











**Sensory Stimulation.**—Kverno and colleagues (2009) examined two studies that used multisensory stimulation. One found decreases in apathy for the sensory stimulation group compared with increases in apathy for the activity therapy group. Another study found no difference in behavior using sensory stimulation. Robinson and colleagues (2007) reviewed three RCTs evaluating the effectiveness of a multisensory environment to reduce wandering but found no difference between the intervention or control groups. Livingston and colleagues (2005) included sensory stimulation (specifically *snoezelen*) in their review of six studies and concluded that *snoezelen* effectively reduced problematic behaviors during and immediately following administration. Chung and Lai (2002) found no effect on problematic behaviors in two *snoezelen* studies they reviewed. Finnema and colleagues (2000) reviewed five studies (none that were included in Livingston et al.'s systematic review) and concluded that *snoezelen* led to generally positive change in mood and behavior. They also noted inconsistency among the studies on the duration and magnitude of effects.

**Simulated Presence.**—Kverno and colleagues (2009) included two studies that found decreases in agitated behavior in people with advanced dementia.

**Tailored Activity Program.**—Olazarán and colleagues (2010) included a study in which caregivers in the intervention group (Tailored Activity Program [TAP]) reported fewer negative behaviors (e.g., agitation, argumentative behavior) than the control group. Livingston and colleagues (2005) reviewed two studies that used individualized special instruction and self-maintenance therapy. Findings from both suggest a decrease in problematic behaviors (e.g., agitation, disruptive vocalization) and improved mood.

**Validation Therapy.**—Livingston and colleagues (2005) reviewed three studies. One study found reduced irritability scores after validation therapy. The other two studies did not report any change. Finnema and colleagues (2000) reviewed seven studies, two of which were discussed in Livingston and colleagues' (2005) review. They report improvements in activities of daily living (ADL) and cognitive function and decreased aggressive behavior.

## Cultural Arts Interventions

**Visual Arts.**—The MHF (2011) reported on a study that examined affect, agitation, level of engagement, and function of 40 people with dementia who were placed in either a weekly art class or an individual art project. Higher levels of fear and verbal agitation were observed for the people assigned to the individual art project compared with those in the art class.

**Music Therapy.**—Witzke, Rhone, Backhaus, and Shaver (2008) conducted a qualitative review of 11 dementia studies from 1999 to 2007 that used music to manage problematic behaviors. Results across the studies were mixed. Five specifically cited "significant" reductions in agitated behaviors although no detailed data were provided. Others reported reductions in negative behaviors or "favorable impact."

Sung and Chang (2005) looked specifically at interventions that used "preferred music" (music that family members said that the person with dementia enjoyed) to manage aggressive behaviors. Of the eight studies cited, all but one showed decreased aggressive behavior. Study limitations include inconsistencies in definitions of "agitation."

Other music therapy reviews include Livingston and colleagues' (2005) review of 24 studies (six RCTs). They report reductions in agitation in the short term (during and immediately after the intervention) but not in the long term. In another review, Vink, Bruinsma, and Scholten (2003) examined 10 RCTs. Although all cited positive effects on mood and behavior, they cautioned that interpretation of findings was limited due to poor study quality (e.g., insufficient description of the intervention, lack of randomization). Beard (2012) reported reduced agitation, apathy, wandering, and disruptive vocalizations in some studies included in her review but, like others, notes that there is great variation in types and applications of music interventions, as in other cultural arts interventions.

Tang and Vezeau (2010) conducted a "narrative review" of music therapy interventions in health care settings. Their results included five studies involving people with dementia. Although nearly all reported successful outcomes (improved cognitive performance, reduced depression), most had only one participant. The authors note that use of music (e.g., types, duration, frequency) varied greatly across studies. They also noted that lack of









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