, unattractive, unlovable, and socially incompetent (Horowitz et al., 1982; Jones et al., 1981; Jones & Moore, 1987; Jones, Sansone, & Helm, 1983; Paloutzian & Ellison, 1982; Rubenstein & Shaver, 1982; Spitzberg & Canary, 1985; Zakahi & Duran, 1982, 1985). Lonely people have also been observed to hold greater discrepancies than nonlonely people between their actual selves (i.e., how they believe they are) and their ideal selves (i.e., how they would ideally wish to be; Kupersmidt et al., 1999; Eddy, 1961, cited in Peplau, Miceli et al., 1982).

Unfortunately, given Gardner et al.'s (2000) assertion that "the arousal of social hunger may direct attention toward and bias memory for social cues" (p. 487), and their observation that failure to meet belongingness needs gives rise to selective retention of social information, self-conceptions may also be more salient for lonely people than nonlonely people. In support of this notion, loneliness has indeed been found to be associated with self-consciousness and a heightened degree of self-focus (Goswick & Jones, 1981; Jones, Cavert, Snider, & Bruce, 1985; Jones et al., 1981, 1982; Moore & Schultz, 1983). Moreover, Weiss (1973) has argued that these inclinations may result in a "tendency to misinterpret or exaggerate the hostile or affectionate intent of others" (p. 21). This is a contention that has been at least partially supported by Cutrona's, (1982) finding that lonely people are more sensitive to rejection.

Moreover, lonely people do not only hold negative views about themselves. Several studies (e.g., Henwood & Solano, 1994; Jones et al., 1981; Wittenberg and Reis, 1986) have shown that they also view other people unfavorably. Relative to nonlonely people, lonely people have been found to perceive others as less trustworthy (Ernst & Cacioppo, 1999; Rotenberg, 1994), less supportive (Sarason, Sarason, & Shearin, 1986; Vaux, 1988), less communicatively competent (Jones et al., 1981; Spitzberg & Canary, 1985; Zakahi & Duran, 1982, 1985), as well as less attractive and socially desirable (Jones et al., 1981, 1983). Lonely individuals are also more cynical, less accepting of others, and more likely to expect (as well as fear) negative evaluations from others (Jones et al., 1981, 1983). These negative

attitudes also appear to generalize to the social world, being expressed as misanthropy (Hojat, 1982a), social alienation, hostility, and as fewer ‘just world’ beliefs (Jones et al., 1981). Thus, as Cacioppo et al. (2000) have suggested, it would appear that “The social world... [is] a less rewarding place for lonely individuals” (p. 146).

Sadly, lonely people are also characterized by perceptions that they are powerless to change their predicament. In contrast to the nonlonely, the lonely have been found to attribute their interpersonal failures and loneliness to personal (arguably unchangeable) characteristics such as fear of rejection, shyness, low ability, and personality traits, rather than to situational or more changeable personal characteristics such as effort, and strategies chosen (Anderson et al., 1983; Anderson, Miller, Riger, Dill, & Sedikides, 1994; Cutrona, 1982; Horowitz et al., 1982; Koenig & Abrams, 1999; Renshaw & Brown, 1993; Revenson, 1981). But on the other hand, they do not attribute their interpersonal successes to personal characteristics, but rather to luck and other external factors (Solano, 1987). Loneliness has also been shown to be associated with a perceived lack of control over outcomes (i.e., external locus of control; Hojat, 1982a, 1983; Jones et al., 1981; Moore & Schultz, 1983). Michela, Peplau, and Weeks (1981, cited in Peplau, Miceli et al., 1982) have revealed that the attribution styles employed by the lonely are detrimental and are associated with pessimism and hopelessness. In addition, Anderson (1980, cited in Peplau, Miceli et al., 1982) has demonstrated that such attributional styles are associated with lower expectations of success, and lower levels of motivation. Thus, it would appear that lonely people are characterized by negative attitudes towards the self and others, as well as detrimental attributional styles that may result in a sense of hopelessness and futility.

3.3. Behavioral features

Loneliness is also manifested in the behavioral domain. Numerous studies have indicated that the social behavior of lonely individuals is marked by inhibited sociability and ineffectiveness. For example, lonely people are typically shy (e.g., Anderson & Harvey, 1988; Cacioppo et al., 2000; Cheek & Busch, 1981; Dill & Anderson, 1999; Hojat, 1982a; Jackson, Soderlind, & Weiss, 2000; Jones et al., 1981; Kalliopuska & Laitinen, 1991; Qualter & Munn, 2002), introverted (Cutrona, 1982; Hojat, 1982a; Jones et al., 1981; Kalliopuska & Laitinen, 1991), less affiliative/sociable (Cacioppo et al., 2000; Cutrona, 1982), and less willing to take social risks (Hojat, 1982a; Jones et al., 1981; Moore & Schultz, 1983). Lonely people also seem to be less assertive than nonlonely people (Bell & Daly, 1985; Cutrona, 1982; Gerson & Perlman, 1979; Hojat, 1982a; Jones et al., 1981; Sermat, 1980; Sloan & Solano, 1984). However, Cacioppo et al. (2000) have revealed that despite feeling more anxious and less comfortable about being assertive, lonely individuals do not necessarily differ from the nonlonely in their reports of the likelihood of engaging in assertive behavior. Nonetheless, using general social skill indexes, loneliness has also been found to be associated with social skill deficits (Inderbitzen-Pisaruk et al., 1992; Jones et al., 1981; Russell et al., 1980; Solano & Koester, 1989). For example, Horowitz and French (1979) have shown that the lonely often have difficulties with introducing themselves, being friendly, making friends, taking part in groups, enjoying parties, and in surrendering control.

Furthermore, lonely people may display inappropriate patterns of self-disclosure. For example, loneliness has been linked to diminished self-reported self-disclosure (Bell & Daly, 1985; Davis & Franzoi, 1986; Franzoi & Davis, 1985; Sippola & Bukowski, 1999; Solano, Batten, & Parish, 1982). However, Solano et al. (1982) have shown that when interacting in pairs, lonely (relative to nonlonely) college students disclose too much information to same-sex partners, and too little to opposite-sex partners. Nonetheless, partners of lonely participants were left with the impression that they did not get to know their partner as well as did partners of nonlonely participants. This may perhaps be linked to the finding that lonely people tend to be less responsive to others (Jones et al., 1982), which in turn may be viewed as a reflection of the lonely individual’s inclination to be self-focused. Jones et al. (1982) have revealed that, at least in mixed-sex college student pairs, lonely people make more statements focusing on themselves, respond more slowly to their partner, ask fewer questions, and change the discussion topic more often than nonlonely people. Thus, the self-focused behavior which lonely people appear to engage in during social interactions may undermine relationship development, furthering feelings of loneliness.

Lonely people can also be distinguished from nonlonely people by their reactions to stress, and to their feelings of loneliness in particular. Rubenstein and Shaver (1980, 1982) have observed that people’s responses to loneliness tend to fall into four categories: *active solitude* (e.g., study or work, write, listen to music, exercise, walk, work on a hobby, go to a movie, read, play music), *spending money* (e.g., spend money, go shopping), *social contact* (e.g., call a friend, visit someone), and *sad passivity* (e.g., cry, sleep, sit and think, do nothing, overeat, take tranquilizers, watch television, drink or get ‘stoned’). In coping with loneliness, they found that severely lonely people characteristically adopt a ‘sad

passivity' coping strategy, whereas people who are infrequently lonely tend to adopt the other three strategies. Similarly, using Rubenstein and Shaver's (1980) *Coping with Loneliness Questionnaire*, Van Buskirk and Duke (1991) have discovered that self-rated loneliness is related to coping via sad passivity, but not to active solitude, spending money, or social contact.

Numerous studies with children (Cassidy & Asher, 1992; Crick & Ladd, 1993; Hymel et al., 1990; Renshaw & Brown, 1993; Rubin et al., 1990; Rubin & Mills, 1988) have also indicated that lonely individuals tend to be socially withdrawn. Thus, Weiss (1984) has suggested that some lonely individuals "deal with the anxiety associated with feelings of vulnerability by further establishing their safety from others. Under conditions of adversity they will further withdraw" (p. 7). Nonetheless, Brennan (1982) has asserted that sometimes loneliness (in adolescents, at least), is associated with denial, and "[a]lternative gratifications such as sexual promiscuity, drugs, fun, alcohol, or rebellion" (p. 284). More generally, Cacioppo et al. (2000) have shown that compared to nonlonely people, lonely individuals typically deal with stress by behaviorally disengaging (i.e., decreasing efforts to manage the stressor), more so than actively coping (i.e., directly attempting to deal with the stressor or its effects), seeking instrumental support (i.e., guidance, assistance, or information), or seeking emotional support (i.e., understanding, or moral support). Therefore, lonely people are seemingly more passive than the nonlonely in their attempts to cope with feelings of loneliness and stress in general.

However, two qualifications are worth noting. Firstly, Russell et al. (1984) have observed that coping responses to loneliness differ according to the type of loneliness experienced. They found that whereas the socially lonely (i.e., those with perceived social network deficits) adopted more passive/contemplative strategies, the emotionally lonely (i.e., those with perceived deficits in their intimate relationships) adopted more active coping strategies, thereby directing efforts towards forming new relationships. Thus, people suffering more from social loneliness may have a greater inclination towards passivity than those suffering more from emotional loneliness. Secondly, causal attributions and perceived social competence may also interact with loneliness to influence coping behavior. For example, Paloutzian and Ellison (1979, cited in Jones, 1982) found that:

college students who held a favorable view of their own social skills were more likely to engage in *intimate activities* (e.g., talking to a friend) when lonely, whereas students who viewed their social skills less favorably tended to engage in *sensually oriented* (e.g., drinking, taking drugs) and *diversionary activities* (e.g., keeping busy, reading, working) when lonely (italics added; p. 244).

But perceived social skills are affected by loneliness, with greater loneliness being associated with lower self-perceived social competence. Therefore, coping behavior is influenced by perceived social skills, which in turn are negatively affected by loneliness. Likewise, Anderson (1980, cited in Peplau, Miceli et al., 1982) has shown that an internal, stable attributional style is linked to less effective coping behavior, and that this attributional style is also characteristically adopted by the lonely. Hence the behavior of lonely people is intimately linked to their cognitions/cognitive style. Nonetheless, to summarize, lonely people appear to behave in a self-absorbed, socially ineffective manner towards others, and are typically passive when faced with loneliness and stress.

4. Antecedent and maintaining factors

The preceding discussion of the loneliness prototype has identified loneliness as a distressing experience. However, given its subjective nature, there are individual differences in the ways that loneliness is experienced (Rokach, 1988). Thus, individuals differ in relation to which and how many prototypic features characterize their loneliness experience, and consequently in the way that their loneliness can best be explained. In the following sections the different perspectives on the origin and maintenance of loneliness will be reviewed.

4.1. Social needs approach

The social needs perspective on loneliness has been proposed by several theorists (e.g., Fromm-Reichmann, 1959; Sullivan, 1953; Weiss, 1973). According to this approach, loneliness is caused by the absence of a needed relationship or set of relationships, which are not necessarily intimate or confidant in nature, but rather enable the meeting of one's inherent social needs (e.g., attachment, social integration, nurturance, reassurance of worth, reliance alliance, and guidance) (Weiss, 1974, 1987). This perspective draws heavily on Bowlby's attachment theory (Weiss, 1987).

According to attachment theory (Bowlby, 1969), during the period of infancy, children form attachment bonds with their parents that provide them with a sense of warmth, intimacy, and security. When separated from attachment figures, children show signs of separation anxiety, such as restlessness, tension, discomfort, and social withdrawal (Stokes, 1987). Bowlby (1969) has suggested that secure early attachments are necessary for developing the capacities of warmth and closeness in social bonding later in life. Moreover, while the transitions from childhood to adolescence to young adulthood are characterized by parents, to some extent, being relinquished as primary attachment figures and replaced by peers such as friends and intimate others, irrespective of age, the loss or absence of attachment figures gives rise to distress (Weiss, 1987).

Hojat (1987) has proposed that disruptions in childhood relationships result in fears of intimacy and rejection, in addition to feelings of detachment, vulnerability, and anxiety. Such barriers to forming subsequent attachment relationships are implicated in later loneliness experiences. Cassidy and Berlin (1999) have further argued that early attachment difficulties affect one's representational models, that is, how individuals view themselves, as well as other people, which in turn influence related behavior. Not surprisingly then, loneliness in young adulthood has been found to be associated with early attachment disruptions (Hecht & Baum, 1984). Furthermore, loneliness in childhood and adolescence has also been linked to concurrent attachment difficulties (Chipuer, 2001). Therefore, according to this perspective, early attachment disturbances result in personal trait and intrapsychic conflicts which lead to loneliness (Perlman & Peplau, 1982). However, situational factors that affect one's ability to meet their social needs, such as relocation, death, and divorce, are also viewed as potential antecedent and maintaining causes of loneliness.

4.2. Cognitive discrepancy approach

In contrast to the social needs approach which focuses primarily on the role of early influences in the development/maintenance of loneliness, the cognitive discrepancy perspective proposes that cognitive processes are the central tenet of loneliness (Peplau & Perlman, 1982). Within this perspective, loneliness is viewed as resulting from a discrepancy between the types of interpersonal relationships one wishes to have, and those that one perceives they presently have (Peplau & Perlman, 1982). According to this approach, irrational or distorted thinking leads to loneliness by causing deficits in sociability (Peplau & Perlman, 1982). A person's thoughts about themselves and others, influence the likelihood of their forming satisfying relationships, because these cognitions impact on how they interact, as well as how they interpret interpersonal situations (Murphy & Kupshik, 1992).

The cognitive discrepancy perspective draws on attribution theory, suggesting that, in their attempts to understand the causes of their own and other's actions, lonely people attribute causality. It is the manner in which they attribute causality that affects their psychological state (Murphy & Kupshik, 1992). Specifically, in explaining the causes of their loneliness, lonely people are likely to blame themselves, deriving uncontrollable, internal, and stable attributions (Solano, 1987). That is, they are likely to view social situations as being beyond their control, and believe that they do not have friends because they are perhaps dull and boring (internal). They are also likely to see their personalities as unchangeable (stable). These attributions are characteristic of what has been referred to as learned helplessness and are likely to result in fractured self-esteem (Ponzetti, 1990; Young, 1982). Accordingly, loneliness may arise because people fail to take full advantage of available interpersonal opportunities since they either expect to be rejected, or have unrealistic standards for eligible potential companions, that is, no one "measures up" (Jones, 1982; Rook & Peplau, 1982). Indeed, a cluster of dysfunctional attitudes (e.g., fears of interpersonal rejection, feeling unsure of oneself, and social anxiety) has been found to characterize sufferers of loneliness (Wilbert & Rupert, 1986). Furthermore, Shaver et al. (1985) have shown that compared to their nonlonely, and transiently lonely counterparts, chronically lonely individuals hold very high expectations for interpersonal relationships. Therefore, this perspective argues that changes in either one's actual or desired social relationships give rise to loneliness, and that attitudes and attributions mediate this relationship.

4.3. Interactionist approach

Contrary to the cognitive discrepancy approach which focuses on the individual, interactionist perspectives hold that loneliness arises from an interplay of personal, cultural, and situational factors (Weiss, 1982). According to this view, characterological factors (such as shyness, introversion, social anxiety, and poor social skills) interact with cultural and situational forces to hinder the establishment and maintenance of social relationships. For example, Yang and Clum

(1994) have argued that one's "culture always provides normative information to guide an individual's behaviors and thoughts" (p. 127). Indeed, Rokach, Lackovic-Grgin, Penezic, and Soric (2000) have shown that one's cultural context influences the development of loneliness. For instance, they compared samples from Croatia and North America, and discovered that unemployment and relocation were interpreted differently by these cultures, and were thus differentially related to loneliness within each culture (i.e., being more predictive of loneliness in North America). Rokach and colleagues suggest that the North American cultural emphasis on individual achievement, and competitiveness, as well as increased computerization, magnifies social alienation leading to an increased risk of loneliness. Furthermore, failure to meet cultural expectations regarding couple companionate relationships (Rokach et al., 2000) and of being involved in social activities on Friday and Saturday nights (Larson, 1999) may intensify loneliness. In a similar vein, different positions in the life cycle are associated with differing social expectations, and failure to meet such expectations may also give rise to loneliness.

In addition, many situational determinants of loneliness have been identified, such as relocation, important others' temporary absences, social conflict, rejection, and exclusion, as well as inadequate transport, poverty and low income, unemployment, retirement, imprisonment, and hospitalization (Blai, 1989; Hymel et al., 1999; Killeen, 1998). However, personal characteristics are important in determining how one interprets and responds to both cultural expectations and situational factors. Mahon and Yarcheski (1988, 1992) have attempted to separate characterological from situational determinants of loneliness to see which are most predictive, and discovered that both are necessary in order to understand loneliness. In their first study, a situational set of variables was found explain more variability in the loneliness of early adolescents (Mahon & Yarcheski, 1988). But in their replication and extension study, a characterological set was found to explain more variability in the loneliness of early adolescents, whereas a situational set explained more variability for middle and late adolescents (Mahon & Yarcheski, 1992). Together, these findings emphasize the importance of the interacting effect of these sets of factors, and demonstrate that the pitting of situational against characterological factors may yield inconsistent findings. Thus, according to the interactionist perspective, antecedent and maintaining factors of loneliness are not exclusively characterological or cultural/situational. Determinants of loneliness include the interaction between one's personal characteristics and their sociocultural context.

4.4. Chronicity/stability of loneliness

The aforementioned perspectives on loneliness highlight a variety of potential causes of loneliness. However, they fail to emphasize differences in the temporal persistence of loneliness. Therefore, in this section, the importance of the time frame or stability of loneliness is stressed. Numerous studies have investigated the temporal persistence of loneliness and have suggested that while for some people loneliness is long-lived, for others it is less so. For example, short-term studies of loneliness spanning 6 to 11 weeks have revealed test–retest correlations ranging between $r = .71$ and $.85$ (Jones & Moore, 1987; Shaver et al., 1985; Spitzberg & Hurt, 1987), whereas longer-term studies spanning between 1 and 3 years have revealed test–retest correlations ranging between $r = .38$ and $.68$ (Boivin et al., 1995; Koenig & Abrams, 1999; Sarason et al., 1986). Accordingly, many researchers (e.g., Jones, 1987) have argued for the necessity of distinguishing between *state loneliness*, which refers to current and immediate feelings of loneliness, and *trait loneliness*, which refers to a relatively enduring experience of loneliness. Similarly, Young (1982) has discriminated between transient, situational, and chronic loneliness. *Transient loneliness* refers to brief and occasional feelings of loneliness experienced from time to time by most people in their everyday lives. In contrast, *situational loneliness* refers to the loneliness experienced by individuals who previously had satisfying relationships, but are now confronted with a specific crisis/life transition that disrupts these relationships. Also differentiated is *chronic loneliness* which refers to an enduring experience of loneliness and dissatisfaction with social relationships that has lasted for at least 2 years.

Irrespective of the ways in which temporal differences in loneliness are labeled, Rook and Peplau (1982) have suggested that chronicity is an important dimension to consider because it has direct etiological as well as treatment implications. For example, Cutrona (1982) and Snodgrass (1987) have shown that based upon chronicity, individuals differ with regard to their attributions for loneliness and interpersonal failures. Specifically, chronically lonely individuals make more self-derogatory attributions (i.e., internal, uncontrollable, and stable attributions) compared to transiently lonely individuals. Shaver and colleagues (1985) have similarly discovered that trait lonely individuals make internal and stable attributions, as well as preferring passive coping strategies. They tend to expect social failure,

and fail to seek solutions, whereas state lonely individuals make both personal/internal and situational attributions, prefer active coping strategies, and are relatively socially skilful. Additionally, [Hojat \(1983\)](#) has revealed that chronic loners have lower self-esteem, are less extraverted, more depressed, anxious, and neurotic, and have a more external locus of control than transitory loners. Furthermore, [Gerson and Perlman \(1979\)](#) found that while situationally and chronically lonely individuals were more depressed than their nonlonely counterparts, situationally lonely participants were more effective communicators of emotional messages than chronically lonely participants. Therefore, trait or chronically lonely individuals appear to suffer from more long-term interpersonal deficits (cognitive, affective, and behavioral) than state or situationally/transiently lonely individuals. [Spitzberg and Hurt \(1987\)](#) have proposed that this is because the longer one's loneliness persists, the more likely it is that their causal attributions will become more self-blaming/self-derogatory, and their social skills will atrophy through either lack of use or motivation.

5. Conclusions and future directions

5.1. Methodological and theoretical considerations

5.1.1. Causality

Given the scarcity of longitudinal and experimental research, in discussing the features typically experienced by lonely people, the present review has primarily focused on correlational studies. As such, it is difficult to establish the direction of causation between loneliness and the features commonly associated with it. Nonetheless, [Cheek and Busch \(1981\)](#) have demonstrated that, while shy college students experienced greater levels of loneliness than their more extraverted peers, over the course of a college semester their loneliness decreased. This finding was interpreted as suggesting that as shy people habituate to (or become increasingly familiar with) a new situation, their loneliness eases. Thus, because shyness appears to impede the establishment and maintenance of interpersonal relationships, it most likely plays a causal role in the precipitation/maintenance of loneliness. Attributional style may also be a causal factor. [Anderson, Jennings, and Arnoult \(1988\)](#) have demonstrated that experimental manipulation of attributional styles can induce nonlonely people to behave much like lonely people, and lonely people to act indistinguishably from their nonlonely counterparts. Specifically, Anderson et al. showed that inducing people to make maladaptive attributions about an interpersonal task resulted in lower success expectancies, lower motivation, less shifting of strategies, and less effective overall performances. The converse was also found. That is, inducing people to make adaptive attributions led to greater success expectancies, greater motivation, more shifting of strategies, and more effective performances. Therefore, to the extent that maladaptive attributional styles impair interpersonal success expectancies, motivation, and performance, they would also appear to perpetuate (if not initiate) the experience of loneliness.

However, perhaps the most clearly established factor in the development/maintenance of loneliness is poor social skills/social withdrawal. [Jones et al. \(1982\)](#) demonstrated that enhancing lonely male college students' social skills (through social skills training) resulted in concomitant reductions in feelings of loneliness. Moreover, longitudinal studies conducted over 1 year (e.g., [Renshaw & Brown, 1993](#)), and 7 years (e.g., [Rubin, Chen, McDougall, Bowker, & McKinnon, 1995](#)), have shown that social withdrawal is predictive of concurrent and future loneliness in both children and adolescents. Nevertheless, although maladaptive social behavior appears to be a causative factor in loneliness, [Cacioppo et al. \(2000\)](#) have revealed that loneliness can also lead to social skill deficits. Through the use of hypnosis, Cacioppo and colleagues experimentally manipulated feelings of loneliness, and found that the induction of loneliness gave rise to reduced social skills and sociability, as well as to lower levels of self-esteem and optimism, and higher anxiety, anger, negativism, and fear of negative evaluation. Therefore, while shyness, maladaptive attributional styles, and poor social skills appear to serve as precipitating and/or maintaining factors for loneliness, it is difficult to establish the direction of causation between loneliness and many of the features commonly associated with it, most likely because reciprocal relationships exist.

5.1.2. Others' perceptions of lonely people

It is also important to note that identifying lonely persons on the basis of their behavior may not be a straightforward matter for observers because it is hard to precisely ascertain the degree of loneliness on the basis of third party reports or observation. [Bell \(1985\)](#) demonstrated that after 10 min 'get-acquainted' conversations with opposite-sex strangers, the partners of lonely participants rated them as less involved and likeable, and expressed less desire for future interactions/friendships with lonely as opposed to nonlonely participants. Furthermore, [Solano et al. \(1982\)](#) discovered that

following a structured acquaintanceship exercise, lonely participants were perceived as ‘more difficult to get to know’ than nonlonely participants. Nonetheless, Jones et al. (1981) found that while lonely males were evaluated less favorably by their classmates at the start of semester (i.e., less frequently being chosen as leader), by the end of the semester lonely males and females were not evaluated differently to nonlonely students. Similarly, Jones et al. (1983) revealed that lonely males, but not lonely females, were rated more negatively than their nonlonely counterparts following brief conversations with opposite-sex strangers. However, the conversational partners of both lonely males and lonely females considered them likely to hold negative self-views. Jones et al. (1983) concluded that after brief social interactions, people might be less willing to continue contact with lonely individuals because they believe that these individuals harbor negative self-views and fear “becoming involved with someone who has ‘problems’” (p. 440).

In contrast, recent research by Christensen and Kashy (1998) has shown that lonely individuals are not necessarily negatively evaluated following brief social encounters. Subsequent to group interactions between four same-sex strangers, Christensen and Kashy discovered that not only were lonely individuals generally not judged differentially by other group members, they were actually perceived as friendlier than nonlonely group members. The authors suggested that, because interactions were expected in their experimental setting, the lonely participants might have acted especially friendly in an attempt to take advantage of the “opportunity to make social connections in a nonthreatening context” (Christensen & Kashy, 1998, p. 327). Similarly, Vitkus and Horowitz (1987) provided empirical support for their proposal that, rather than suffering from social skill deficits, lonely people adopt passive interpersonal roles which disrupt social performance. Vitkus and Horowitz found that when lonely participants were assigned a particular interpersonal role (i.e., either listening to, or describing a personal problem to a partner) their behavior did not differ from that of nonlonely participants. Moreover, Rotenberg, Gruman, and Ariganello (2002) have also shown that through their own behavior, other people can elicit less socially skilled behavior from people they believe to be lonely—a phenomenon they refer to as ‘behavioral confirmation of the loneliness stereotype’ (p. 81). Therefore, it would appear that lonely individuals may not necessarily suffer from social skill deficits, and are indeed not always evaluated negatively by others, particularly when interactions involve members of the same sex, or when they continue over longer periods of time.

5.1.3. Measurement issues

One final important issue that requires discussion is that of the assessment of loneliness. Loneliness has most commonly been assessed using the *Revised UCLA Loneliness Scale* (Russell, 1982), which is a self-report, unidimensional/global measure of loneliness. However, recent studies of loneliness and its measurement (e.g., DiTommaso & Spinner, 1997; Hoza, Bukowski, & Beery, 2000) provide strong evidence to suggest that loneliness is indeed a multidimensional phenomenon (i.e., different social relationship deficiencies give rise to different forms of loneliness), and that unidimensional assessments of it are inadequate because they do not enable illumination of the intricate and differential relationships between the various forms of loneliness and other phenomena. Furthermore, Marangoni and Ickes (1989) have argued that measures of loneliness, by and large, fail to capture the distinction between state/short-term loneliness and trait/long-term loneliness, but tend to err on the side of measuring trait loneliness. Therefore, it is difficult to discriminate between the concomitants and consequences of chronic and situational loneliness.

In addition, all of the aforementioned research on loneliness has been derived solely from self-report measures. Sole reliance on self-report data is generally frowned upon because it can give rise to the issue of shared method variance (Goossens & Beyers, 2002). However, in this instance, given that loneliness is a subjective experience which is not consistently associated with deficient objective features (such as poor social performance, number of friends, etc.), it would seem that self-report measures are the most tenable method of data collection. Nonetheless, Goossens and Beyers (2002) have suggested that future research may benefit from employing multi-method approaches such as observational techniques, and multiple informants (i.e., self-as well as other-reports).

5.2. Conclusions

In conclusion, humans are inherently social beings who possess a fundamental need to belong. However, when they fail to satisfy this need, disturbances such as loneliness arise, which can have severe consequences for mental health and wellbeing. It has been argued that the alleviation of loneliness should be a key focus for clinicians. The recognition and assessment of loneliness can be promoted through a better understanding of its characteristic features. The above

review has attempted to illustrate the ways in which loneliness may become manifest through feelings, cognitions, and behaviors. Horowitz et al.'s (1982) prototype approach to elucidating the experience of loneliness is of particular significance in this regard. To summarize, the prototypical lonely person is characterized by: negative feelings such as desperation, depression, impatient boredom, and self-deprecation; negative attitudes about oneself, other people, and about the causes of events; as well as by passive, self-absorbed, and ineffective social behavior. It should also be noted that while, for the purposes of illustration, affective, cognitive, and behavioral patterns have been differentiated, they are all indeed intimately entwined. For example, a lonely person's attributional style may influence their behavior in a particular situation, which in turn may result in specific feelings. Furthermore, according to Horowitz and colleagues, the more prototypical lonely features one possesses, the more likely it is that the individual is indeed lonely (i.e., belongs in the loneliness category). Literature related to the proposed origins of loneliness has also been reviewed. As Jones (1982) has succinctly summarized, loneliness derives primarily from "the way in which lonely people perceive, evaluate, and respond to interpersonal reality" (p. 244).

Although loneliness has received a fair amount of research attention, contemporary prevalence studies are needed to establish current rates of incidence of loneliness. In addition, more research is necessary to better determine the causal relationship between loneliness and its correlates. After a burst of research interest in the 1980s, research has waned in more recent years. It is unclear why this has occurred, though one might speculate that it may be due to an overshadowing of the loneliness construct with other closely related constructs, such as depression, which may have led to researchers taking loneliness for granted—overlooking it as merely a feature of these problems. In this review we have attempted to demonstrate that while loneliness shares features in common with many other psychological problems, such as depression and anxiety, it is nonetheless a distinct phenomenon worthy of attention in its own right. Thus, we would like to call for a return to greater research and clinical attention into loneliness. Having now developed a picture of the affective, cognitive, and behavioral characteristics that typify the lonely person, there is a need for research that enhances our understanding of the interactions between these features. For example, given increased interest in the role of emotion generally, and emotion regulation in particular (Southam-Gerow & Kendall, 2002), examination of this construct may provide a promising avenue for future loneliness research, affording an opportunity to examine how beliefs and expectations influence affect and behavior, and vice versa. Since adolescence is a period of high risk for loneliness, and also a critical time for cultivating social skills and attitudes which can have lifelong effects on one's social and emotional development, it would appear that adolescence should also be a particular focus of research and intervention efforts—efforts directed at changing the thoughts, behaviors, and emotion regulation strategies that promote the persistence of loneliness into adulthood. Intensive empirical intervention and treatment research aimed specifically at preventing and alleviating the harmful consequences of severe and persistent loneliness are long overdue. Prospective, longitudinal studies of loneliness and its alleviation are very much needed.

References

- American Psychiatric Association (2000). *DSM-IV-TR*. Washington, DC: Author.
- Andersson, L. (1982). Interdisciplinary study of loneliness—with evaluation of social contacts as a means towards improving competence in old age. *Acta Sociologica*, 25, 75–80.
- Anderson, C. A., & Arnoult, L. H. (1985). Attributional models of depression, loneliness, and shyness. In J. H. Harvey, & G. Weary (Eds.), *Attribution: Basic issues and applications* (pp. 235–279). Orlando, FL: Academic Press.
- Anderson, C. A., & Harvey, R. J. (1988). Discriminating between problems in living: An examination of measures of depression, loneliness, shyness, and social anxiety. *Journal of Social and Clinical Psychology*, 6, 482–491.
- Anderson, C. A., Horowitz, L. M., & French, R. D. (1983). Attributional style of lonely and depressed people. *Journal of Personality and Social Psychology*, 45, 127–136.
- Anderson, C. A., Jennings, D. L., & Arnoult, L. H. (1988). Validity and utility of the attributional style construct at a moderate level of specificity. *Journal of Personality and Social Psychology*, 55, 979–990.
- Anderson, C. A., Miller, R. S., Riger, A. L., Dill, J. C., & Sedikides, C. (1994). Behavioral and characterological attributional styles as predictors of depression and loneliness: Review, refinement, and test. *Journal of Personality and Social Psychology*, 66, 549–558.
- Asher, S. R., & Paquette, J. A. (2003). Loneliness and peer relations in childhood. *Current Directions in Psychological Science*, 12, 75–78.
- Averill, J. R., Clore, G. L., Frijda, N. H., Levenson, R. W., Scherer, K. R., Clark, L. A., et al. (1994). What is the function of emotions? In P. Ekman, & R. J. Davidson (Eds.), *The nature of emotion: Fundamental questions* (pp. 97–139). New York: Oxford University Press.
- Bancroft, J., Skrimshire, A., & Simkins, S. (1976). The reasons people give for taking overdoses. *British Journal of Psychiatry*, 128, 538–548.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117, 497–529.
- Baumeister, R. F., & Tice, D. M. (1990). Anxiety and social exclusion. *Journal of Social and Clinical Psychology*, 9, 165–195.

- Bell, R. A. (1985). Conversational involvement and loneliness. *Communication Monographs*, 52, 218–235.
- Bell, R. A., & Daly, J. A. (1985). Some communicative correlates of loneliness. *Southern Speech Communication Journal*, 50, 121–142.
- Birtchnell, J., & Alarcon, J. (1971). The motivational and emotional state of 91 cases of attempted suicide. *British Journal of Medical Psychology*, 44, 42–52.
- Blai, B. (1989). Health consequences of loneliness: A review of the literature. *Journal of American College Health*, 37, 162–167.
- Bleach, G., & Claiborn, W. L. (1974). Initial evaluation of hot-line telephone crisis centers. *Community Mental Health Journal*, 10, 387–394.
- Boivin, M., & Hymel, S. (1997). Peer experiences and social self-perceptions: A sequential model. *Developmental Psychology*, 33, 135–145.
- Boivin, M., Hymel, S., & Bukowski, W. M. (1995). The roles of social withdrawal, peer rejection, and victimization by peers in predicting loneliness and depressed mood in childhood. *Development and Psychopathology*, 7, 765–785.
- Borys, S., & Perlman, D. (1985). Gender differences in loneliness. *Personality and Social Psychology Bulletin*, 11, 63–74.
- Bowlby, J. (1969). *Attachment and loss: Vol. 1. Attachment*. New York: Basic Books.
- Bradburn, N. M. (1969). *The structure of psychological well being*. Chicago: Aldine.
- Brage, D., & Meredith, W. (1994). A causal model of adolescent depression. *Journal of Psychology*, 128, 455–468.
- Brage, D., Meredith, W., & Woodward, J. (1993). Correlates of loneliness among Midwestern adolescents. *Adolescence*, 28, 685–693.
- Brennan, T. (1982). Loneliness at adolescence. In L. A. Peplau & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research and therapy* (pp. 269–290). New York: Wiley.
- Buchholz, E. S., & Catton, R. (1999). Adolescents' perceptions of aloneness and loneliness. *Adolescence*, 34, 203–213.
- Burger, J. M. (1995). Individual differences in preference for solitude. *Journal of Research in Personality*, 29, 85–108.
- Cacioppo, J. T., Ernst, J. M., Burleson, M. H., McClintock, M. K., Malarkey, W. B., Hawkley, L. C., et al. (2000). Lonely traits and concomitant physiological processes: The MacArthur social neuroscience studies. *International Journal of Psychophysiology*, 35, 143–154.
- Cacioppo, J. T., Hawkley, L. C., Berntson, G. G., Ernst, J. M., Gibbs, A. C., Stickgold, R., et al. (2002). Do lonely days invade the nights? Potential social modulation of sleep efficiency. *Psychological Science*, 13, 384–387.
- Cacioppo, J. T., Hawkley, L. C., Crawford, E., Ernst, J. M., Burleson, M. H., Kowalewski, R. B., et al. (2002). Loneliness and health: Potential mechanisms. *Psychosomatic Medicine*, 64, 407–417.
- Campos, J. J., Mumme, D. L., Kermoian, R., & Campos, R. G. (1994). A functionalist perspective on the nature of emotion. *Monographs of the Society for Research in Child Development*, 59, 284–303.
- Cassidy, J., & Asher, S. R. (1992). Loneliness and peer relations in young children. *Child Development*, 63, 350–365.
- Cassidy, J., & Berlin, L. J. (1999). Understanding the origins of childhood loneliness: Contributions of attachment theory. In K. J. Rotenberg & S. Hymel (Eds.), *Loneliness in childhood and adolescence* (pp. 34–55). Cambridge, England: Cambridge University Press.
- Check, J. V. P., Perlman, D., & Malamuth, N. M. (1985). Loneliness and aggressive behavior. *Journal of Social and Personal Relationships*, 2, 243–252.
- Check, J. M., & Busch, C. M. (1981). The influence of shyness on loneliness in a new situation. *Personality and Social Psychology Bulletin*, 7, 572–577.
- Chipuer, H. M. (2001). Dyadic attachments and community connectedness: Links with youths' loneliness experiences. *Journal of Community Psychology*, 29, 429–446.
- Christensen, P. N., & Kashy, D. A. (1998). Perceptions of and by lonely people in initial social interaction. *Personality and Social Psychology Bulletin*, 24, 322–329.
- Conroy, R. W., & Smith, K. (1983). Family loss and hospital suicide. *Suicide and Life-Threatening Behavior*, 13, 179–194.
- Coric, D., & Murstein, B. I. (1993). Bulimia nervosa: Prevalence and psychological correlates in a college community. *Eating Disorders: the Journal of Treatment and Prevention*, 1, 39–51.
- Crick, N. R., & Ladd, G. W. (1993). Children's Perceptions of their peer experiences: Attributions, loneliness, social anxiety, and social avoidance. *Developmental Psychology*, 29, 244–254.
- Culp, A. M., Clyman, M. M., & Culp, R. E. (1995). Adolescent depressed mood, reports of suicide attempts, and asking for help. *Adolescence*, 30, 827–837.
- Cutrona, C. E. (1982). Transition to college: Loneliness and the process of social adjustment. In L. A. Peplau & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research and therapy* (pp. 291–309). New York: Wiley.
- Davis, M. H., & Franzoi, S. L. (1986). Adolescent loneliness, self-disclosure, and private self-consciousness: A longitudinal investigation. *Journal of Personality and Social Psychology*, 51, 595–608.
- Davis, S. F., Hanson, H., Edson, R., & Ziegler, C. (1992). The relationship between optimism–pessimism, loneliness, and level of self-esteem in college students. *College Student Journal*, 26, 244–247.
- DeNiro, D. A. (1995). Perceived alienation in individuals with residual-type schizophrenia. *Issues in Mental Health Nursing*, 16, 185–200.
- Dill, J. C., & Anderson, C. A. (1999). Loneliness, shyness, and depression: The etiology and interrelationships of everyday problems in living. In T. Joiner & J. C. Coyne (Eds.), *The interactional nature of depression: Advances in interpersonal approaches* (pp. 93–125). Washington, DC: American Psychological Association.
- DiTommaso, E., & Spinner, B. (1997). Social and emotional loneliness: A re-examination of Weiss' typology of loneliness. *Personality and Individual Differences*, 22, 417–427.
- Erikson, E. H. (1963). *Childhood and society*, (2nd ed.). New York: Norton.
- Erikson, E. H. (1968). *Identity: Youth and crisis*. New York: Norton.
- Ernst, J. M., & Cacioppo, J. T. (1999). Lonely hearts: Psychological perspectives on loneliness. *Applied and Preventive Psychology*, 8, 1–22.
- Fischer, C. S., & Phillips, S. L. (1982). Who is alone? Social characteristics of people with small networks. In L. A. Peplau & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research and therapy* (pp. 21–39). New York: Wiley.
- Fordham, K., & Stevenson-Hinde, J. (1999). Shyness, friendship quality, and adjustment during middle childhood. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 40, 757–768.

- Franzoi, S. L., & Davis, M. H. (1985). Adolescent self-disclosure and loneliness: Private self-consciousness and parental influences. *Journal of Personality and Social Psychology*, 48, 768–780.
- Frohm-Reichmann, F. (1959). Loneliness. *Psychiatry: Journal for the Study of Interpersonal Processes*, 22, 1–15.
- Gardner, W. L., Pickett, C. L., & Brewer, M. B. (2000). Social exclusion and selective memory: How the need to belong influences memory for social events. *Personality and Social Psychology Bulletin*, 26, 486–496.
- Gamefski, N., Diekstra, R. F., & de Heus, P. (1992). A population-based survey of the characteristics of high school students with and without a history of suicidal behavior. *Acta Psychiatrica Scandinavica*, 86, 189–196.
- Geller, J., Janson, P., McGovern, E., & Valdin, A. (1999). Loneliness as a predictor of hospital emergency department use. *Journal of Family Practice*, 48, 801–804.
- Gerson, A. C., & Perlman, D. (1979). Loneliness and expressive communication. *Journal of Abnormal Psychology*, 88, 258–261.
- Gilbert, E., & DeBlasse, R. (1984). Anorexia nervosa: Adolescent starvation by choice. *Adolescence*, 19, 839–846.
- Goossens, L., & Beyers, W. (2002). Comparing measures of childhood loneliness: Internal consistency and confirmatory factor analysis. *Journal of Clinical Child and Adolescent Psychology*, 31, 252–262.
- Goossens, L., & Marcoen, A. (1999). Adolescent loneliness, self-reflection, and identity: From individual differences to developmental processes. In K. J. Rotenberg & S. Hymel (Eds.), *Loneliness in childhood and adolescence* (pp. 225–243). Cambridge, England: Cambridge University Press.
- Goswick, R. A., & Jones, W. H. (1981). Loneliness, self-concept, and adjustment. *Journal of Psychology*, 107, 237–240.
- Green, B. H., Copeland, J. R. M., Dewey, M. F., Sharma, V., Saunders, P. A., Davidson, L. A., et al. (1992). Risk factors for depression in elderly people: A prospective study. *Acta Psychiatrica Scandinavica*, 86, 213–217.
- Hagerty, B. M., Williams, R. A., Coyne, J. C., & Early, M. R. (1996). Sense of belonging and indicators of social and psychological functioning. *Archives of Psychiatric Nursing*, 10, 235–244.
- Hawkey, L. C., Burleson, M. H., Bernston, G. G., & Cacioppo, J. T. (2003). Loneliness in everyday life: Cardiovascular activity, psychosocial context, and health behaviors. *Journal of Personality and Social Psychology*, 85, 105–120.
- Hecht, D. T., & Baum, S. K. (1984). Loneliness and attachment patterns in young adults. *Journal of Clinical Psychology*, 40, 193–197.
- Henwood, P. G., & Solano, C. H. (1994). Loneliness in young children and their parents. *Journal of Genetic Psychology*, 155, 35–45.
- Hojat, M. (1980). Loneliness as a function of selected personality variables. *Journal of Clinical Psychology*, 38, 137–141.
- Hojat, M. (1982). Psychometric characteristics of the UCLA Loneliness Scale: A study with Iranian college students. *Educational and Psychological Measurement*, 42, 917–925.
- Hojat, M. (1983). Comparison of transitory and chronic loners on selected personality variables. *British Journal of Psychology*, 74, 199–202.
- Hojat, M. (1987). A psychodynamic view of loneliness and mother–child relationships: A review of theoretical perspectives and empirical findings. *Journal of Social Behavior and Personality*, 2(2, Pt 2), 89–104.
- Horowitz, L. M., & French, R. D. (1979). Interpersonal problems of people who describe themselves as lonely. *Journal of Consulting and Clinical Psychology*, 47, 762–764.
- Horowitz, L. M., French, R. D., & Anderson, C. A. (1982). The prototype of a lonely person. In L. A. Peplau & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research and therapy* (pp. 183–205). New York: Wiley.
- House, J. S., Landis, K. R., & Umberson, D. (1988). Social relationships and health. *Science*, 241, 540–545.
- Hoza, B., Bukowski, W. M., & Beery, S. (2000). Assessing peer network and dyadic loneliness. *Journal of Clinical Child Psychology*, 29, 119–128.
- Hymel, S., Rubin, K. H., Rowden, L., & LeMare, L. (1990). Children's peer relationships: Longitudinal prediction of internalizing and externalizing problems from middle to late childhood. *Child Development*, 61, 2004–2021.
- Hymel, S., Tarulli, D., Hayden Thompson, L., & Terrell-Deutsch, B. (1999). Loneliness through the eyes of children. In K. J. Rotenberg & S. Hymel (Eds.), *Loneliness in childhood and adolescence* (pp. 80–106). Cambridge, England: Cambridge University Press.
- Inderbitzen-Pisaruk, H., Clark, M. L., & Solano, C. H. (1992). Correlates of loneliness in midadolescence. *Journal of Youth and Adolescence*, 21, 151–167.
- Jackson, J., & Cochran, S. D. (1990). Loneliness and psychological distress. *The Journal of Psychology*, 125, 257–262.
- Jackson, T., Soderlind, A., & Weiss, K. E. (2000). Personality traits and quality of relationships as predictors of future loneliness among American college students. *Social Behavior and Personality*, 28, 463–470.
- Johnson, H. D., LaVoie, J. C., Spenceri, M. C., & Mahoney-Wernli, M. A. (2001). Peer conflict avoidance: Associations with loneliness, social anxiety, and social avoidance. *Psychological Reports*, 88, 227–235.
- Jones, W. H. (1981). Loneliness and social contact. *Journal of Social Psychology*, 113, 295–296.
- Jones, W. H. (1982). Loneliness and social behavior. In L. A. Peplau & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research and therapy* (pp. 238–252). New York: Wiley.
- Jones, W. H. (1987). Research and theory on loneliness: A response to Weiss' reflections. *Journal of Social Behavior and Personality*, 2(2, Pt 2), 27–30.
- Jones, W. H., Cavert, C. W., Snider, R. L., & Bruce, T. (1985). Relational stress: An analysis of situations and events associated with loneliness. In S. Duck, & D. Perlman (Eds.), *Understanding personal relationships: An interdisciplinary approach* (pp. 221–242). London: SAGE Publications.
- Jones, W. H., Freemon, J. E., & Goswick, R. A. (1981). The persistence of loneliness: Self and other determinants. *Journal of Personality*, 49, 27–48.
- Jones, W. H., & Hebb, L. (2003). The experience of loneliness: Objective and subjective factors. *The International Scope Review*, 5(9), 41–68.
- Jones, W. H., Hobbs, S. A., & Hockenbury, D. (1982). Loneliness and social skill deficits. *Journal of Personality and Social Psychology*, 42, 682–689.
- Jones, W. H., & Moore, T. L. (1987). Loneliness and social support. *Journal of Social Behavior and Personality*, 2(2, Pt 2), 145–156.
- Jones, W. H., Sansone, C., & Helm, B. (1983). Loneliness and interpersonal judgments. *Personality and Social Psychology Bulletin*, 9, 437–441.
- Kalliopuska, M., & Laitinen, M. (1991). Loneliness related to self-concept. *Psychological Reports*, 69, 27–34.
- Kiecolt-Glaser, J. K., Garner, W., Speicher, C., Penn, G. M., Holliday, J., & Glaser, R. (1984). Psychosocial modifiers of immunocompetence in medical students. *Psychosomatic Medicine*, 46, 7–14.

- Kiecolt-Glaser, J. K., Ricker, D., George, J., Messick, G., Speicher, C. E., Garner, W., et al. (1984). Urinary cortisol levels, cellular immunocompetency, and loneliness in psychiatric inpatients. *Psychosomatic Medicine*, *46*, 15–23.
- Killeen, C. (1998). Loneliness: An epidemic in modern society. *Journal of Advanced Nursing*, *28*, 762–770.
- Kirkpatrick-Smith, J., Rich, A. R., Bonner, R., & Jans, F. (1991). Psychological vulnerability and substance abuse as predictors of suicide ideation among adolescents. *Omega: Journal of Death and Dying*, *24*, 21–33.
- Kirova-Petrova, A. (2000). Researching young children's lived experiences of loneliness: Pedagogical implications for linguistically diverse students. *Alberta Journal of Educational Research*, *46*, 99–116.
- Kochenderfer, B. J., & Ladd, G. W. (1996). Peer victimization: Cause or consequence of school maladjustment? *Child Development*, *67*, 1293–1305.
- Koenig, L. J., & Abrams, R. F. (1999). Adolescent loneliness and adjustment: A focus on gender differences. In K. J. Rotenberg & S. Hymel (Eds.), *Loneliness in childhood and adolescence* (pp. 296–322). Cambridge, England: Cambridge University Press.
- Koenig, L. J., Isaacs, A. M., & Schwartz, J. A. J. (1994). Sex differences in adolescent depression and loneliness: Why are boys lonelier if girls are more depressed? *Journal of Research in Personality*, *28*, 27–43.
- Kupersmidt, J. B., Sigda, K. B., Sedikides, C., & Voegler, M. E. (1999). Social self-discrepancy theory and loneliness during childhood and adolescence. In K. J. Rotenberg & S. Hymel (Eds.), *Loneliness in childhood and adolescence* (pp. 263–279). Cambridge, England: Cambridge University Press.
- Larson, R. W. (1999). The uses of loneliness in adolescence. In K. J. Rotenberg & S. Hymel (Eds.), *Loneliness in childhood and adolescence* (pp. 244–262). Cambridge, England: Cambridge University Press.
- Larson, R., Csikszentmihalyi, M., & Graef, R. (1982). Time alone in daily experience: Loneliness or renewal? In L. A. Peplau & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research and therapy* (pp. 40–53). New York: Wiley.
- Lynch, J. J. (1977). *The broken heart: The medical consequences of loneliness*. New York: Basic Books.
- Mahon, N. E., & Yarcheski, A. (1988). Loneliness in early adolescents: An empirical test of alternate explanations. *Nursing Research*, *37*, 330–335.
- Mahon, N. E., & Yarcheski, A. (1992). Alternate explanations of loneliness in adolescents: A replication an extension study. *Nursing Research*, *41*, 151–156.
- Mahon, N. E., Yarcheski, A., & Yarcheski, T. J. (1998). Social support and positive health practices in young adults. *Clinical Nursing Research*, *7*, 292–308.
- Mahon, N. E., Yarcheski, A., & Yarcheski, T. J. (2001). Mental health variables and positive health practices in early adolescents. *Psychological Reports*, *88*, 1023–1030.
- Marangoni, C., & Ickes, W. (1989). Loneliness: A theoretical review with implications for measurement. *Journal of Social and Personal Relationships*, *6*, 93–128.
- Maris, R. W. (1981). *Pathways to suicide: A survey of self-destructive behaviors*. Baltimore, MD: Johns Hopkins University Press.
- McAdams, D. P., & Bryant, F. B. (1987). Intimacy motivation and subjective mental health in a nationwide sample. *Journal of Personality*, *55*, 395–413.
- McWhirter, B. T. (1990). Loneliness: A review of current literature, with implications for counseling and research. *Journal of Counseling and Development*, *68*, 417–422.
- McWhirter, B. T. (1997). Loneliness, learned resourcefulness, and self-esteem in college students. *Journal of Counseling and Development*, *75*, 460–469.
- McWhirter, B. T., Besett-Alesch, T. M., Horibata, J., & Gat, I. (2002). Loneliness in high risk adolescents: The role of coping, self-esteem, and empathy. *Journal of Youth Studies*, *5*, 69–84.
- Medora, N., & Woodward, J. C. (1986). Loneliness among adolescent college students at a midwestern university. *Adolescence*, *21*, 391–402.
- Mijuskovic, B. (1986). Loneliness, anxiety, hostility, and communication. *Child Study Journal*, *16*, 227–240.
- Mijuskovic, B. (1988). Loneliness and adolescent alcoholism. *Adolescence*, *23*, 503–516.
- Moore, D., & Schultz, N. R. (1983). Loneliness at adolescence: Correlates, attributions and coping. *Journal of Youth and Adolescence*, *12*, 95–100.
- Moore, J. A., & Sermat, V. (1974). Relationship between self-actualization and self-reported loneliness. *Canadian Counsellor*, *8*, 84–89.
- Murphy, P. M., & Kupshik, G. A. (1992). *Loneliness, stress and well-being: A helper's guide*. London: Routledge.
- Neeleman, J., & Power, M. J. (1994). Social support and depression in three groups of psychiatric patients and a group of medical controls. *Social Psychiatry and Psychiatric Epidemiology*, *29*, 46–51.
- Neto, F., & Barros, J. (2000). Psychosocial concomitants of loneliness among students of Cape Verde and Portugal. *Journal of Psychology*, *134*, 503–514.
- Nolen-Hoeksema, S., & Ahrens, C. (2002). Age differences and similarities in the correlates of depressive symptoms. *Psychology and Aging*, *17*, 116–124.
- Nordentoft, M., & Rubin, P. (1993). Mental illness and social integration among suicide attempters in Copenhagen. Comparison with the general population and a four-year follow-up study of 100 patients. *Acta Psychiatrica Scandinavica*, *88*, 278–285.
- Nurmi, J. -E., Toivonen, S., Salmela-Aro, K., & Eronen, S. (1997). Social strategies and loneliness. *Journal of Social Psychology*, *137*, 764–770.
- Olmstead, R. E., Guy, S. M., O'Mally, P. M., & Bentler, P. M. (1991). Longitudinal assessment of the relationship between self-esteem, fatalism, loneliness, and substance use. *Journal of Social Behavior and Personality*, *6*, 749–770.
- Ostrov, E., & Offer, D. (1978). Loneliness and the adolescent. *Adolescent Psychiatry*, *6*, 34–50.
- Overholser, J. C. (1992). Interpersonal dependency and social loss. *Personality and Individual Differences*, *13*, 17–23.
- Page, R. M., & Cole, G. E. (1991). Loneliness and alcoholism risk in late adolescence: A comparative study of adults and adolescents. *Adolescence*, *26*, 925–930.
- Page, R. M., Wyre, S. W., & Cole, G. E. (1986). The role of loneliness in health and wellness. *Home Healthcare Nurse*, *4*, 6–10.
- Paloutzian, R. F., & Ellison, C. W. (1982). Loneliness, spiritual well-being and the quality of life. In L. A. Peplau, & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research and therapy* (pp. 224–237). New York: Wiley.

- Parker, J. G., & Asher, S. R. (1993). Friendship and friendship quality in middle childhood: Links with peer group acceptance and feelings of loneliness and social dissatisfaction. *Developmental Psychology*, *29*, 611–621.
- Parker, J. G., Saxon, J. L., Asher, S. R., & Kovacs, D. M. (1999). Dimensions of children's friendship adjustment: Implications for understanding loneliness. In K. J. Rotenberg, & S. Hymel (Eds.), *Loneliness in childhood and adolescence* (pp. 201–221). Cambridge, England: Cambridge University Press.
- Parker, J. G., & Seal, J. (1996). Forming, losing, renewing, and replacing friendships: Applying temporal parameters to the assessment of children's friendship experiences. *Child Development*, *67*, 2248–2268.
- Parkhurst, J. T., & Hopmeyer, A. (1999). Developmental change in the sources of loneliness in childhood and adolescence: Constructing a theoretical model. In K. J. Rotenberg, & S. Hymel (Eds.), *Loneliness in childhood and adolescence* (pp. 56–79). Cambridge, England: Cambridge University Press.
- Parlee, M. B. (1979). The friendship bond. *Psychology Today*, *13*, 43–54.
- Peck, D. L. (1983). The last moments of life: Learning to cope. *Deviant Behavior*, *4*, 313–332.
- Peplau, L. A., Bikson, T. K., Rook, K. S., & Goodchilds, J. D. (1982). Being old and living alone. In L. A. Peplau & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research and therapy* (pp. 327–347). New York: Wiley.
- Peplau, L. A., Miceli, M., & Morasch, B. (1982). Loneliness and self-evaluation. In L. A. Peplau & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research and therapy* (pp. 135–151). New York: Wiley.
- Peplau, L. A., & Perlman, D. (1982). Perspectives on loneliness. In L. A. Peplau & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research and therapy* (pp. 1–18). New York: Wiley.
- Perlman, D., Gerson, A. C., & Spinner, B. (1978). Loneliness among senior citizens: An empirical report. *Essence*, *2*, 239–248.
- Perlman, D., & Landolt, M. A. (1999). Examination of loneliness in children–adolescents and in adults: Two solitudes or a unified enterprise? In K. J. Rotenberg, & S. Hymel (Eds.), *Loneliness in childhood and adolescence* (pp. 325–347). Cambridge, England: Cambridge University Press.
- Perlman, D., & Peplau, L. A. (1982). Theoretical approaches to loneliness. In L. A. Peplau & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research and therapy* (pp. 123–134). New York: Wiley.
- Ponzetti, J. J. (1990). Loneliness among college students. *Family Relations*, *39*, 341–348.
- Prinstein, M. J., & La Greca, A. M. (2002). Peer crowd affiliation and internalizing distress in childhood and adolescence: A longitudinal follow-back study. *Journal of Research on Adolescence*, *12*, 325–351.
- Qualter, P., & Munn, P. (2002). The separateness of social and emotional loneliness in childhood. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, *43*, 233–244.
- Renshaw, P. D., & Brown, P. J. (1993). Loneliness in middle childhood: Concurrent and longitudinal predictors. *Child Development*, *64*, 1271–1284.
- Revenson, T. A. (1981). Coping with loneliness: The impact of causal attributions. *Personality and Social Psychology Bulletin*, *7*, 565–571.
- Rich, A. R., Kirkpatrick-Smith, J., Bonner, R. L., & Jans, F. (1992). Gender differences in the psychosocial correlates of suicide ideation among adolescents. *Suicide and Life-Threatening Behavior*, *22*, 364–373.
- Rich, A. R., & Scovel, M. (1987). Causes of depression in college students: A cross-lagged panel correlational analysis. *Psychological Reports*, *60*, 27–30.
- Riggio, R. E., Watring, K. P., & Throckmorton, B. (1993). Social skills, social support, and psychosocial adjustment. *Personality and Individual Differences*, *15*, 275–280.
- Roberts, R. E., Roberts, C. R., & Chen, R. Y. (1998). Suicidal thinking among adolescents with a history of attempted suicide. *Journal of the American Academy of Child and Adolescent Psychiatry*, *37*, 1294–1300.
- Rokach, A. (1988). The experience of loneliness: A tri-level model. *Journal of Psychology*, *122*, 531–544.
- Rokach, A. (1989). Antecedents of loneliness: A factorial analysis. *Journal of Psychology*, *123*, 369–384.
- Rokach, A. (1998). Loneliness and psychotherapy. *Psychology—A Quarterly Journal of Human Behavior*, *35*, 2–18.
- Rokach, A., Lackovic-Grgin, K., Penezic, Z., & Soric, I. (2000). The effects of culture on the causes of loneliness. *Psychology: A Journal of Human Behavior*, *25*, 6–20.
- Rook, K. S., & Peplau, L. A. (1982). Perspectives on helping the lonely. In L. A. Peplau & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research and therapy* (pp. 351–378). New York: Wiley.
- Rosow, I., & Wichstroem, L. (1994). Parasuicide and use of intoxicants among Norwegian adolescents. *Suicide and Life-Threatening Behavior*, *24*, 174–183.
- Rotenberg, K. J. (1994). Loneliness and interpersonal trust. *Journal of Social and Clinical Psychology*, *13*, 152–173.
- Rotenberg, K. J. (1999). Childhood and adolescent loneliness: An introduction. In K. J. Rotenberg & S. Hymel (Eds.), *Loneliness in childhood and adolescence* (pp. 3–8). Cambridge, England: Cambridge University Press.
- Rotenberg, K. J. (1999). Parental antecedents of children's loneliness. In K. J. Rotenberg, & S. Hymel (Eds.), *Loneliness in childhood and adolescence* (pp. 176–200). Cambridge, England: Cambridge University Press.
- Rotenberg, K. J., & Flood, D. (1999). Loneliness, dysphoria, dietary restraint, and eating behavior. *International Journal of Eating Disorders*, *25*, 55–64.
- Rotenberg, K. J., Gruman, J. A., & Ariganello, M. (2002). Behavioral confirmation of the loneliness stereotype. *Basic and Applied Social Psychology*, *24*, 81–89.
- Rotenberg, K. J., & Morrison, J. (1993). Loneliness and college achievement: Do Loneliness Scale scores predict college drop-out? *Psychological Reports*, *73*, 1283–1288.
- Rubenstein, C. M., & Shaver, P. (1980). Loneliness in two northeastern cities. In J. Hartog, J. R. Audy, & Y. A. Cohen (Eds.), *The anatomy of loneliness* (pp. 319–337). New York: International Universities Press.
- Rubenstein, C., & Shaver, P. (1982). The experience of loneliness. In L. A. Peplau & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research and therapy* (pp. 206–223). New York: Wiley.
- Rubenstein, C., Shaver, P., & Peplau, L. A. (1979). Loneliness. *Human Nature*, *2*, 38–65.

- Rubin, K. H., Chen, X., McDougall, P., Bowker, A., & McKinnon, J. (1995). The Waterloo longitudinal project: Predicting internalizing and externalizing problems in adolescence. *Development and Psychopathology*, *7*, 751–764.
- Rubin, K. H., LeMare, L., & Lollis, S. (1990). Social withdrawal in childhood: Developmental pathways to peer rejection. In S. R. Asher & J. D. Coie (Eds.), *Peer rejection in childhood* (pp. 217–252). New York: Cambridge University Press.
- Rubin, K. H., & Mills, R. S. (1988). The many faces of social isolation in childhood. *Journal of Consulting and Clinical Psychology*, *56*, 916–924.
- Russell, D. (1982). The measurement of loneliness. In L. A. Peplau & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research and therapy* (pp. 81–104). New York: Wiley.
- Russell, D. W. (1996). UCLA Loneliness Scale (Version 3): Reliability, validity, and factor structure. *Journal of Personality Assessment*, *66*, 20–40.
- Russell, D., Cutrona, C. E., Rose, J., & Yurko, K. (1984). Social and emotional loneliness: An examination of Weiss's typology of loneliness. *Journal of Personality and Social Psychology*, *46*, 1313–1321.
- Russell, D., Peplau, L. A., & Cutrona, C. E. (1980). The revised UCLA Loneliness Scale: Concurrent and discriminant validity evidence. *Journal of Personality and Social Psychology*, *39*, 472–480.
- Russell, D., Peplau, L. A., & Ferguson, M. L. (1978). Developing a measure of loneliness. *Journal of Personality Assessment*, *42*, 290–294.
- Sadava, S. W., & Pak, A. W. (1994). Problem drinking and close relationships during the third decade of life. *Psychology of Addictive Behaviors*, *8*, 251–258.
- Saks, F. G. (1974). Current trends in youth service requests. *Social Casework*, *55*, 409–415.
- Sarason, I. G., Sarason, B. R., & Shearin, E. N. (1986). Social support as an individual difference variable: Its stability, origins, and relation aspects. *Journal of Personality and Social Psychology*, *50*, 845–855.
- Schultz, N. R., & Moore, D. (1988). Loneliness: Differences across three age levels. *Journal of Social and Personal Relationships*, *5*, 275–284.
- Schumaker, J. F., Krejci, R. C., Small, L., & Sargent, R. G. (1985). Experience of loneliness by obese individuals. *Psychological Reports*, *57*, 1147–1154.
- Schumaker, J. F., Shea, J. D., Monfries, M. M., & Groth-Marnat, G. (1993). Loneliness and life satisfaction in Japan and Australia. *Journal of Psychology*, *127*, 65–71.
- Schwarzer, R., Jerusalem, M., & Kleine, D. (1990). Predicting adolescent health complaints by personality and behaviors. *Psychology and Health*, *4*, 233–244.
- Segrin, C. (1998). Interpersonal communication problems associated with depression and loneliness. In P. A. Anderson, & L. K. Guerrero (Eds.), *Handbook of communication and emotion: Research, theory, applications, and contexts* (pp. 215–242). San Diego, CA: Academic Press.
- Sermat, V. (1980). Some situational and personality correlates of loneliness. In J. Hartog, J. R. Audy, & Y. A. Cohen (Eds.), *The anatomy of loneliness* (pp. 305–318). New York: International Universities Press.
- Shaver, P., Furman, W., & Buhrmester, D. (1985). Transition to college: Network changes, social skills, and loneliness. In S. Duck, & D. Perlman (Eds.), *Understanding personal relationships: An interdisciplinary approach* (pp. 193–219). London: SAGE Publications.
- Sippola, L. K., & Bukowski, W. M. (1999). Self, other, and loneliness from a developmental perspective. In K. J. Rotenberg, & S. Hymel (Eds.), *Loneliness in childhood and adolescence* (pp. 280–295). Cambridge, England: Cambridge University Press.
- Sloan, W. W., & Solano, C. H. (1984). The conversational styles of lonely males with strangers and roommates. *Personality and Social Psychology Bulletin*, *10*, 293–301.
- Snodgrass, M. A. (1987). The relationships of differential loneliness, intimacy, and characterological attributional style to duration of loneliness. *Journal of Social Behavior and Personality*, *2*(2, Pt 2), 173–186.
- Solano, C. H. (1987). Loneliness and perceptions of control: General traits versus specific attributions. *Journal of Social Behavior and Personality*, *2*(2, Pt 2), 201–214.
- Solano, C. H., Batten, P. G., & Parish, E. A. (1982). Loneliness and patterns of self-disclosure. *Journal of Personality and Social Psychology*, *43*, 524–531.
- Solano, C. H., & Koester, N. H. (1989). Loneliness and communication problems: Subjective anxiety or objective skills? *Personality and Social Psychology Bulletin*, *15*, 126–133.
- Southam-Gerow, M. A., & Kendall, P. C. (2002). Emotion regulation and understanding implications for child psychopathology and therapy. *Clinical Psychology Review*, *22*, 189–222.
- Spitzberg, B. H., & Canary, D. J. (1985). Loneliness and relationally competent communication. *Journal of Social and Personal Relationships*, *2*, 387–402.
- Spitzberg, B. H., & Hurt, H. T. (1987). The relationship of interpersonal competence and skills to reported loneliness across time. *Journal of Social Behavior and Personality*, *2*(2 Pt 2), 157–172.
- Stephan, E., Faeth, M., & Lamm, H. (1988). Loneliness as related to various personality and environmental measures: Research with the German adaptation of the UCLA Loneliness Scale. *Social Behavior and Personality*, *16*, 169–174.
- Stokes, J. P. (1985). The relation of social network and individual difference variables to loneliness. *Journal of Personality and Social Psychology*, *48*, 981–990.
- Stokes, J. P. (1987). On the usefulness of phenomenological methods. *Journal of Social Behavior and Personality*, *2*(2 Pt 2), 57–62.
- Storr, A. (1988). *Solitude: A return to the self*. New York: The Free Press.
- Stravynski, A., & Boyer, R. (2001). Loneliness in relation to suicide ideation and parasuicide: A population-wide study. *Suicide and Life-Threatening Behavior*, *31*, 32–40.
- Sullivan, H. S. (1953). *The interpersonal theory of psychiatry*. New York: Norton.
- Van Buskirk, A. M., & Duke, M. P. (1991). The relationship between coping style and loneliness in adolescents: Can “sad passivity” be adaptive? *Journal of Genetic Psychology*, *152*, 145–157.
- Vaux, A. (1988). Social and emotional loneliness: The role of social and personal characteristics. *Personality and Social Psychology Bulletin*, *14*, 722–734.

- Vitkus, J., & Horowitz, L. M. (1987). Poor social performance of lonely people: Lacking a skill or adopting a role? *Journal of Personality and Social Psychology*, *52*, 1266–1273.
- Weber, B., Metha, A., & Nelsen, E. (1997). Relationships among multiple suicide ideation risk factors in college students. *Journal of College Student Psychotherapy*, *11*, 49–64.
- Weeks, D. G., Michela, J. L., Peplau, L. A., & Bragg, M. E. (1980). Relation between loneliness and depression: A structural equation analysis. *Journal of Personality and Social Psychology*, *39*, 1238–1244.
- Weiss, R. S. (1973). *Loneliness: The experience of emotional and social isolation*. Cambridge, MA: MIT Press.
- Weiss, R. S. (1974). The provisions of social relationships. In Z. Rubin (Ed.), *Doing unto others* (pp. 17–26). Englewood Cliffs, NJ: Prentice-Hall.
- Weiss, R. S. (1982). Issues in the study of loneliness. In L. A. Peplau, & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research and therapy* (pp. 71–80). New York: Wiley.
- Weiss, R. S. (1984). Loneliness: What we know about it and what we might do about it. In L. A. Peplau, & S. F. Goldston (Eds.), *Preventing the harmful consequences of severe and persistent loneliness* (pp. 3–12). Rockville, MD: National Institute of Mental Health.
- Weiss, R. S. (1987). Reflections on the present state of loneliness research. *Journal of Social Behavior and Personality*, *2*(2, Pt 2), 1–16.
- Wenz, F. V. (1977). Seasonal suicide attempts and forms of loneliness. *Psychological Reports*, *40*, 807–810.
- Wheeler, L., Reis, H., & Nezelek, J. B. (1983). Loneliness, social integration, and sex roles. *Journal of Personality and Social Psychology*, *45*, 943–953.
- Wilbert, J. R., & Rupert, P. A. (1986). Dysfunctional attitudes, loneliness, and depression in college students. *Cognitive Therapy and Research*, *10*, 71–77.
- Winnicott, D. (1958). The capacity to be alone. *International Journal of Psychoanalysis*, *39*, 416–420.
- Wittenberg, M. T., & Reis, H. T. (1986). Loneliness, social skills, and social perception. *Personality and Social Psychology Bulletin*, *12*, 121–130.
- Wood, L. A. (1986). Loneliness. In R. Harré (Ed.), *The social construction of emotions* (pp. 184–208). Oxford: Blackwell.
- Yang, B., & Clum, G. A. (1994). Life stress, social support, and problem-solving skills predictive of depressive symptoms, hopelessness, and suicide ideation in an Asian student population: A test of a model. *Suicide and Life-Threatening Behavior*, *24*, 127–139.
- Young, J. E. (1982). Loneliness, depression, and cognitive therapy: Theory and application. In L. A. Peplau, & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research and therapy* (pp. 379–405). New York: Wiley.
- Zakahi, W. R., & Duran, R. L. (1982). All the lonely people: The relationship among loneliness, communicative competence and communication anxiety. *Communication Quarterly*, *30*, 202–209.
- Zakahi, W. R., & Duran, R. L. (1985). Loneliness, communicative competence and communication apprehension: Extension and reflection. *Communication Quarterly*, *33*, 50–60.