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Humor and laughter in persons with cognitive impairment and their caregivers

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Abstract

Purpose—The purpose of this study was to describe humor and laughter in persons with cognitive impairment (PWCI) and caregivers who were recalling a shared experience in a focus group.

Design—Twenty participants attended an Art Engagement Activity at the Andy Warhol Art Museum, which included a guided tour and an art project. All PWCI had medically diagnosed cognitive disorders and all caregiver participants did not. Four focus groups were conducted and transcripts of audio-recorded sessions were transferred to a qualitative software program.

Methods—Words, phrases and episodes of humor and laughter were used to construct codes, which were refined during group analysis using constant comparison.

Findings—Humor and laughter were present in all four focus groups. Emerging themes of humor included silliness, sarcasm and commenting about hardships of dementia. Laughter was identified in segments with and without humor. Some PWCI were unable to follow social cues.

Conclusions—Humor and laughter played a role in creating a safe social environment. PWCI were able to engage in humor during social interactions, yet some had difficulty recognizing social cues. Further study may reveal roles of humor and laughter in adaptation to cognitive decline and holistic interventions for improved quality of life.

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Introduction and Background

Alzheimer's disease is the most prevalent form of dementia, impacting 5.4 million Americans and an estimated 15 million family caregivers (Alzheimer's Association, 2012). Research targeting the dyad of persons with cognitive impairment (PWCI) and their caregivers focuses largely on caregiver burden (Abdollahpour, Noroozian, Nedjat, & Majdzadeh, 2012; Siemens & Hazelton, 2011; Zucchella, Bartolo, Pasotti, Chiapella, & Sinforiani, 2012) and is based almost exclusively on the caregiver perspective (Chou et al., 2012; Wang, Feldt, & Cheng, 2012). A smaller body of research targets quality of life for dementia care dyads by promoting positive relationships between PWCI and their caregivers using holistic approaches (Buckley et al., 2012; Buffum & Brod, 1998; Takai, Takahashi, Iwamitsu, Oishi, & Miyaoka, 2011; Zhao et al., 2012).

One way to promote positive interactions within dementia care dyads is to have PWCI and their family caregivers participate in mutually enjoyable activities. Enjoyment of an activity may manifest in numerous ways, including expressions of humor and laughter. While humor and laughter may serve as indicators of enjoyment levels of both PWCI and caregivers, the measurement of these phenomena is challenging and research in this area is limited. Overcoming these challenges is important because humor may have implications for holistic nursing as a tool that can promote a healthy and healing environment (Jackson, 2012).

Outside of the dementia context, research on humor and laughter has focused on topics ranging from the study of what makes people laugh, to investigations into the physiologic benefits of laughter (Ko & Youn, 2011), and the role of humor in psychotherapy (Falkenberg, Buchkremer, Bartels, & Wild, 2011). Focusing on older adults, Kruse and Prazak (2006) found that humor about people or animals and funny situations or events precipitated over half of all instances of laughter. Of potential relevance to the study of dementia care dyads, Wilkens and Eisenbraun (2009) have suggested that humor and laughter play a role in social support by maintaining people's sense of well-being. Human laughter is generally viewed to communicate a sender's message non-verbally and can be considered a multifaceted and complex social behavior that shapes group structures during social interaction (Szameitat et al., 2009). Conceptualizing laughter as a distinct form of communication could help to illuminate nurses' understanding of how a PWCI and caregiver engage with one another, giving insight into the interpersonal relationship of the dyad (Kovarsky, Curran, & Nichols, 2009).

There is no one widely agreed upon definition for 'laughter' or 'humor,' and some studies do not even differentiate between the two concepts (Mora-Ripoll, 2011). Although standard definitions for humor and laughter are lacking, they are most commonly described as associated, yet distinct, entities (Mora-Ripoll, 2011). One approach to define these terms has been to survey lay individuals. According to lay individuals, humor and its individual meanings are varied and encompass joking, laughing, macabre humor, situation comedy, plays on words/puns, and unexpected situations (Olsson, Backe, Sorensen, & Kock, 2002). Theoretically guided studies complement and extend such findings by developing guidelines for structuring key elements of the humor process and forming definitions (Walter, Hanni, Haug, Amrhein, &Krebs-Roubicek, 2007). According to Walter et al. (2007), key elements

to the study of humor are a stimulus (humor) and an emotional response (e.g., laughter). Framed with this basic outline, definitions of humor and responses to humor stimuli can be applied in a structurally congruent manner, making it easier to compare segments of social interaction.

From a nursing perspective, understanding laughter as a form of communication represents a key feature of holistic approaches to dementia care. Holistic nursing approaches call upon nurses to use their inner creative resources in care delivery (Gaydos, 2004). Humor represents such a resource and holds particular potential for use in the context of dementia care where impairments in language can pose barriers to traditional communicative exchanges. Advancing our understanding of the forms and functions of laughter and humor among individuals with dementia and their care partners is an important first step toward formally integrating the use of humor into nursing care in a measurable way.

In the current study, interactions between PWCI and their caregivers followed an Art Engagement Activity designed to provide them with a shared, positive experience in an art museum. Using the setting of focus groups, which followed the museum experience, the purpose of this study is to describe humor and laughter in PWCI and caregivers who are recalling a shared experience.

Sample

Twenty participants partook in focus groups following an Art Engagement Activity at the Andy Warhol Art Museum in Pittsburgh, Pennsylvania. The Art Engagement Activity represents an existing partnership between the Andy Warhol Art Museum and the University of Pittsburgh Alzheimer's Disease Research Center (ADRC) in Pittsburgh, Pennsylvania. The program was developed as part of a broader effort to promote relationships between the University of Pittsburgh Schools of the Health Sciences and the Carnegie Museums of Pittsburgh. The Art Engagement Activity included a guided tour of the museum and a hands-on art project inspired by the Warhol tradition. Participation in the Art Engagement Activity was limited to dyads (PWCI and caregiver) seen at the ADRC. No exclusion criteria were placed; however, the sample was limited to those dyads with a mode of transportation to the museum and those who were physically able to participate in the walking portion of the activity. Four Art Engagement Activity sessions were held between June 2011 and November 2011, and each of these sessions was followed by a focus group designed to elicit feedback on the program. All focus group participants were ADRC participants who attended an Art Engagement Activity. All PWCI (n=10) had impaired cognition (based on a prior ADRC evaluation) while none of the caregiver participants (n=10) had impaired cognition. Each focus group was conducted with between four and seven PWCI and caregiver participants. More than half of participants were female (n=11), the majority were 60 or older (n=14), and 75% were Caucasian and 25% were African American.

Methods

At the end of each Andy Warhol Art Engagement Activity, participants were invited to partake in a focus group. All participants provided verbal informed consent to the focus group in accordance with the study's IRB approval. Focus groups were conducted by a trained mediator (JF) using scripted questions designed to elicit thoughts and feelings about the experience, and to describe ideas to improve the activity for future participants. All sessions were audio-recorded and transcribed verbatim (AL). Sample questions include: "What were your expectations for today?" and "What do you think about discussing the paintings as a group?" and "What things can we do to improve this activity?" (Flatt, Liptak, Gogan, Varner, & Lingler, 2012). Field notes taken by an ADRC staff member provided contextual detail for each session and clarification for several persons' voices in the audio recording. Focus group sessions lasted thirty-two minutes each, on average. Transcripts of each audio-recorded session were transferred to a qualitative software program (ATLAS.ti, version 6.2). Participants were identified as a PWCI or a caregiver by information audibly spoken using cues from the mediator and field notes. Because literature describing humor and laughter in PWCI is scant, we used conventional content analysis (Hsieh & Shannon, 2005; Mayring, 2000). Words, phrases and episodes of humor and laughter were used to construct codes which were refined during group analysis using constant comparison (Miles & Huberman, 1994). Broad definitions for humor and laughter were created. A humor stimulus was defined as a part of conversation that may or may not produce the utterance of a "ha", "he" or "ho" sound or what makes the person physically react. A laughter response was defined as the utterance of a "ha", "he" or "ho" sound or the physical reaction to the stimulus. Subcategories for both humor and laughter were created to have a better understanding of each segment coded (Morse & Field, 1995). The audio-recording was listened to while coding each transcript to further enhance analysis of each segment of humor and laughter during coding. Each segment of humor and/or laughter was coded with all applicable codes to illustrate that some segments of humor and/or laughter are multidimensional. Transcripts were analyzed as individual recordings, then by comparison, and finally as a collective whole to identify over-arching themes. Overall themes of humor and laughter were derived from collectively examining the transcripts (AL, JT, JF, & JL). Discussions about how to refine the codes occurred between coders throughout the project. This ensured the ideas and thought process behind the coding was accepted by the group and done in an intentional manner. The coding technique of constant comparison provided the flexibility needed to continually build upon characterizations of humor (Morse & Field, 1995). Multiple coding rounds were necessary to capture entire segments of humor and laughter within the transcripts. Humor was coded, in the broadest sense, as the "what" of the humor/laughter phenomenon, with subtypes of humor being defined iteratively as they were identified in the transcripts (Hsieh & Shannon, 2005; Morse & Field, 1995).

Results

Humor was present in all groups. The PWCI was the initiator of the humor stimulus in 48 of 65 total instances. Not every participant acted as the initiator of a humor stimulus. Emerging themes of humor included silliness, sarcasm and commenting about the hardships of dementia from both PWCIs' and caregivers' perspectives. Several sub-categories,

representing different codes, fall under each humor theme. The theme of humor for silliness included codes of flamboyant/silly humor, action humor and obvious humor. The theme of sarcasm/dry wit humor included codes of dry wit/sarcastic humor, stereotype humor and teasing humor. Codes of illness humor, gallows humor and flaws humor fell under the theme of humor about one's illness.

Laughter was identified in all groups. It is assumed that most of the participants laughed at some point during the focus group; however, this could not be confirmed with audio-only recordings. Laughter was identified when a humor stimulus was present and also in segments without humor, typically from a participant trying to ease an awkward moment in the conversation. All laughter that was considered as unsuitable to the context of the conversation was done by PWCIs, with no instances involving caregiver participants. Definitions of all the humor and laughter codes that were used in analysis can be found in Tables #1, #2, and #3. The three themes of humor with examples and explanations can be found below.

Humor: Sarcasm/Dry Wit

Humor that had an ironic or double meaning was common in all groups. This type of humor was initiated more often by PWCI than caregivers. In response to a question to the group about start times, the following exchange occurred.

Example of Humor: Sarcasm/Dry Wit

Caregiver: I was already worried 'cause I wasn't sure I would get here on time because I'm not an early morning person.

Mediator: Okay.

PWCI: No. (*Laughs – Caregiver*). I call her Dracula.

(Laughs – group)

PWCI: The coffin closes (*Laughs – group*) and opens at sunset.

(*Laughs – group*)

This example is between a husband and wife. The wife (caregiver) expressed that she was worried about how early the activity started because she is not a morning person and was afraid they would be late. The husband (PWCI) further emphasized this fact about his wife by telling the group that his nickname for her is "Dracula." The caregiver laughed when the husband started to talk, as if she were giving permission for the rest of the group to laugh because she knew what he was going to say. This then prompts the group to laugh at the next statement, "I call her Dracula," an example a double meaning or ironic humor.

Humor: Silliness

Humor that is silly and fun in nature is found in all but one of the groups. This type of humor was initiated by both PWCI and caregiver participants. As an off-topic conversation, the following exchange occurred.

Example of Humor: Silliness

PWCI: Well, she smiles a lot.

(*Laughs – group*)

PWCI: Yes! She's smilin'! Yeah! Yeah, she's sayin', "Oh, that woman, goofy!" (*Laughs – group*) "I'm a goofy noof!"

(*Laughs – group*)

PWCI: I have to take you to Noofinland!

(*Laughs – group*)

In this case, the PWCI is talking about another PWCI in the focus group. She is commenting on an observation that the PWCI next to her (who appears to be more cognitively impaired) smiles a lot. She expresses that the smiling PWCI must be thinking she is a "goofy noof.' The group laughs because, while this is in character for her, it is completely off topic and slightly awkward. This patient feeds off the laughter and continues the thought with "I have to take you to Noofinland!" which produces more laughter. While listening to this clip, it is apparent that this PWCI loved being the comedian of the group and is genuinely funny and entertaining. The whole group gets enjoyment from her absurdity.

Humor: Illness

Humor related to dementia or Alzheimer's disease was present in all groups. This type of humor was initiated by both PWCI and caregiver participants. The following interaction occurred when discussing activities done together as a dyad.

Example of Humor: Illness

Caregiver: What was good for us, was because [Name] I think that you'll admit that your memory is somewhat short. Three minutes max. Okay, so he keeps asking me why, what are we doing today? Where we going? So I could say, "You're my ticket to the Andy Warhol museum!" (*Laughs – group*) Because of you, I'm getting there. And because of that he feels that was okay, right? And then he was willing to come. That was really nice. Once in a while, in a great while, [Name]'s got this ticket to something really fun, so thank you!

In this example, a caregiver participant is very forthcoming that the PWCI (her husband) has an impaired memory. She even states that his memory is "three minutes max." Her statement starts out negative, but then she reframes her comments by acknowledging that because of his illness, they were able to do activities (go to the Andy Warhol Museum) that otherwise would not have been readily available to them. The group laughter occurs in the

middle of her speech, right after the statement, “You’re my ticket to the Andy Warhol museum!”

Laughter without Humor

In all focus groups, at least some laughter occurs without an obvious humor stimulus. In this exchange, a PWCI is commenting on Andy Warhol’s concept of ‘art’.

Example of Laughter without Humor

PWCI: Yea, to me, art was like different paintings and that. To me, a urinal is not art, you know? And that was famous for him, you know? Just to come up with that idea and do that, I don’t know. (*Laughs – PWCI*). There are some things I like and some things I dislike.

The PWCI makes a statement about how the view of art he came in with, is not what Warhol thought was art. After he states that this is just one idea and “I don’t know,” he laughs to cover the silence of no one readily agreeing with him.

Discussion

The emerging themes of humor and laughter in this study were silliness, sarcastic/dry wit humor, commenting about one’s illness and instances of inappropriate laughter. Among the 20 focus group participants following an Art Engagement Activity at the Andy Warhol Art Museum. Humor and laughter appeared to play a role in creating a safe social environment. The humor exhibited by these individuals could be quick witted and sarcastic even among patient participants experiencing memory loss. The following discussion of key findings will focus on situating our results within the larger theoretical discourse on humor and laughter.

Of the themes noted above, sarcastic and dry wit humor was the most pervasive. This sarcastic form of humor is a common one and has been noted in numerous other research studies involving a range of social (Szameitat et al., 2009; Olsson et al., 2002) and clinical (Kovarsky et al., 2009; Mora-Ripoll, 2011) populations. McCreaddie and Wiggins (2007) have explained this form of humor by invoking Incongruity Theory, a perspective first introduced by Kant (1724 1804). In Incongruity Theory, the punch line of a humor statement is inconsistent with the set-up, causing a play of words to initiate a humor stimulus and laughter response. This theme of humor requires attention to detail, concentration and remembering word and phrase play within a conversation. It also requires executive brain functioning, which is impaired in this population (Saunders, de Medeiros, & Bartell, 2011). Participants with MCI or early Alzheimer’s disease diagnosis, most likely experience a decline in multiple cognitive functions such as word-finding, verbal fluency and attention (Sabat & Lee, 2011). Learning new information and getting stuck for words during a conversation are some of the marked features of early Alzheimer’s disease (Parsons-Suhl, Johnson, McCann, & Solberg, 2008), making this style of humor a surprising one. Indeed, we found that this form of humor, although used by both members of the dyad, was most commonly employed by PWCI during the focus groups.

Our second key finding is that humor and laughter, regardless of category, functioned to create a normal, safe environment for all participants. In general, humor can help individuals

to cope with undesirable or otherwise upsetting situations by disarming anxious individuals and relieving tension within the group and signaling a friendly environment. In the setting of the current investigation, humor may help participants to cope with the awkwardness that is a documented part of every focus group (Wilkinson, Rees, & Knight, 2007). Realizing this connection of humor as a coping strategy to create a safe environment may even lead to an increase its use (Tan & Schneider, 2009). The example of sarcasm/dry wit humor demonstrates this very well, especially in caregivers. This coincides with the Relief Theory (Freud 1856 – 1938), which is defined as an excess of nervous energy that masks motives and desires of the one initiating the humor stimulus (McCreaddie & Wiggins, 2007). In Kruse and Prazak (2006), humor is defined as life affirming; a powerful coping mechanism used to decrease fear, anxiety and psychological stress. The concept of a safe environment can be attributed to humor and laughter's nonverbal dimension. Nonverbal cues can be used as tools to establish trust, and they do not diminish even as memory and logic capabilities are lessened (Greene, Ingram, & Johnson, 1993).

Our third overarching finding is that PWCI were more likely to produce the humor stimulus than caregiver participants. This may be explained by the idea that humor and laughter are equalizers for individuals of 'lower status.' This means that when people of 'lower status' make conversation with individuals of 'higher status', 'lower status' individuals use humor stimuli to bring each individual to the same level (Saunders et al., 2011). The Superiority Theory (Hobbes 1588 – 1679) supports that humor can be aggressive and that a person creating the humor stimulus may take pleasure in others' discomfort. This theory suggests that the purpose of humor is to belittle the individual being made fun of and to empower the initiator of the humor stimulus. While this was not evident in the focus group transcripts, this may have been an underlying or unconscious behavior from the participants. Often participants in observational research will change their behavior to maintain "social desirability." In addition, the novelty of the group may have constrained behavioral patterns that would be more likely to emerge in a more familiar environment. The theme of humor and laughter being used to create a safe environment prevailed over malicious intent.

Defining 'humor' and 'laughter' were important aspects of this study because there are many different approaches for qualifying and quantifying humor and laughter data in older adults. Deciding where to focus the efforts of a particular study can be quite challenging. Participants in a study by Olsson et al. (2002), categorized humor as joking, laughing, macabre humor, situation comedy, plays on words/puns, and unexpected situation. Humor in this study was defined as the stimulus of a part of conversation that may or may not produce the utterance of a "ha", "he" or "ho" sound. Many subcategories of humor were created in order to fully encompass the emotion behind each humor instance. One of the main goals was to combine theories and explanations of humor and laughter to create complete and clear definitions. Humor and laughter have been shown to be a "complex social and communicative phenomenon," making qualitative research an ideal way to approach this analysis (Wilson, Muller, & Damico, 2007). Qualitative analysis also provided the flexibility to change and refine definitions as more rounds of coding were completed (Hsieh & Shannon, 2005). Each round of coding provided the coders with insight on how the definitions were working with the segments and what concepts were being missed by the current list of definitions available.

Implications for holistic nursing include using humor and laughter as specific therapies for older individuals with dementia in a clinical setting. Nurses, who are trained in the art and science of caring, may implement humor and laughter into everyday nursing practice. There are two primary means through which nurses may encourage and engage in humor and laughter with PWCI. First, nurses may initiate or respond positively to humor during routine nurse-patient interactions. Efforts to promote humor during routine care may strengthen the quality of nurse patient relationships, and they may help to attenuate patients' anxiety during potentially threatening aspects of dementia care delivery, like bathing. Secondly, nurses can provide PWCI and their family caregivers with increased opportunities to engage in mutually enjoyable activities. This engagement could lead PWCI to feel interconnectedness to others, which may be vitally important given the sense of isolation often reported by PWCI (Steeman, 2006). Such holistic approaches may improve the quality of care for PWCI and ultimately prove imperative to enhancing quality of life in this population.

Limitations

There are multiple limitations to this research study. Only a small cohort of PWCI and caregivers that attended the ADRC prior to June through November 2011 participated in the Andy Warhol Art Engagement Activity. This was because main recruitment took place at the PWCI's annual visit at the ADRC. This factor may limit the diversity of views expressed in each focus group. Secondly, PWCI and caregivers participated in this activity voluntarily and joined out of personal interests. This suggests that there may have already been an underlying interest in art and a positive relationship between patient and caregivers, which may have influenced their decision to attend this activity together. Further, the responses from our focus groups may be more positive than in the general population of persons with MCI and early Alzheimer's disease and their caregivers. Third, video recording was not done for the focus group sessions, which may have enhanced understanding of the humor/laughter phenomenon. Finally, all subjects were labeled on each transcript based off of one person's ability to distinguish voices and limited field notes taken by an ADRC staff member. Because of this, it is possible that the PWCI and caregiver labels on certain statements may be incorrect.

Research Implications

More research is needed to examine the potential of humor to reduce patients' distress during various stages of care delivery. Further studies should include more precise and universalized definitions for humor and laughter, as well as more concrete ways of creating sub-categories to describe this phenomenon. Additionally, studies should consider the roles of humor and laughter as a marker for quality of life for patients with dementia and their caregivers. Future study may also help to reveal how humor and laughter can be used as a holistic nursing approach support patients with cognitive limitation, as well as creating a more supportive social environment.

Conclusion

Dementia is a devastating disease that affects millions of people, changing the day-to-day lives of the person with dementia and their caregiver. Few studies have targeted

conversational analysis of PWCI and caregivers. People with cognitive impairments were able to engage in humor during social interactions. We found that different types of humor were prevalent in an older adult population with dementia and their caregivers, including humor that is silly, sarcastic and related to one's illness. Some had difficulty recognizing social cues and laughter that was unsuitable to the conversation, which was often done by the participants to ease an awkward moment. Humor and laughter allowed the group to provide a safe social environment to talk about the activity and their illness. This knowledge can be used in the clinical setting to promote enjoyment and well-being, and to provide nurses with a resource for holistic care with the geriatric population.

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Table 1

Humor Represented as Silliness

Humor (Thematic Frequency)	Subcategory Code	Definition	Example
Silliness (39)	Humor: flamboyant/silly	Is an over-the-top statement or action that is silly in nature.	*Patient is just making a random comment.* Patient: And I'm always laughin'! I'm always laughin'! I mean it! And I don't know why I'm always laughin'! I mean I smile with my eyes and I'm always laughing and smiling. I don't know why?
	Humor: action	Is a physical display of emotion.	*One patient is talking about another patient in the group.* Patient: I'm younger than you, but you're doing great, and now I think, "Well, I'm gonna do great, too!" because you're my inspiration! You are! So I'm gonna give you a big kiss! (Gives participant a kiss)
	Humor: obvious	Is a true and well-known fact that is made aloud to the group.	*Caregiver is inquiring about an out of town family member.* Caregiver 1: Where does [Name] come from? Caregiver 2: San Diego. Caregiver 3: Oh that's a long way!

Table 2

Humor Represented as Sarcasm/Dry Wit

Humor (Thematic Frequency)	Subcategory Code	Definition	Example
Sarcasm/Dry Wit (47)	Humor: sarcasm/dry wit	An ironic, taut statement.	*Patient is commenting on the silk screen tote bag art project.* Patient: I'm gonna get a million dollars for the one I just did!
	Humor: stereotype	Is a generalization of a type or group of people.	*Patient is commenting on people living in a retirement community.* Patient: With those people, they are worried about what kind of soup they are going to have now.
	Humor: teasing	Is an inside joke, that may not make sense out of context or to the rest of the audience, but makes sense between person(s).	*Patient is talking to spouse about why he has come to the museum today.* Patient: I have to go with something she likes (to do) because she comes to see all the shows I was in!

Table 3

Humor as a Response to One's Illness

Humor (Thematic Frequency)	Subcategory Code	Definition	Example
One's Illness (37)	Humor: illness	About living with or caring for a person with mild cognitive impairment or Alzheimer's disease	*Patient is talking about the silk screen tote bag art project.* Patient: But to see how it gets done and do it ourselves makes you feel good because you did it. Nobody painted this for us. We did it ourselves. You know, and when people look at this. I made this. I made this at the Andy Warhol museum. I'm real tickled about that.
	Humor: gallows	Morbid in itself, but in context appropriate.	*Patient is laughing at self for getting lost.* Patient: Yeah, if there were a whole bunch of people I would get lost. You know, I have been lost before
	Humor: flaws	Making fun of the flaws of one's self or another.	*Caregiver is commenting on the time of the event and how difficult it is to be ready early with a loved one that suffers from early Alzheimer's disease.* Caregiver: It's always a hassle getting out of the house.