Cancer education materials often are written by health-care professionals who work closely with patients with cancer and are aware of their information needs. In some instances, after writing a brochure or pamphlet, writers use one of the readability formulas, such as Flesch’s (1948), Fry’s (1968), or the Simple Measure of Gobbledygook (SMOG) (McLaughlin, 1969), to assess their work. They then print and disseminate the materials and assume that the target audience will be able to read and understand them. Results from research studies show that this assumption often is incorrect because the materials are too difficult for patients with low literacy skills to read and comprehend (Cooley et al., 1995; Glazer, Kirk, & Bosler, 1996). Some researchers have suggested that appropriate reading levels can be obtained by using shorter sentences and simpler words (Davis, Crouch, Wills, Miller, & Abdehou, 1990; Estey, Musseau, & Keehn, 1994). Materials prepared using this approach most likely would have a lower reading grade level when assessed by one of the previous formulas that use sentence and word length to determine reading level. However, lowering the reading level does not necessarily ensure that the materials will be readable. These formulas provide a reading grade level estimate for the material but they do not assess readability. Readability and reading level are equally important but entirely different concepts. Readability is the ease with which readers are able to understand the text. Thus, a person reading at the eighth-grade level may be able to recognize all the words in a brochure written at his or her level but may have difficulty understanding the content because of the way it is written.

Although formulas may be useful in providing an estimate of the reading grade level of written material, they do not incorporate the variables needed to assess readability. The Readability Assessment Instrument (RAIN) (Singh, 2003) was developed to determine the readability of texts in terms of 14 variables that affect comprehension. A number of studies have used RAIN to evaluate health education brochures about attention-deficit hyperactivity disorder (Singh, 1995), HIV and AIDS (Singh, 2000), patient medication leaflets (Kirkpatrick & Mohler, 1999), and behavioral treatment programs in mental health (Adkins & Singh, 2001; Adkins, Singh, McKeegan, Lanier, & Oswald, 2002). These studies found that many of the materials were unacceptable in terms of readability.

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