Title:

Bringing Type 2 diabetes to theatre:

Examining Appalachian audience reflections on *The Sugar Plays*

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Abstract:

The Sugar Plays are a family-focused health intervention. The goal of the play is to explore the experience of living with a Type 2 Diabetes Mellitus (T2DM) diagnosis in Appalachia. This present study examined audience reactions using three data-collection methods: (1) open-ended questionnaires, (2) participatory sketches and (3) semi-structured personal interviews. This qualitative analysis of 30 audience members who participated in all three methods found that they articulated lessons learned from the plays, evaluated the characters' behaviors, and engaged in reciprocal storytelling. The audience's reactions demonstrated that narrative telling is relational and that audiences were critically engaged in the process. The plays also helped health practitioners foster conversations about diabetes, the impact of intergenerational dietary habits, and the role of intergenerational buffers.

Keywords: Appalachia, Narrative, Theatre, Type 2 Diabetes Mellitus

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Living with Type 2 Diabetes Mellitus (T2DM) is a multi-layered experience, involving not only the management of the disease through prescribed medication, but also the management of communicative experiences influenced by the disease, such as the power dynamic between medical practitioners and patients. About 30.3 million individuals in the United States of America (9.4% of the population) have diabetes (Centers for Disease Control, 2017). The total annual economic cost of treating diabetes is estimated at $245 billion. Medical expenditures for individuals with diabetes are estimated to be more than 2.3 times that of someone without diabetes (American Diabetes Association, 2013). Yet, while people diagnosed with T2DM may share similar symptoms, their personal narratives about the impact of their illness—and the effect on family members who care for them—may differ. So, it is increasingly important to understand the illness experience. The rate of people being diagnosed with diabetes is expected to double by 2030 (Rowley, Bezold, Arikan, Byrne, & Krohe, 2017).

One region that experiences a high incidence of diabetes is Appalachia (Centers for Disease Control, 2017). About 25 million individuals live in the 420 counties in the region, which includes cities such as Pittsburgh and small towns in the rolling hills of Kentucky. This 205,000 square mile area runs from southern New York to northern Mississippi; it is predominantly an economically distressed region, with 42% of the population categorized as rural (Pollard & Jacobsen, 2011). Residents of socioeconomically distressed Appalachian counties are 33% more likely to develop and die from diabetes than members of non-Appalachian counties (Barker et al., 2010). In Appalachian Ohio, this study's site, the prevalence rate averages 11.3%, compared to the average state rate of 9.5% (Centers for Disease Control,

2015). Diabetes-focused health interventions have been ongoing throughout the region (see work of the Center for Appalachian Philanthropy, Kentuckiana Regional Planning and Development Agency, and Live Healthy Appalachia); however, the incidence rate continues to rise.

The purpose of the current study was to understand perceptions of the illness within a section of Appalachia, to add to our larger knowledge of how the illness is framed and what experiences may perpetuate or help reduce the development of the illness. Also, the study aims to help medical practitioners, family caregivers, and patients recognize the challenges associated with the illness and provide additional strategies for communicating sensitively, ethically, and meaningfully with each other. A search for peer-reviewed research on diabetes in Appalachia, which used narrative inquiry or theory to investigate the T2DM illness experience revealed only one study (Manoogian, Harter, & Denham, 2010); there were none that focused on the use of theatre as an intervention. This study will help to fill that research gap.

Culturally-framed initiatives that are narrative-based are potential starting points for gathering insight into perceptions about T2DM in Appalachia (Barker et al, year.; Denham, Meyer, Toborg & Mande, 2004; Manoogian et al., 2010). This article analyzes audiences' responses to one such intervention, *The Sugar Plays* (the collective name given to three humorous 20-minute one-act plays). These plays tell the story of Appalachian family members who struggle to manage their T2DM. Type 2 Diabetes Mellitus occurs when the pancreas cannot produce enough insulin to control glucose levels in the body (American Diabetes Association, n.d.). Therefore, the body becomes insulin-resistant. In the following sections, a synopsis of the challenges associated with T2DM in Appalachia will be offered. This will be followed by a summary of the narrative-based theoretical perspective and a description of research on using theatre in health education. Next, background information on *The Sugar Plays* will be presented.

Then, the article will explain the research methodology, discuss findings and implications, and share suggestions for future research.

Type 2 Diabetes in Appalachia Health Communication Challenges

After reviewing research investigating communication about Type 2 Diabetes Mellitus in Appalachia, three main sociocultural challenges emerged that would be relevant to understanding perceptions of T2DM: persistent intergenerational narratives about T2DM, cultural and familial dietary practices, and economic factors. Many Appalachians living with T2DM pass on intergenerational stories chronicling the disabling and fatal effects of diabetes on family members (Manoogian et al., 2010). Storytelling, even if it focuses on negative effects, normalizes T2DM within the family. According to Manoogian et al. (2010), some family members act as intergenerational buffers who try to reshape traumatic diabetes stories and break the cycle of diabetes by teaching more effective health management strategies, but those attempts are often not well-received. Their efforts are often rebuffed because the dietary behaviors are deeply ingrained in family traditions and to critique them is regarded as disrespectful. Others remain silent, inadvertently ensuring that T2DM keeps on developing in new casualties in new generations of the family.

Another challenge to communication about T2DM is the maintenance of traditional family dietary routines (Denham, Manoogian, & Schuster, 2007). In general, Appalachians value kinship and rely on family members to model healthy behaviors, including dietary routines (Denham et al., 2007). While some families confront and change dietary habits over time because of a T2DM diagnosis, healthy dietary patterns may conflict with traditional Appalachian food choices, such as oily gravy, fried foods, and copious servings of carbohydrates like potatoes at meals. Therefore, it becomes difficult to ask for or find alternative meal choices at larger

social gatherings (Denham et al., 2007). In fact, as Denham et al. observed, Appalachians experience guilt at social events because eating differently may negatively impact their relationships with family members who may accuse them of not supporting family customs. Therefore, traditional dietary patterns persist.

A third challenge that impacts communication about diabetes is the struggling economy in parts of the region. Appalachian Ohio averages a poverty rate of 17.8%, which is higher than the state (15.5%) and national average (15%). In fact, some counties have poverty rates between 23% and 31% (Ohio Development Services Agency, 2016). The region also has a high population-to-practitioner ratio. Low incomes cause patients with T2DM to visit doctors infrequently or attend educational seminars (Lohri-Posey, 2006). As a result, there are fewer opportunities to receive information from health care professionals (Denham et al., 2007).

Narrative Theory Standpoint

Narrative theory guides this study of perceptions people hold about T2DM. Human communication may be regarded as an act of narration that is "a theory of symbolic actions – words and/or deeds – that have sequence and meaning for those who live, create, or interpret them" (Fisher, 1984, p. 2). This study is grounded in the tenet that human beings are natural storytellers who both observe stories and participate in them as storytellers. In this study, participants are observers of the T2DM narrative in their personal lives, in the lives of family members, and in the stories presented in *The Sugar Plays*. The participants are also storytellers as they recount and attempt to make sense of their own personal stories, those of relatives, and those on the stage. Their personal stories emerge in response to those they see in the plays.

The study is organized according to the principle that people tell stories to make sense of incoherent events. Narratives may help individuals make meaning and gain understanding of an

experience, particularly, an illness experience. Narratives are told to show "what can be expected, even (or especially) what can be expected to go wrong and what might be done to restore or cope with the situation" (Bruner, 2002, p. 31). As patients share information about a chaotic illness experience with others, they interpret key story content according to their experiences and knowledge and attempt to bring order to or understand the development of the disease and its purpose in their lives (Babrow, Kline, & Rawlins, 2005).

To complement the narrative perspective, this study is also guided by another interpretive theory, dramatism, particularly the principle that communication (in this case, stories) can instigate identification. Identification occurs when the readers or listeners recognize similarities between themselves and the story's protagonist(s) (Burke, 1969a; Chen & Bell, 2016). This interaction occurs when meaningful connections are made (Singhal & Rogers, 1999). The audience feels as though they share similar characteristics, stories, and emotions with the personalities appearing on stage or through mediated communication. As a result, listeners are often moved to present similar personal narratives (Peterson & Langellier, 2006). However, the similarities can only be seen if the story fits with the listener's frame of reference and if the protagonists espouse similar core values as the listener. The listeners will compare the stories in the plays with theirs to determine the storyline's consistency before accepting and reciprocating (Fisher, 1984).

In reciprocating, listeners may unknowingly use another dramatistic framework, titled the Pentad (Burke, 1969b). Burke (1969b) theorized that one can tell a communicator's motive in discourse by focusing on five areas: Act – What happened? What is going on?; Scene – Where is the Act happening?; Agent – Who is involved? What are the roles?; Agency – How do the Agents act? or By what means do they act? and Purpose – Why do they act? What is their aim or

motive? Storytellers may use these components as they organize their story and listeners may use these questions to analyze the telling of the story. Framed through a narrative lens, this study seeks to determine how people make sense of communicative experiences regarding T2DM within the sociocultural challenges of Appalachia.

Health Promotion in Theatre

This study co-opted a narrative-based intervention, theatrical plays, to instigate storytelling about the T2DM experience. Stories embedded in theatre have been used to tackle communication challenges, increase knowledge, and prompt attitude and behavior change (Singhal & Rogers, 1999). Theatre has functioned as a channel to promote HIV/AIDS prevention (Livingston et al., 2014), healthy aging (Feldman, Radermacher, Lorains, & Haines, 2011), organ donation (Buitrago et al., 2013), cancer awareness (Beach, Buller, Dozier, Buller, & Gutzmer, 2014), and mental health (Roberts et al., 2007). However, research on diabetes prevention and care education through theatre is sparse. Theatre has been used to train health care practitioners on how to talk about diabetes care with patients and their family members (Birdsall & James, 1999), educate children and teens about the effects of T2DM (Curry, 2009), and help patients express frustrations about the dietary regimen (Pieper, Costa, Wiltgen, Martins, & Kupfer (2015). However, no program of that type has been conducted in the Appalachian Ohio region. Studies have reported that audiences must first connect with plays characterized by compelling narratives and culturally relevant characters, scenes, and language (Singhal & Rogers, 1999). *The Sugar Plays* were commissioned to offer these characteristics.

The Sugar Plays

The Sugar Plays (*Sugar Bear*, *A Family History,* and *Lucille*) are part of a diabetes community toolkit developed for diabetes educators working in Appalachia. The School of

Nursing at a university situated in Appalachian Ohio commissioned the plays, which were created by graduate students in the School of Theatre. A faculty member at the School of Nursing, who had been specializing in diabetes education and research for years, received grant funding to create a diabetes toolkit. One of the elements in the kit would be three one-act plays that could be presented during diabetes education sessions.

The final scripts needed to be 20-minute one-act plays with storylines that focused on T2DM, family support, and life in Appalachia. To more effectively appeal to the audiences, the scripts also needed to include behaviors and social practices unique to the culture of Appalachia. Since the faculty member at the School of Nursing had no playwriting experience, a call for original scripts was emailed out to the graduate students of the School of Theatre (no specific cohort was targeted). All interested students were encouraged to submit a script. Students composed their scripts based on the criteria. After the authors pitched their ideas (both verbally and in writing), the Graduate Director of the School of Theatre and faculty from the School of Nursing selected the top three storylines. Once the three scripts were selected, additional development or editing was recommended during individual sessions with the Graduate Director of the School of Theatre and the faculty member from the School of Nursing who had received the grant. This study (which was not grant-funded) was developed as a way that responses to the scripts could be observed in real-world situations before presenting them to diabetes educators.

The researcher entered the process after the scripts had been created and was not part of the development process. Due to financial constraints, only two plays, *Sugar Bear* and *Lucille*, were used in this study. *Sugar Bear* is the story of a nuclear family in which a grandfather and father struggle to manage their T2DM. The play is filled with tension and humor, stimulated by the story of a fictional bear and a hidden stash of sweets. Eventually, both men recognize the

impact of their noncompliance and accept a new dietary routine. The play, *Lucille*, focuses on the newly-diagnosed retired teacher, Mrs. Lucille Myers, and her transition nurse, Candy. Nurse Candy guides the resistant Lucille toward accepting her T2DM and acknowledging that her most likely source of support will be her annoying, but caring daughter-in-law. Interestingly, *Lucille* was loosely based on the playwriter's story of his own diagnosis with T2DM. Copies of both scripts are located online (Diabetes: A Family Matter, 2012). Each play sought to provide insight into the challenges of living with T2DM in the region. Based on prior research, this study sought to answer the following research question:

RQ: How do audience members of *The Sugar Plays* narratively recount their experiences with Type 2 Diabetes Mellitus after watching a theatrical intervention focused on that illness experience?

Data Collection

Following approval by the Institutional Review Board (IRB), this study was conducted over a period of four months. Three data-collection methods were used: (1) open-ended questionnaires, (2) participatory sketches, and (3) semi-structured personal interviews with viewers of the play. This layered methodology aimed at gathering information not only on audience members' experiences with T2DM but also how the audience reflected on their experiences in response to the stories presented on stage. At each venue, the research project was described and informed consent forms were handed out. Upon giving consent, audience members were provided open-ended questionnaires. On those forms, participants responded to questions about the play. If they were willing to participate in an individual interview, they completed a "contact me" form. No pre-test of knowledge about T2DM was conducted. The questionnaire gathered demographic information, as well as perceptions of the play's messages, the portrayal

of the family, of T2DM, and of the challenges individuals with the illness face in the region. The final question invited participants to sketch an image they thought depicted T2DM. In venues where both plays were shown one right after the other, the process took an hour and 45 minutes. In venues where only one play was shown, the process took 30 minutes to 1 hour.

Participants

During the research period, the plays were performed at four venues before approximately 130 patrons who had experience with T2DM (who either had been diagnosed or had a relative with T2DM). Each presentation of the play was a live presentation on stage. Local actors were sourced from a community theatre company. The participants encountered the plays at two churches, a shelter for the homeless, and a community center. Contact was made with the leaders of these organizations and a date and time was identified when regular patrons would be available and would attend. The community center and shelter each hosted a weekly dinner for community members. The leaders recommended times that were appropriate for presenting the plays. Announcements were made at the churches and shelter inviting members to attend.

About 85% of patrons saw both *Lucille* and *Sugar Bear*. In total, 30 individuals volunteered to be interviewed and audio-recorded (6 had been diagnosed with T2DM and 24 did not have diabetes but had at least one family member with T2DM). These individuals will hereafter be referred to as interviewees, audience(s) or participants. Of the interviewees, 74% (22) saw both plays, while 26% (8) saw only one (either *Lucille* or *Sugar Bear*). All (except one telephone interview) were carried out face-to-face and helped gain insight into "the social actor's experience and perspective" (Lindlof & Taylor, 2011, p. 173). Participants were asked to recall messages about T2DM from the plays, personal stories similar to those in the plays, and the cultural relevance of the stories. The semi-structured interviews lasted between 20 minutes and 1

hour and 40 minutes. Seven men and 23 women—between 20 to 76 years of age—were interviewed; the mean age was 43 years. Of the interviewees, 53% (16) identified as White, 40% (12) as African-American, 3% (1) as South-East Asian, and 3% (1) as Mixed-Ethnicity. All were residents of South-east Appalachian Ohio.

Participatory Sketching was used in two ways. The last question on the questionnaire asked the audience to sketch a response to this question: "When you hear the word 'diabetes', what image comes to mind?" Second, after elaborating on their responses to the questionnaire in the interview, participants explained their sketch (Flaherty, 2008). Sketching enables participants to include "imagination as part of the research process and [allows] participants the freedom to express themselves both visually and verbally" (Flaherty, 2008, p. 116). Also, sketching places the production of knowledge into the hands of the participant (Flaherty, 2008). Pseudonyms were used in the report. Each interviewee received a $20 gift certificate. Information about the gift certificates was given at the start of the interview, after the participants had contacted the researcher and confirmed an appointment to be interviewed.

Data Analysis

All interviews were transcribed verbatim, resulting in 278 pages of single-spaced transcribed pages. The author was the only coder of the transcripts, performing all coding manually. Personal narratives that referred to behavior or comments made by characters in the plays were focused on. While there were a few fully-formed narratives (Labov & Waletsky, 1997), in this study, narrative segments (lumps) that recounted an experience in temporal order and/or evaluated the experience (Riessman, 1993) were highlighted. The "lumping" technique was used to categorize the segments. These topic-centered segments were grouped into discrete themes and were compared to better understand the experience (Riessman, 1993). While

transcribing, the categories were constantly reviewed, and similarities, overlaps, and distinctions were identified. Similar to the process stated above a grouped and comparative analysis of the sketches and comments written on open-ended questionnaires was conducted simultaneously with the analysis of the transcripts of the interviews. This was because the interview started with the questionnaire and required that the participants elaborate on their responses and sketches. Only questionnaires and sketches from interviewees were analyzed. By the 25th interview, a saturation point was reached because messages, concerns, and interpretations were recurring (Corbin & Strauss, 2008). This analysis took an interpretive perspective and it is acknowledged that the participants' responses and sketches are subjective representations.

Results

This study sought to determine how Appalachian audience members with experiences with Type 2 Diabetes Mellitus in their families reacted to a theatrical intervention focused on diabetes prevention and management. The analysis of the transcripts was guided by a narrative lens and revealed that audience members reflected on lessons learned (recalled important messages), evaluated the characters (assessed behaviors), and engaged in reciprocal storytelling (were prompted to tell similar stories to those presented on stage).

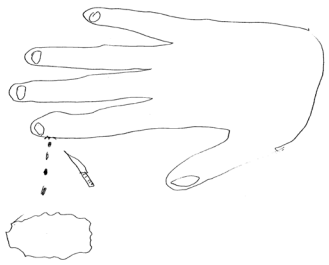
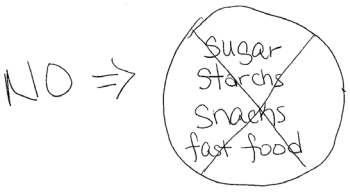
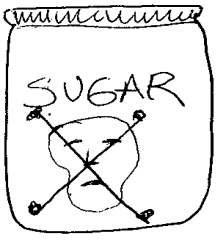
Reflecting on Lessons Learned

Lessons learned are key elements of a narrative and are defined as "value-laden implications and consequences" (Sharf, 2017, p. 33). The lessons learned may be implicit in the story or explicitly deduced and stated by the teller or the listener. After watching the plays, the audience said the main lessons learned were that: (1) T2DM must be monitored; (2) Culture negatively impacts dietary habits; (3) Poor dietary habits negatively impact people with T2DM; (4) Healthier food choices are needed, but difficult. The quotations in Table 1 are exemplars of

the lessons learned. The participants' comments illustrated that they grasped multiple lessons and often expressed them as connected ideas.

Table 1

Lessons learned

Quotes	Sketch representing Lessons Learned
I know, even with my wife [who has T2DM], I mean, because I do like to eat, and I'm kind of selfish about that, that I'll try to be a little more sensitive, that I can't really just sit and eat what I want in front of her, 'cause that's tough, you know. So I've tried to alter my diet a little bit, and so that's what I really got from *Sugar Bear* [italics added]. Yeah, I probably need to be a little bit better….[she] has to check her sugar. I just always think of them pricking their finger over and over. I just feel, you know, you feel kind of handcuffed by it. (Dennis) (Lessons: T2DM must be monitored, Poor dietary choices negatively impact people with T2DM)	 *Figure 1*. Dennis' Sketch
…I know this was from *Lucille* [italics added]… that, you can still eat the same foods, but just in moderation, depending on the carb level,…I had learned about the blood sugar in terms of how it tops off at 120. I didn't know that…the finger sticking is the most accurate test of sugar or glucose and that, how people with diabetes, should eat three meals a day, approximately the same time a day. 'Cause it's funny 'cause I never thought about it, but, when this came out, I thought oh that's true, cause my grannie used to do that. (DJ) (Lessons: T2DM must be monitored)	 *Figure 2.* DJ's Sketch
…the play [*Sugar Bear*] really emphasized what unbalanced sugar levels can do in a person's life. It made me think about in my culture how many things are sugar laden and how I associate something sweet with tasting good and were I to have diabetes, this would kill me…this stuff [food] now becomes poison. (Lloyd, diagnosed with T2DM weeks later) (Lessons: T2DM must be monitored and Culture negatively impacts dietary choices)	 *Figure 3.* Lloyd's Sketch

I knew alcohol had a lot of sugar in it, but I didn't connect it with the diabetes…and now I'm beginning to think that's just the reason why a lot of people does drink because their sugar levels, and the sugar and the alcohol makes 'em feel better that way, so, so they'll just drink more and then not eat... (Jennifer)
(Lessons: T2DM must be monitored, Culture negatively impacts dietary choices)

You're physically gonna die! For me, having to eat right, and having to pay attention to, you know, the sodium intakes, and the sugar and all of that. That's like dying. Because I don't like to eat right. I shouldn't admit that [laughs]. I hate eating right, that is like the hardest thing for me to do, and to [have to] look at the back of the box and count calories and stuff (Ranelle)
(Lessons: T2DM must be monitored, Healthier food choices are needed, but difficult)

Figure 4. Ranelle's Sketch

Lesson 1: T2DM must be monitored.

The interviewees stated that they learned that patients and family members must monitor the variables that affect Type 2 Diabetes Mellitus. For instance, Dennis realized that checking glucose levels several times daily was important; Lloyd noted that the imbalance in glucose levels could wreak havoc on a person's life; DJ recalled that finger pricking was the most accurate test of glucose levels and that eating the same number of meals at the same time of the day was beneficial; and, Ranelle acknowledged the importance of checking sodium and sugar calories eaten. As the audience members reflected on the content in the plays, they started to consider the illness narratives of their loved ones and attempted to make sense of behaviors that managed and exacerbated the disease.

The narratives from the plays helped audience members gain a better understanding of the T2DM experience (Bruner, 2002). They began to comprehend that it was important to consistently monitor what goes into the body and what happens to the body once that food is

eaten. Dennis' sketch (Figure 1) featured a finger being pricked with blood flowing out and demonstrated that the play reinforced a significant symbol of the diabetes experience – the pricking of the finger to measure the glucose levels in the blood. While DJ's quote focused on monitoring glucose levels, finger pricking, and eating at least three meals a day, her sketch (Figure 2) was more specific in highlighting the types of foods that could negatively impact the glucose levels. In her sketch, an "X" crosses out sugar, starches, snacks, and fast food. While the sketch symbolizes a complete elimination of certain foods, at the same time, it shows that the participant gathered some information from the plays about the effects of particular foods on one's health.

Lesson 2: Culture negatively impacts dietary choices.

Additionally, interviewees recognized the negative impact of the sociocultural environment on the management of T2DM. Lloyd, who had been living in Appalachian Ohio for 15 years, reflected on his experiences eating within his community and remarked that the plays caused him to feel alarmed at how high the sugar content was in the foods he enjoyed. He stated that sweet food tasted good and he often inferred that sweetness meant that the food was good for the body. In his sketch (Figure 3), he concluded that the sweet and delicious food from this region that he has been indulging in for years was poison to his body. Other participants also stated that "sweet" was regarded positively in family meals and was praised by the elders in the family. These participants were expressing that they had accepted a negative dietary routine that had been ingrained for years (Denham et al., 2007). However, upon viewing the plays, they began to question the value of that those deep-seated eating habits.

Participants also noted the relationship between diabetes and other social ills, such as alcoholism and poverty. Jennifer, who lived in a small town in Appalachian Ohio for all her life,

recalled the impact of alcoholism on people with diabetes in both her community and family (Table 1). As a result of watching *Sugar Bear*, which had a storyline about alcoholism, she wondered aloud about the correlation between the macro context (alcoholism and diabetes in her community) and the micro context (alcoholism and diabetes in her family). Jennifer also noted that there was a relationship between health and economic status. Her community was characterized by poverty and she observed that one way people dealt with the depression of poverty was to indulge in alcohol. Jennifer also picked up the message that alcohol negatively impacted the glucose levels in the body through the grandfather's story in *Sugar Bear*; he had just returned home after being hospitalized due to high glucose levels caused by his drinking. The interviewees' observations indicated that T2DM does not operate in a vacuum but is impacted by a number of socioeconomic factors.

Lesson 3: Poor dietary habits negatively impact people with T2DM.

Also, after watching the plays, the interviewees reflected on the impact of their own insensitive behavior in the presence of persons with diabetes. Their responses were in the form of a confessional showing how they progressed from insensitivity to empathy. The confessional is an admission of a mistake or dangerous behavior and in this case, harmful behavior that impacted others. Dennis remarked that he had not been mindful of what he ate in front of his wife who has T2DM; now, he will be more sensitive about his eating habits. As he reflected on his sketch (Figure 1), he noted that finger-pricking must be painful and admitted he had never even considered it prior to watching the plays. Using the word, "handcuffed," Dennis was just now realizing how much a part of his wife's identity the disease was. He vowed, "I'll try to be a little more sensitive." DJ stated that while she knew her grandmother had diabetes, she had never thought of the implications of the disease on her grandmother's life. Later in her interview, DJ

said that after seeing the plays she was becoming more attentive to her mother who was recently diagnosed as pre-diabetic. The participants noted how oblivious they were to the rigors of managing the disease. Attributable to the plays, they could now walk in the shoes of family members for a short timeframe. Dennis and DJ's decisions to be more mindful verify the persuasive nature of storytelling (Fisher, 1984). Participants were moved to change their behavior toward loved ones due to their experience of watching the plays.

Lesson 4: Healthier food choices are needed, but difficult.

Participants also realized that they needed to eat better, but they struggled with that choice. Several interviewees framed the relationship between the disease and food negatively. Participants described having diabetes as being "handcuffed" and as "death," and food as "poison" and "destructive." After watching the plays, Ranelle described T2DM as being very restrictive, limiting her to healthier choices. For her, the disease signaled the end (the death) of any enjoyment of food (Table 1). In fact, her sketch (Figure 4) was the headstone of a grave with the simple acronym RIP (Rest in Peace) written on it, indicating that the person had died. Even though her conclusion was inaccurate, for Ranelle, a T2DM diagnosis meant an unavoidable death precipitated by the disease. She also confessed to having poor eating habits and disliking healthier meal choices, even though she knew that eating healthier was better. Denham et al. (2007) observed that healthier food choices were framed negatively in Appalachia because they conflict with traditional food patterns. Ranelle embodied that struggle, acknowledging that the stories in the plays about T2DM showed, as Bruner (2002) noted, "what can be expected [becoming ill], what can be expected to go wrong [death] and what might be done to restore…the situation [eating well]" (p. 31). The responses from the interviewees revealed that

they identified information both explicitly stated in the plays and those that were implicit. They learned the implications of having T2DM and made connections that emerge in the experiences.

Evaluating the Characters

Audience members also assessed how characters behaved after receiving a T2DM diagnosis. The audience analyzed the characters by unknowingly applying narrative tools, such as the Dramatistic Pentad (Burke, 1969b). They also empathized and identified with the character, that is, they were emotionally moved by the characters' struggles and saw themselves within the characters' stories (Burke, 1969a; Singhal & Rogers, 1999). In their responses, the audience demonstrated that they too engaged in the construction of the T2DM narratives by actively editing, intentionally making inferences about what it feels like to have that experience and explaining subsequent behaviors that impacted them as listeners (Garro & Mattingly, 2000).

Character behavior.

The audience made value judgments on the behaviors and choices of the characters. Their responses demonstrated that audiences are not passive, but actively engaged in the relational act of storytelling – telling, listening, responding, and creating their own meanings (Singhal & Rogers, 1999). As with any narrative, there are characters involved. When asked about how they interpreted the characters' behavior and the effects of those behaviors, audience members drew the following conclusions: illness can disrupt; conflict in the family can be part of the experience of T2DM; shame can cause secrecy; persuasive social support is needed; and, family caregivers feel frustration.

The audiences discerned that illness can be disruptive. Patients with severe diabetes struggle to regain the order their lives had prior to their diagnosis. As wounded storytellers, they often feel a loss of control, temporality, and identity (Frank, 1995). Audience members were

aware of this sense of powerlessness, particularly while watching *Lucille*. Kelsie stated that throughout that play she could see that the main character was trying to retain independence and power over her life:

> People with diabetes sorta feel like it's like taking over their life sometimes…. I know with the older lady and I think it was *Lucille*, she, like she didn't wanna, she didn't like having other people over her, like the nurse was trying to help her out, the nurse was saying it nicely, but she still felt like, don't tell me what to do, like I know what I'm doing, I can do this, I can do that…And, like, she was wanted that control, it's like, I don't have control over this one thing, so I need control of everything else. (Kelsie)

Illness can instigate a devastating loss of autonomy, disrupt a life trajectory, and forcibly move the patient into an unwanted life narrative (Frank, 1995). Kelsie identified how illness could disrupt the agency one usually has over one's body and its functions, interactions with others, and one's life goals. The loss of power and attempts to regain this power can adversely affect interactions with professional caregivers, as well as family caregivers, especially at the point of diagnosis. The audience members could also see that in Lucille's case she tried to distance herself from any assistance, such as when the nurse offered to talk with her about T2DM and when Lucille rebuffed her daughter-in-law's assistance during her at-home visits. Audiences also noticed that the disruption can cause discord. As Erin noted, "There was so much conflict in the family." This conflict can throw not only the patient into disorder and stress, but also the family.

Audience members also recognized the tensions that can emerge when families try to provide support to a family member struggling with a chronic illness. Erin could see that while the father in *Sugar Bear* wanted to manage his disease on his own terms, his methods were in

direct opposition to the healthy options that his wife presented, such as eating more vegetables and eating dinner at a set time each day. Her quote (Table 2) also demonstrated that the audience identified how unproductive avoidance is in the attempt to regain power and manage conflict. Her sketch (Figure 5) mirrored what she saw in the plays and showed the burden caregivers must carry.

Table 2

Conflict in the Family

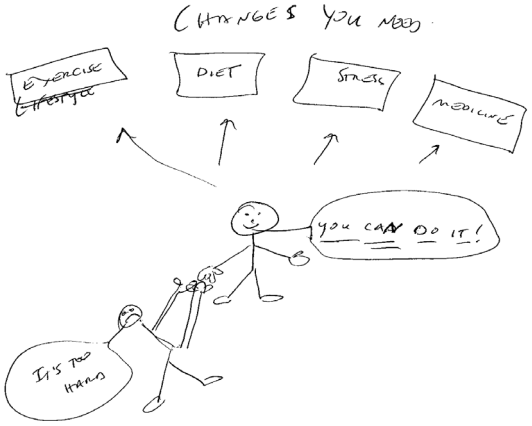
Quote	Sketch
…The father [in *Sugar Bear*] wanted to do his own thing and he was, he was hiding when he was doing it from the others, and he was defensive, so he was blaming things…that was his fault on his son, which caused more conflict and then there's a conflict with the wife because she trying to help him and he doesn't…it's hard to do and they often feel overwhelmed (Erin)	

Figure 5: Erin's Sketch

Caregivers must act as cheerleaders, encouraging the loved one with T2DM to manage exercise, diet, stress, and medicine. As the sketch (Figure 5) expressed, family caregivers must be that force of optimism, often struggling to bolster an overwhelmed loved one who is declaring that the management of the illness experience is "too hard." Additionally, audience members observed the shame that was associated with having the chronic illness often caused patients to be silent about setbacks or accept support. Unfortunately, the silence surrounding an illness further exacerbates the illness and family tensions.

> …well they [*Sugar Bear adult family members*] were secret[*sic*], certainly about the grandfather being, he'd been I guess, he'd been in the hospital a few days, but nobody wanted to say, why and they didn't want the youngest child to, to know that at all. Aww, so there was a lot of secrecy, and obviously, there wasn't much support of, any support, they were sort of undermining, each other in every respect. (Margaret)

Audience members also perceived that strong persuasive support from caregivers was needed to help set the family on a more effective dietary plan. However, primary family caregivers may find persuasion very frustrating and initially ineffective as was experienced by the mother in *Sugar Bear,* when she tried to persuade the family to eat more vegetables. In fact, even the audience had mixed reactions about the mother's form of support; some saw her as caring, while others regarded her as a nag.

> …I don't think I heard nagging [in *Sugar Bear*], I, I feel, I heard a frustrated wife who loves and cares for her husband and is frustrated that she feels that she can't do anything, well, there's nothing she could do, until he actually owned up to it (Elizabeth)

> Sales [persuasion] is everything, and what I saw in the play [*Sugar Bear*] was the mother wasn't selling [the idea of healthier eating] and she was, she, she, she, she had ah one approach with, with the children and another approach with the husband and she didn't sell the thing [managing the father's and grandfather's T2DM and making healthier food choices] well. She, she, became a policeman. She became, ah, a cop for lack of a better term over, over the sugar. (Lloyd)

Nevertheless, the audience recognized when someone was trying to disrupt the storyline of T2DM in a family. They identified the mother in *Sugar Bear* as an intergenerational buffer

(Manoogian, et al., 2010) trying to stem the effects of T2DM on the lives of her father-in-law, her husband, and children. She was trying to reshape the family's health legacy, but her communicative approaches were ineffective until her husband recognized the need for change and fell in line. The family was only able to start on a healthier path when the husband realized that he was passing on his poor eating habits, such as eating a bunch of candy frequently, to his children.

Narrative as an evaluation tool.

Another finding was that audience members unknowingly engaged in narrative analysis when they identified life-changing actions done by characters. Subsequently, they recommended alternative behavior that could positively reorder or restore the trajectory of the current story. In so doing, the audience began to analyze negative perceptions of the disease and provided suggestions for re-shaping that narrative perception. The audience invoked narrative tools, such as components of the Dramatistic Pentad including the agent, agency, and purpose (Burke, 1969b), to analyze the plot, the behavior of the characters, their goals, and the persuasive strategies used to achieve those goals.

According to Burke (1969b), in a narrative, the Agent is the subject(s) of the narrative. This is a person who is producing the narrative or upon whom the narrative is focused. The Agent may wield power in the story or attempt to change the arc of the story or the person may be the focus of the story with little power to change its trajectory. In the audience's responses, several members identified the mother in *Sugar Bear* and Lucille as Agents. The mother was attempting to create an alternative narrative for her family – "she [the mother] is the caregiver in the situation in the play" (Elizabeth). In contrast, Lucille was trying to maintain a negative health narrative – "What she [Lucille] didn't realize was that she was the one who was forcing it on

herself because she wasn't controlling anything. She was letting everything [her lifestyle] control her" (Inga). Additionally, the audience members could identify the Agency or the means through which the Agent worked in the narrative. Agency represents the stimulus for action or the means through which one can impact the action of others in the story (Burke, 1969b). Audience members identified the meals as the opportunities for change. Elizabeth stated, "She's [the mother in *Sugar Bear*] the one making dinner, well she can make right choices in the dinner." Inga also noted that it was through inner strength that Lucille would learn how to change aspects of her life: "Until she learns…that she could deal with herself and learn how to change things one thing at a time. And basically, that's how you have to handle…like taking it one day at a time." Inga was referring to the fact that the health narrative could change through the Agent, the person with the most power or agency in the story.

Audience members also identified the purpose (the "why?" in the Pentad) or the target or end goal (Burke, 1969b) as the creation of healthier dietary habits and ultimately, healthy family members. The audience also made suggestions for addressing resistance to achieving the purpose: "And if, if the husband wants to be stupid about it, stupid about it and say, 'I don't want that,' she'll [the mother] say, 'Well, you need to make your own [meal].' I mean, that kinda is support. I mean, there's tough love" (Elizabeth). Also, there was a recommendation to fulfill the purpose slowly: "Take one step at a time, change one thing at a time. Not everything at the same time" (Inga). Finally, one interviewee used the storyline in *Sugar Bear* as a metaphor to demonstrate the adverse effect of not achieving the goal of healthy eating:

> "…now they've [*Sugar Bear*] lost all of their chickens [because the father hid sweets in the coop and a coyote entered and ate all the chickens after he forgot to close the gate]. And it's really affected the family in a whole different manner, a little bit more

> widespread because he [the father] chooses not to be a key, to be responsible for what he has [T2DM]…It's almost like falling on your face and being in it to where you realize that it's not just you that this affect. It affects every single person that you are around and until some people have it, lose all their chickens and the eggs and everything [literally and figuratively] and see that: "Wow, look what I just did to my family because I can't control myself or because, you know, I choose not to do what I should do" (Linda).

The audience members could identify the Agents or protagonists in an illness narrative. They also recognized that Agency or the responsibility for achieving goals could be influenced by multiple factors. As they attempted to make sense of the T2DM, they started to assign blame for the development and outcomes of the T2DM story.

Identification with the characters.

One of the reasons audience members may engage with the story is because they identified with the characters. The audience members also demonstrated understanding and sensitivity toward the characters. Characters can transfer affect or emotion to audience members (Singhal & Rogers, 1999) and, as such, enhance the appeal and entertainment value of the narrative (Singhal & Rogers, 1999). The result is that audience members feel connected to the story or that they are like or feel similar to a character, almost as though they are walking in the same shoes as the character (Table 3). As some of the responses illustrate, the audience may even experience empathic distress while watching a character struggle.

Table 3

Empathy and Identification

Quotes	Perceived similarity
That play [*Lucille*] hit home more than anybody will ever know…not just the diabetes, but it just, it was the concept of her being alone and not really having anybody there to take care of her or to listen to her or for her to understand, you know, to try to help her understand anything…I've been there. I've done that. When I had the car wreck…my daughter comes up to the hospital. I'm lying in the hospital. They don't know if I'm living or dying [due to diabetes complications]. My daughter comes in and says, "Hi Mom, I love you. Goodbye, I'm going to Montana." Now do you understand why I said that hit home for me probably more than anybody else?! (Inga)	Identified with: • solitude and loneliness during a significant illness disruption
Because I thought, "Oh my gosh, is that how I sound? [referring to the mother in *Sugar Bear*] And they [the family] still don't wanna do it, yet that's how I sound?" You know, did I push too hard? And not, and, and they [interviewee's children with T2DM] were just, they just didn't wanna hear me anymore. They just didn't wanna deal with it anymore. Did I push too hard? Because I am kind of a strong, I don't sometimes know when to be quiet and lay off. Because I want this, I want them to get better. Then they don't think there's anything wrong. So it was really, truly, it was very difficult for me to sit there any longer, that's why I got up and left. 'Cause I couldn't do it anymore. I, I couldn't hear anymore. I was, I was done. 'Cause it's hard, sorry. (Linda)	Identified with: • character's communication style • character's attempt to change the T2DM health narrative within the family • the character's role of primary caregiver and primary meal preparer the frustrations of caregiving
…the mom [*in Sugar Bear*], she was on it, she's like, "we have to eat at 6," and I completely understand that. I do. Like, if I don't eat between 12 and 12:30, I am not a	Identified with: • the character's need for sticking to a dietary schedule

> happy person. I start sweating…I just have to eat something…And so I, I completely, what I, I saw that instantly, in that play, ‘cause that’s, that’s my life. (Ilene)

As the responses demonstrated, audience members connected with different aspects of the stories, including emotional experiences, behavior styles, and social roles. Even though the audience members were all different personalities from the same locale, Appalachian Ohio, their responses revealed the persuasive power of a narrative. The interviewees stated that they experienced similar emotions to those of the characters in similar circumstances. Others revealed that they communicated in the same manner as the characters, especially the caregiver role. They could also relate to the frustration of attempting to change ingrained behaviors in their families. Also, interviewees with T2DM connected with the challenge of maintaining a consistent diet structure to manage the disease. In sum, in evaluating the characters, audience members appraised characters’ behavior, employed narrative tools to assess, and finally, identified with the characters. The audience’s intimate attentiveness to the plays demonstrates that audiences are not always passive but are critically engaged with the story presented to them.

Reciprocal Storytelling

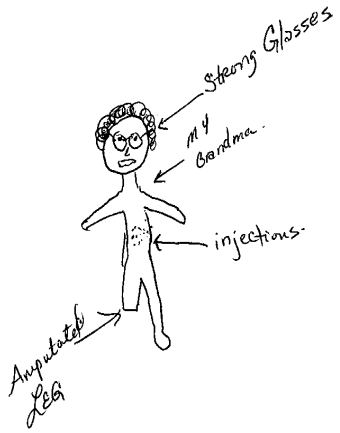
Narrative storytelling prompts additional or reciprocal storytelling. Human beings are storied creatures and, in their responses often tell stories (Bruner, 2002). Narratives about illness are one of the best ways to understand and co-construct the illness experience (Frank, 1995). In this section, audience members engaged in a narrative tit-for-tat as they responded to the staged narratives by telling narratives about their own experience with the T2DM illness experience. The reciprocated narratives demonstrate that fictional stories can generate or instigate non-fictional ones. Most of the reciprocated narratives were about family members and featured

intergenerational interactions, that is, an older member with T2DM interacting with a younger family member who is at risk. For instance, interviewee, Darla provided a vivid narrative description of the devastating corporeal effects of T2DM on her grandmother (Table 4).

Darla recounted four types of physiological complications and actions associated with T2DM: injecting insulin into the abdomen, neuropathy of the eyes, finger pricking, and leg amputation. Her sketch depicted three of these (Figure 6). Her account described the difficulties associated with the disease. In analyzing her sketch, she spoke of being a child and seeing the injection scars on her grandmother's stomach which were caused by using glass needles, the only types available at that time. Darla contemplated the toll those painful scars must have taken on her grandmother and the effect those scars had on her sense of self.

Table 4

Reciprocated Story

Quote	Reciprocated Sketch
And so, her [participant's grandmother] abdomen, she was just always shooting in her abdomen. And, she wore, she wore like really strong glasses because the diabetes started affecting her eyes. And, I just remember, really thick glasses. I think she was maybe trifocals and she was, she still had trouble seeing and then she always had to have like blood tests…in her fingers, she was always like having to prick herself and she hated that too. Because she'd worked in a shoe factory so her hands were real tough and callous so, it was real hard for the needles to get the, blood out of her fingers, 'cause her skin was so tough from all those years o' working. And then, the worst thing that happened is she had her leg amputated from the diabetes. (Darla)	 *Figure 6*. Darla's Sketch

Darla's story reflected an intergenerational interaction that chronicled the disabling impact of T2DM (Manoogian et al., 2010). Furthermore, participants recalled instances when either they or a family member acted as an intergenerational buffer who tried to help family members change the existing unhealthy eating narrative and lead a healthier lifestyle. Their stories contain characters just like the mother in *Sugar Bear* who tried to break the cycle in her family (Table 5).

Table 5

Reciprocated Stories

Quotes	Reciprocated Sketches
When she's [participant's grandmother] at the office, cause she helps my dad out, when she's there, she's like, "Okay, Kenny, I'm fine, I'ma keep going but you either have to go get me something to eat or I'm gonna go get it myself." And he did that sometimes. He'd be like, ..." okay, I'ma get you something to eat as soon as we finish this, soon as we finish this, soon as we finish this." And I remember just one time I was there and I heard her keep saying that and I just got up, I'm like, ah, I'm like, "Dad, let me see your keys." I'm like, "Grandma what you want?" I'm like, "I'm gonna get you something. Like Subway's right down there, I'll go get you something, now I would be the one to go get it." And I, I ended up like, I didn't like tell my dad, but I had to sorta tell my, tell my mom and she was like, "Kenny, you know you 'pose to, you should let your mom like, either provide food when you know you guys are gonna be there after a certain time, you know she needs to eat at this time." (Kelsie)	 *Figure 7*. Kelsie's Sketch
Dad [who passed away from complications of cancer and T2DM] was a trip like that. Or like he would, we would go to Red Lobster or something. And you know those biscuits, they have a really high sugar content, which is weird to think, that biscuits have a lot of sugar. But theirs do and he would eat them and, and we'd say, "Dad, you know," or Mom would do, like the basket would be here and then Mom would move it over here, and so Dad would just be like [makes a face and pretends to reach for a basket] you know, while he's still talking like none of us notice and, and I would say, "Okay, that's three," you know, stuff like that, [laughs] 'cause he wasn't supposed to eat them [laughs]. (Ilene)	 *Figure 8*. Ilene's Sketch

Then we get home and somehow my mom has this bag of Snickers. And she's got 'em tucked in her pocketbook. They got paid for, but she hid them from me. And I don't remember how it was, I got her pocketbook for something or another. I can't remember what it was even for and here's this 5, 6 candy bars. These big huge Snicker candy bars. She was hooked on Snicker candy bars. And I'll tell her, "Mom, you, can't have it." "Well, yes I can." She said, "at least I'll die with my belly full!" I mean my mom was as contrary as the next person. I mean, grandma didn't understand. Mom didn't wanna understand! (Inga)

Figure 9. Inga's Sketch

As early as 4-years-old, I remember my son coming in from being outside with his dad [who has T2DM] and saying something like, "Dad needs a sandwich." And I would say, "Would dad send you in here?" And he said, "Nope, but he needs a sandwich." So, even at that very young age, he's picked up on the lows, the personality change, and, my husband gets really short with us, you know. So, whenever they were going camping or fishing, or whatever they were doing, I was very comfortable when they were together (Stefann)

Figure 10. Stefann's Sketch

In response to the play, *Sugar Bear*, some participants presented narratives in which they communicated with family members about the management of T2DM (Table 5). In each account, at least two generations are represented and show the importance of family support. The stories also indicated how easily behaviors that perpetuated the unhealthy management of the disease can be passed on to other generations. In Kelsie's case, her father was the form of resistance, delaying the purchase of food for his mother; but his daughter intervened. In Stefann's story, it seemed that her husband was continuing with his activities, ignoring the signs of low blood glucose; but his young son intervened. In Ilene's example, her father-in-law was ignoring the dietary restrictions; but his wife and daughter-in-law intervened. Finally, in Inga's narrative, her mother went against the nutritional recommendations; but her daughter intervened. Another participant, Linda, told a story of how she would secretly refill the bottle of pancake

syrup with the light version to control her mother's tremendous intake of the syrup during breakfast. Each story documented efforts by a person from a different generation to correct the behavior of the patient.

The sketches of the participants provided additional insight on the reciprocated stories. In Kelsie's case, she explained that her sketch (Figure 7) reminded her of her family, "I just know with my family like, I thought of them too, like all the things that they can and cannot have, so, like my little cousin, he has diabetes." It was that knowledge that prompted her to help her grandmother, while her father delayed his break. Like Kelsie, Ilene's sketch (Figure 8) also symbolized a decision to stop eating unhealthily. She exclaimed, "It meant to stop eating crap. That's completely it!" She recalled watching her father-in-law sweating profusely, taking frequent trips to the bathroom, and the family's unsuccessful efforts to help him regulate his eating habits. For Inga, whenever she intervened it meant that she had to bear the brunt of arguments and accusations from her angry family members. She described her sketch (Figure 9) as showing the combined sadness and frustration she felt as she attempted to make herself and family members healthier. Finally, Stefann's sketch (Figure 10) echoes Dennis' sketch. She, too, acknowledged the need to help the family member monitor the glucose levels, mainly using the glucometer, whether they wanted to or not.

These reciprocated stories demonstrate a domino-like effect; one story begets another relevant or supporting story which further reveals the illness experience. Audience members found the stories in the plays to be coherent, fitting well into their worldviews, and probable enough that they could relate the topics to themselves or a family member and they shared similar stories. The reciprocated narratives revealed how family members directly intervened: by buying and requesting sandwiches for a grandmother and a father when it was clear their blood

glucose level was low; by moving food that was high in glucose farther away from family members because it was a temptation while dining in a restaurant; and by directly confronting the relative about purchasing too much candy. These stories not only reveal the challenges of getting patients to comply with a healthy regimen, they also reveal that there are various forms of family support. The responses provide insight into how an illness experience can be narrated, especially when instigated by similar stories.

Discussion

This study contributed to scholarship that explores perspectives of health through a narrative lens (Harter et al., 2005), research on the experience of T2DM in Appalachia (Denham et al., 2007; Manoogian et al., 2010), and studies on the impact of theatre in health promotion and community education (Beach et al. 2014; Pieper et al., 2015). This research was guided by narrative theory to reveal how Appalachian audience members who had experiences with Type 2 Diabetes Mellitus in their families made connections with a theatrical intervention focused on diabetes prevention and management. The responses from audience members revealed that they co-constructed the experience of T2DM by reflecting on lessons learned, evaluating the characters, and engaging in reciprocal storytelling.

Theoretical Implications

This study supports some of the principles of the narrative theory. The responses from the interviewees reinforced the notions that storytelling is relational and participatory (Beck, 2005). A compelling story encompasses a relationship "between teller (or text) and audience, one in which the listener comes to care about the events recounted" (Garro & Mattingly, 2000, p. 11) and attempts to understand them. In this study, the audience formed a relationship with the characters in *The Sugar Plays* by connecting their narratives with their own personal

experiences, thereby highlighting identification (Burke, 1969a). For effective persuasion to occur, one must see herself as being like the other. Storytelling encourages identification because the experience also supports taking the point of view of the character or relating to the character (Moran, Murphy, Frank, & Baezconde-Garbanati, 2013). In fact, individuals with the most robust identification were usually the ones who were most significantly influenced by persuasive communication. The key is having relevant characters and a believable message that will encourage transportation (Moran et al., 2013), that is, having the audience members commit so firmly to the storyline that they experience the events and messages as though they were happening in real life. As Linda explained, at one point during the play, *Sugar Bear*, she had to leave the room, overwhelmed with emotion, because the storyline was so similar to her family life. Also, even though *Lucille* did not include a storyline about being abandoned by children, Inga, started to cry in the interview as she recalled how she connected with the sense of loneliness in that play as she too had to make important health decisions on her own.

Narrative telling is also a participatory and co-constructed process that involves the telling and retelling of stories. As the audience watched the stories unfold on stage, they engaged in a back-and-forth exchange of ideas. The audience is not passive; it actively weighed the fidelity of the messages. Members evaluated the illness story being told to them in the plays and engaged in a joint action of listening and telling by identifying and assessing meaningful content in the story being told. The plays were set in Appalachian Ohio, which helped encourage a sense of familiarity. Consequently, the audience members who were from the area told reciprocating narratives which bore similar struggles, tones, and characters. In fact, the audience became so engaged that they were able to point out who were the main influencers or agents of a story and how their illness narrative could be changed (Burke, 1969b). Narrative co-construction took

place as the teller and "others who experience or encounter that symbolic experience…make sense of it in their own ways, according to their own backgrounds, perspectives, and lived realities" (Beck, Chapman, Simmons, Tenzek, & Ruhl, 2015, p. 13).

Participants also demonstrated that they could gather new information, bring coherence to the actions of the agents in a story, and express empathy toward the characters. As Yamasaki (2017) noted, "we learn from stories of health and illness" (p. 6). But before we learn and retain information, the listeners must accept the content as believable (Babrow et al., 2005). The quotes and sketches demonstrated an acceptance of the fidelity of the espoused values (Fisher, 1984) in the plays. Interviewees learned about an illness experience, the struggles of patients, and treatment options. In this instance, the plays encouraged audiences to self-reflect and accept important medical information. The interviewees learned because the experiences on stage connected with what they were experiencing in real life. Babrow et al. (2005) reminds us that during the narrative process, the listener appraises and evaluates. But these interpretations are done from the perspective of their world. The responses from the participants are narrative evaluations which are the end of a negotiation process. In this process, the narrator first tells the audience how they should interpret the events and the required response; then, the audience collaborates and demonstrates what was understood. The study revealed that interviewees went through this process when they expressed that they reflected on their poor eating habits and the effects those choices had on relatives and their personal health. Participants also recalled ideal ways to test glucose and show more empathy.

Practical Implications

Based on the responses of the participants, this study also presents several practical implications for the work of community educators, medical practitioners, and theatre educators.

Specific to this study, the responses from audience members revealed that the plays can be used as an initial therapeutic step to help families struggling with the strain of T2DM and can encourage dialogue about intergenerational dietary habits. Additionally, the study demonstrated that community educators working in Appalachia must incorporate the family into any educational or health promotion interventions for diabetes.

Community theatre is an opportunity to foster non-threatening dialogue among health practitioners, educators, and family members. Diabetes educators could approach owners or organizers of theatre groups in their community about presenting *the Sugar Plays*. Audiences could watch a play and, after, diabetes educators could moderate conversations about the plays. The responses from participants indicated that the management of T2DM in Appalachian Ohio is hindered by the lack of communication about the disease in the family. Community educators could treat *The Sugar Plays* as an entertaining springboard to help break the ice. Reflecting on the plays and the sociocultural challenges evident in those stories may be a therapeutic exercise for audience members and their families. The plays could spark a conversation about the kind of support needed from both family members and practitioners. Both before and after the plays, audience members can be asked to describe the support individuals with T2DM need. Consequently, the conversations may reveal the frustrations, loneliness, and conflict a patient or family is experiencing in the management of the disease. The review of the plays may also be a subtle and safe means to inform family members of what the patient requires to successfully manage the disease.

Diabetes educators may also initiate conversations about the plays to address the impact of intergenerational narratives that maintain poor eating habits and therefore, diabetes in the family. Denham et al. (2007) emphasized that Appalachia is characterized by intergenerational

stories that normalize T2DM in families. To demonstrate this deep familial influence, educators could regard the plays—particularly *Sugar Bear*—as a model of how one generation's dietary choices impacted the younger generation's health. Showing the impact is better than trying to describe it verbally to people who may not easily understand the influence of intergenerational behaviors. Finally, medical practitioners and diabetes educators may even want to think of incorporating the use of sketches to initiate conversations about T2DM. The sketches added another layer to the interviewees' reflections, revealed honest perceptions of T2DM, and could act as icebreakers if the health practitioner was working with a group.

Health practitioners may also regard the plays as a means through which they can discuss the role of intergenerational buffers. According to Manoogian et al. (2010) these types of family members are critical to breaking the cycle of T2DM in the family. However, they need to be identified and supported. From the responses, the interviewees could easily identify when someone attempted to act as a buffer. They also reciprocated stories of when they or other family members intervened. Denham et al. (2007) noted that the management of T2DM can create a great deal of strain within a family, especially since the successful management of the disease often depends on drastic changes in dietary habits which have been long practiced by the family. An intergenerational buffer risks losing critical family connections just by suggesting dietary changes. Diabetes educators could ask audiences after they have watched the plays to discuss what behaviors an effective buffer needs and how these could be modeled.

Finally, the plays may also be regarded as conduits of information, providing equipment (tools or essential information) for living (Burke, 1969a). Stories tell individuals "what to notice, and how to judge actions and outcomes" (Manoogian et al., 2010, p. 41). In this instance, the audience received the tools or information to judge their own eating habits and the consequences

of poor eating habits. They discovered knowledge that moved several of them to reconsider their attitude toward T2DM and food.

Limitations

While the study provides meaningful insights, it has several limitations. A more representative population would have been beneficial. Participants volunteered for the study and a convenience sampling provided the participants for the study. As a result, only individuals who were available within a certain time frame could participate. Also, the fact that participants self-volunteered to be interviewed meant that only some experiences were shared and others that may have been richer or more detailed were not. Additionally, it is possible that the respondents may not have shared all relevant information. This may have been due to the need for a longer interview session or because they would have felt uncomfortable or feared judgment. Finally, generalizability is not possible because the participants are from one locale in Appalachia; even so, the study cannot be generalized to all of South-east Appalachian Ohio.

Future Research

The Sugar Plays act as a diabetes education tool that could be further explored. Future researchers could conduct a longitudinal study to determine whether audience members were still implementing any of the lessons learned from the plays years after watching them. For instance, researchers could determine whether they were supporting relatives with T2DM and whether they have maintained healthy dietary habits. That study could determine whether audience members had re-storied their diabetes experience. Also, another study could focus on how multiple members of a family responded to the play. Focus group discussions with only members of one family could be conducted after they have watched the plays. The perspective of the family on the dynamics in the play would be meaningful; additionally, it would be valuable to

see how they interacted with each as they talked about an illness that was affecting the family. Another study focusing on the reactions of only family caregivers to the plays could be conducted. Linda's and Inga's reactions to the plays demonstrated that family caregivers experience a great deal of stress. Capturing their experiences would provide valuable insights to diabetes educators, other health practitioners and—ultimately—the family.

Conclusion

Narratives are inherently co-constructive and performative (Harter et al., 2005; Peterson & Langellier, 2006). Also, narratives encourage connections; this study demonstrated how this can be achieved through live performance before audience members. How the audiences reacted to *The Sugar Plays* augurs well for theatre. Audiences articulated what they learned about the medical experience of T2DM; they evaluated the behaviors of characters, and reciprocated with personal stories that were like the ones they were seeing on stage. Audiences can be active in the narrative process. Through a narrative sense-making process, audiences learned more about the experience of T2DM, interpreted the characters' behavior on stage and evaluated them in light of their personal stories. Audience responses demonstrated that plays can be a viable means of addressing challenges associated with T2DM in Appalachia. This study demonstrated that theatre can go beyond entertainment and become an opportunity to engage with compelling narratives.

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