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# Teacher Narratives and Student Engagement Testing Narrative Engagement Theory in Drug Prevention Education

## **Comments**

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Running head: **TEACHER NARRATIVES IN DRUG PREVENTION**

**Teacher Narratives and Student Engagement: Testing Narrative Engagement Theory in Drug Prevention Education**

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**Abstract**

Testing narrative engagement theory, this study examines student engagement and teachers' spontaneous narratives told in a narrative-based drug prevention curriculum. The study describes the extent to which teachers share their own narratives in a narrative-based curriculum, identifies dominant narrative elements, forms and functions, and assesses the relationships among teacher narratives, overall lesson narrative quality, and student engagement. One hundred videotaped lessons of the *keepin' it REAL* drug prevention curriculum were coded and the results supported the claim that increased narrative quality of a prevention lesson would be associated with increased student engagement. The quality of narrativity, however, varied widely. Implications of these results for narrative-based prevention interventions and narrative pedagogy are discussed.

**Keywords**

narrative, health campaign, substance use prevention, prevention science, teaching, pedagogy

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A fundamental tenet of public health is that it is always preferable to prevent a problem from occurring than it is to address the effects of a condition once it has developed (Institute of Medicine, 2014). One promising approach for designing prevention interventions and health promotion campaigns is to ground prevention messaging in the stories of the target population (Miller-Day & Hecht, 2013). While we all have our own stories that organize our experiences and guide our health behaviors, these stories are influenced by larger cultural narratives about health (Mattingly & Garro, 2000). We shape our own story by choosing among available cultural stories, applying them to our experiences, “sometimes getting stuck in a particularly strong narrative, often operating within contradictory implied narratives, and sometimes seeking stories that transgress the culturally condoned ones” (Richardson, 1997, p. 181). Not all of our health stories are necessarily healthy.

Miller-Day and Hecht (2013) describe narrative engagement theory<sup>i</sup> that explains how youth narratives are effective in reducing adolescent substance use. The underlying assumption in this theory is that adolescents make substance use decisions based on the narrative story lines available to them (socially, locally, and personally) and that they embrace stories that cohere and resonate with their experiences (Hecht & Miller-Day, 2007, 2009). Thus, the stories kids tell about drugs reveal how they see drugs and drug use, the choices they make, and what can be done to influence them to make healthy choices (Miller-Day & Hecht, 2013). This line of research has revealed that exposure to health messages created from youth narratives heightens identification with the program content, overcomes resistance to the health message, and enhances the personal relevance of these messages to the message recipients (Miller, Alberts, Hecht, Trost, & Krizek, 2000). A narrative approach to health messages and substance use prevention resulted in the *keepin' it REAL* drug prevention curriculum, implemented in middle-

school classrooms in 50 countries around the world and reaching more than 1 million youth (Hecht, Colby & Miller-Day, 2010).

The curriculum promotes the sharing of stories from teachers as well as students. These classroom-based discussions and the implementation of the entire curriculum rely on classroom teachers to promote the sharing of, “personal and locally-based stories of drugs and drug use” (Miller-Day & Hecht, 2013, p. 9) that heighten youth’s engagement. Yet, it is unclear what stories teachers elect to share in the classroom. These teachers have their own unique experiences; so, what kinds of stories do teachers share when teaching a prevention program?

While prevention researchers carefully craft the stories included in any narrative-based intervention, they have little control over the local narratives that emerge during implementation of the program. Some research suggests that emergent local narratives should enhance the curriculum by reflecting local culture (Hecht & Krieger, 2006); however, this may not be the case with teacher narratives. While narrative-based interventions tend not to promote fear or judgment, teachers may feel a moral responsibility to narrate stories including fear appeals and judgment, counteracting the core messages of the intervention. In a recent study by Krieger et al. (2013), youth who were asked to create substance use prevention posters tended to rely heavily on fear appeal messages, even when instructed not to do so. No systematic research has been conducted to examine the narratives shared by classroom implementers when administering a narrative-based prevention curriculum. This seems particularly important for understanding how implementation under real world conditions may impact program effectiveness. Therefore, this study first reviews research on narrative health messages and narrative pedagogy and then investigates the spontaneously emerging narratives that teachers share when implementing a narrative-based substance use prevention curriculum in 7<sup>th</sup> grade classrooms in the United States.

## **Background**

### *Narrative Health Messages*

Narratives are defined as “talk organized around significant or consequential experiences, with characters undertaking some action, within a context, with implicit or explicit beginning and end points, and significance for the narrator or her or his audience” (Miller-Day & Hecht, 2013). This definition highlights “the active role of characters, intentionality, and the contextual nature of narrative” (p. 2). Narratives may be fiction or nonfiction, first or third person, and organize events in some way to create an identifiable structure, containing implicit or explicit messages about the topic being addressed (Kreuter et al., 2007).

Indeed, storytelling is one of the most powerful delivery tools for health information (Hopfer, 2011). A story that is told with enough vivid and sensory detail has the power to engage the listener, enhance identification with the characters, model pro-health behaviors, and even transport the listener into that experience (Lee, Hecht, Miller-Day & Elek, 2011). Narrative engagement theory argues that narrative health messages can reframe an audience’s preexisting narrative knowledge by addressing their mental models (Miller-Day & Hecht, 2013); that is, cognitive representations of the world, their place in that world, and presenting alternatives that shape cognition and decision making (Johnson-Laird, 2006). Stories help us to understand the daily context in which health decisions take place and, when added to more objective “factual” information, are more effective than presenting facts alone (Hopfer, 2011). Insights into the human experience of healthy behaviors—the nature of choice, pleasure, and guilt—is central to health interventions, and information-only approaches struggle to produce these insights. Stories facilitate information processing, provide surrogate social connections, and address emotional and existential issues (Kreuter et al., 2007).

Therefore, the stories communicated in a prevention interventions are consequential. Yet, while the planned youth narratives that are a planned part of a curriculum might promote a certain kind of narrative knowledge, the spontaneous narratives that emerge during implementation of a program may be equally powerful based on the narrative pedagogy of the instructor.

### *Narrative Pedagogy*

Employing narrative as a pedagogical tool is relatively new in formal teacher education and certification programs (Diekelmann, 2001). Classified as an “interpretive pedagogy,” narrative pedagogy is an approach to teaching and learning that evolves from the experiences of the teacher based on an understanding of how people make sense of phenomena through stories (Clandinin & Connelly, 2004). As stories are authored and analyzed, practical knowledge is both taught and learned (Nehls, 1995) and the ability to know and connect with students becomes the focus of the learning environment (Brown, Kirkpatrick, Mangum, & Avery, 2008). Freire (1993) argued that the concept of education in which students passively accept deposits of knowledge from a teacher will not work for many learners; rather, reflective and critical thinking is essential for learning and conventional pedagogies may not foster the development of these skills (Kawashima, 2005).

Although the role of reflection in learning and education has gained significant momentum in general education (Alterio & McDrury, 2003), the role of storytelling is most prominent in the areas of English as a second language, literacy, and transformative education (e.g., Cranton 1997). However, it seems likely that many teachers implementing prevention interventions in elementary and middle-school contexts may not have much formal training or knowledge of narrative-based approaches to learning, thus impacting their ability to deliver these

interventions. Given this likelihood and the fact that school-based prevention interventions are generally implemented by classroom teachers with little to no training in narrative pedagogy, the current study seeks to investigate teacher's use of narratives in a narrative-based middle school drug prevention intervention.

Within the context of implementing a prevention curriculum, the current study specifically examines teacher narratives by asking the following questions:

**Research Question 1:** To what extent do teachers share their own narratives in a narrative-based curriculum?

**Research Question 2:** What are the dominant elements of teacher narratives?

**Research Question 3:** What are the forms of teacher narratives?

**Research Question 4:** What are the functions of teacher narratives?

**Research Question 5:** What are the relationships among number of teacher narratives, overall narrative quality of the lesson, and student engagement?

## **Method**

### ***The Prevention Intervention***

Teachers were observed implementing the multicultural, school-based *keepin' it REAL (kiR)* drug prevention curriculum for students 12-14 years old. The 10-lesson curriculum is taught by classroom teachers in 45-minute sessions over 10 weeks and includes four booster sessions delivered in the following school year. The lessons teach students to assess the risks associated with substance abuse, enhance decision-making and resistance strategies, improve anti-drug normative beliefs and attitudes, and reduce substance use (Hecht & Miller-Day, 2007).

*kiR* was chosen for a number of reasons. First, it is narrative-based (Miller-Day & Hecht, 2013). Lessons integrate findings from on narrative interviews as examples, illustrations,

scenarios for role-playing activities, homework activities, and curriculum videos. Prompts are provided for teachers to “share your own story here if applicable.” The *kiR* curriculum has proven effective in reducing substance use in a randomized clinical trial (Hecht, Graham, & Elek, 2006), it is listed as evidence-based intervention on the National Registry of Evidence-based Programs and Practices, and has been adopted by D.A.R.E. America for national and international dissemination resulting in what is believed to be the widest dissemination of any school-based substance use prevention program (Hecht et al., 2010). Given its widespread use in the US as well as around the world, it is particularly important to understand how *kiR* is implemented.

### *Sample*

As part of a larger study on implementation quality, 25 rural schools in Ohio and Pennsylvania were assigned to teach the *kiR* curriculum using a stratified random assignment procedure (see Graham et al., 2014 for more information). Thirty-seven total teachers taught the curriculum total of 78 classrooms (65% were women, with 52.4% under the age of 40). . All teachers received training during a 1-day workshop conducted by project staff during which they received a detailed curriculum manual. Five minutes of the training was devoted to pointing out that the curriculum includes a number of youth narratives reflected in individual, dyadic, small group, and classroom activities and teachers were asked to elicit personal narratives from students whenever possible and share their own narratives if relevant. No specific training was provided on how to elicit student narratives or how to integrate teacher narratives into the curriculum.

### *Video Data*

A total 675 lesson videos were received out of the possible 780, of which 550 videos both audio and video data. For the current study, 100 videos were randomly selected from the 550 for the

current study. Additional details regarding video data and selection procedures for the larger study are reported in Pettigrew et al. (2013).

### *Coding Procedures and Measures*

To address our research questions, the first step in the analysis was to code each lesson for overall student engagement, narrative quality of the lesson, and to identify teacher narratives within each lesson. Next, teacher narratives in each lesson were coded for their narrative elements, forms, and functions.

First, a team of six coders received approximately 12–14 hours of training over 8 weeks (Shin et al. 2014). Training included didactic instruction on the operational definitions for student engagement and overall lesson narrative quality with ongoing coder meetings to clarify and discuss coders' uncertainty of operational definitions, as well as to periodically check coder reliability using videos from previous studies as practice. In order to diminish concerns regarding coding bias, training continued until inter-coder reliability (Krippendorff's alpha, [Hayes & Krippendorff, 2007]) of 0.80 was reached. After establishing reliability, coders independently rated the videos for the current study. To prevent coder drift, intercoder reliabilities were calculated bi-monthly over the coding period with each alpha coefficient greater than .80.

Second, all teacher narratives were identified and the duration of the narrative noted in the video timeline. The qualitative descriptions of the narratives were then coded to identify the key narrative elements. To begin, a-priori narrative elements were identified from the research literature and included: characters, settings, topics, actions, and resolution. Using an iterative qualitative analysis approach (Tracy, 2012), the lead author coded each teacher narrative for these elements. This approach involves immersion in the data, primary cycle coding involving employing a constant comparative method to label and systematize the data (e.g., identifying

kinds of characters, settings, etc.), developing a codebook and reflecting on the codes as they relate to existing literature. Coding was exhaustive, but codes within all categories were not mutually exclusive; that is, all narratives were coded, but a single narrative might have more than one kind of character, setting, or topic. Secondary cycle coding involves organizing codes into conceptual categories or hierarchical order (e.g., school playground and school cafeteria are both included in a larger category of the “school” setting), and moving toward synthesis by creating the most parsimonious set of codes; that is, the simplest explanation accounting for the most data. The forms and functions of the teacher narratives were identified in the same way; however, no a-priori codes were employed and all codes were emergent. All of the quantitative coding measures were entered into SPSS for a descriptive analysis.

### *Measures*

***Student engagement.*** Two items were used to rate student engagement. Coders rated the videos on two, four point agree to disagree scales (1 = strongly disagree, 4 = strongly agree) indicating the degree to which students were: (i) attentive during the lesson and (ii) students participated during the lesson.

***Lesson narrative quality.*** Coders were instructed to “Please evaluate the quality of the teacher’s use of narrative conventions in teaching the lesson. Note the overall opportunity and frequency of storytelling by the teacher and his or her elicitation of student narratives.” One item was used to assess lesson narrative quality of the lesson. Coders rated the videos on one five point scale (1= poor, 5= excellent) indicating the general degree of excellence in the use of narrative in teaching the entire lesson. Table 1 illustrates the definitions for each rating code.

[Insert Table 1 about here]

***Teacher narratives.*** Coders indicated the number of teacher narratives in the lesson entering the total number of lesson narratives in SPSS (quantitative data management and analysis software), note the start time and end time of each narrative, and qualitatively transcribe the actual narratives into NVivo (qualitative data management and analysis software). For the purposes of this study, narrative was conceptually defined as “talk organized around significant or consequential experiences, with characters undertaking some action, within a context, with implicit or explicit beginning and end points, and significance for the narrator or her or his audience” and operationally defined as including the following characteristics for coding: (a) spontaneous, (b) can be concise or elaborate, (c) must include at a minimum characters and an action, (d) can be past or future-oriented, (e) can be factual or fictional.

***Narrative elements, forms, and functions.*** Based on the final qualitative codebook, we first identified cases of narrative elements, forms, and functions and then coded frequencies of each variable. The first variable we coded for was *narrative elements* including characters (self, hypothetical generalized student, hypothetical generalized [non-student] other, a specific student, teacher’s parent, teacher’s child, teacher’s spouse, other family member, friend, work colleague, media personality, stranger, or other adult), settings (public place other than school, school, home, no setting), topics (alcohol, tobacco, marijuana, other drug, peer pressure, social interaction other than peer pressure, leisure time, stress, taking responsibility, other risky behavior, and no clear topic), actions (positive verbal, negative verbal, negative nonverbal, positive nonverbal, enacting refuse/explain/avoid/leave, no clear action), and resolution (positive resolution, negative resolution, neither negative nor positive, no resolution). We also coded for *narrative forms* (non-fiction narratives about self, fictional narratives about self, non-fiction

narratives about others, and fictional narratives about others) and *narrative functions* (provide an example/exemplify, testify, heighten identification, induce fear/fear appeal, or gain attention).

## Results

To answer the question regarding the degree to which teachers share their own narratives during *kiR* lessons, individual narratives were counted per lesson. There were 263 spontaneous teacher narratives across the 100 lessons ranging from one to eight narratives, with a modal narrative count of 1 per lesson. The narrative accounts lasted between 0.10 seconds and 6:09, with the mean narrative length of 1:19 and the modal length between 0:30 and 0.40 seconds.

[Insert Table 2 about here]

## *Narrative Elements*

Table 1 reports the character, setting, topic, action, and resolution elements of the 263 narratives. The most common characters in teacher narratives were the teacher him or herself (36%,  $n = 95$ ), followed by a hypothetical “you” [the students] (33%,  $n = 87$ ) and a friend of the teacher (28%,  $n = 74$ ). The total number of elements exceeds 263 due to most narratives including more than one character. For example, the characters are underlined in the following story shared by a teacher:

*When I was graduating high school I wasn't yet at legal drinking age and my stepmother offered me, um, like a drink or whatever...that was like a weird situation... (OH-R3\_2, Lesson 4).<sup>ii</sup>*

The most common settings were public settings other than school (e.g., at a party at someone else's home) (25%,  $n = 66$ ), followed by school (11%,  $n = 28$ ), and then home (10%,  $n = 27$ ). Many narratives did not include a clearly defined setting.

The most common topics the narratives addressed were social interactions (e.g., “a cute boy was flirting with her and...”) (34%,  $n = 90$ ) and peer pressure (e.g., “he was trying to get me

to do it and I didn't want to") (28%, n = 73) and since these were substance use prevention lessons it is not surprising that the majority of the other topics revolved around alcohol, tobacco or marijuana (27%, n = 72). Yet, some teachers shared stories that were not related to the curriculum at all (7%, n = 18) (e.g., a story of a recent hunting expedition). The following is an example of a teacher narrative that was coded at a number of topics including *alcohol*, *social interaction*, and *peer pressure*:

*I will tell you a situation of mine. Because I'm human and I like to share my experiences with you. During my first week of school, I'm at college, right? Cool thing to do is go up to these frat parties. That's where all the kids go, that's what everyone does, and if you don't go there then you're basically in the dorm rooms by yourself. So, I went to this frat party. In the back of my mind was my father telling me, "If you ever drink (alcohol) and you get caught in college, your friends better pay the fines and help you get out of jail because I won't." So, that's in like the back of my mind. But then, all around me were all these cute guys and all my friends they're all having a good time and they're drinking (alcohol; social interaction). How easy was it gonna be to say no? Hard right? Did I say no to drinking that night? What do you think? Well, I didn't. At first I was like, "Haaaa what am I gonna do?" So, I had it in my hand and then it was like right there and my friend is like, "You have to drink some! It's spilling all over the place (peer pressure)!" So, I'm like, okay, if you want this alcohol, you drink the alcohol. What I did is I ended up walking around with an empty cup so then nobody asked me if I wanted any alcohol or not. Did I have a good time? I had a good time. All*

*the rest of the people are throwing up and I was like, “Hey, glad I didn’t drink!”(KGR14\_2, lesson 4)*

Actions included enacting the core resistance strategies discussed in the lessons (refuse, explain, avoid, and leave) such as the alcohol example above when the teacher avoided drinking alcohol by “walking around with an empty cup so then nobody asked me if I wanted any alcohol or not” (42%, n = 110). Not all actions were related to the topic of substance use and a variety of other actions emerged in the narratives such as positive and negative nonverbal actions (e.g., when a friend asked the teacher to take a dangerous risk “[she] just stared at her”) (18%, n = 48), negative verbal actions (e.g., when another teacher’s high school friend was experimenting with smoking marijuana, she said “I screamed at her that she was not my friend”) (8%, n = 22), and other positive verbal actions (e.g., when a child of the teacher did something responsible, “I told her that I appreciated it”) (5%, n = 13).

Thirty-six percent of the narratives included no resolution at all. All narratives have an ending, but they don't always have resolution. Resolution occurs when there is ending to the action of the story and a sense of closure. In some open-ended narratives, the listener is required to “fill in the blanks” about what happened or why it happened. For those narratives that did include resolutions, they were typically positive (35%, n = 91), followed by negative resolutions (26%, n = 69) or neither clearly positive nor negative (5%, n = 13). The following is an example of a narrative that included both an action (underlined) and a resolution (italics):

So, this Friday night you guys are out and the other guys wanted to do some of this [teacher pretends to put chewing tobacco in his mouth]. You know what this is? When they put tobacco in their mouth? What do you do when this happens?  
*You say NO because you don’t want to get mouth sores.* (KG-R6\_3, Lesson 5)

### *Narrative Forms*

Categorization of narrative forms revealed that most stories were either about oneself or about others (self/other) and were either based on real-life incidents (non-fiction) or hypothetical or made up incidents (fiction). Forty-two percent (n = 111) of the narratives were fictional accounts of others, 34% (n = 89) were non-fictional accounts about oneself, 13% (n = 35) were non-fictional accounts of others, and 11% (n = 28) were fictional accounts about oneself. While nearly 1/3 of the narratives were what we would typically consider a “personal narrative” (nonfiction about self) such as the teacher’s story of deciding whether to drink alcohol at the college party, the majority were fictional accounts involving others. The following example is an illustration of a fictional account about others:

*Okay, Alex, you are a big drug dealer in [name of town]—sorry I had to pick on you. His gang's called the Boot gang, because you're wearing a big boot. They hang out at Reservoir Park. Now, if you know he's going to be at Reservoir Park and that's the way you walk home every day, how could you avoid running into him and having to deal with him asking if you want drugs?" (KG-R14, Lesson 7).*

### *Narrative Functions*

Narrative function was conceptualized as the purpose of the narrative within the context of the lesson. Five categories of functions emerged in the interpretive examination of the data. The most common function was to heighten identification with a lesson concept (30%, n = 79). Identification with a lesson was conceptually defined as a narrative intended, “to reduce psychological distance between the lesson concept and the listener’s experience, putting the listener in a scenario where he or she could experience the concept.” The narrative excerpted

above about the “boot gang” is also an example of a narrative told to heighten identification with the concept “avoid,” which as a drug resistance strategy.

The second most common function was to provide testimony (30%, n = 78), defined as “to bear witness to an individual’s experience; disclose personal experience of the topic.” These narratives were typically used to demonstrate the teacher’s experience or credibility related to the curriculum content (e.g., substance use offers). The next most common narrative function was to exemplify a concept or idea (25%, n = 64), defined as “to provide an example or illustration to facilitate comprehension.” Some narratives served as fear appeals (12%, n = 32); that is, “told to induce fear in the listener.” Finally, some narratives were told to heighten attention (4%, n = 10), defined as, “to surprise the listener or spark his or her attention.” This story function was typically used when students seemed distracted or unruly. The following is an excerpt from a particularly well- developed narrative that functioned as a fear appeal (underlined):

*[Susie] wanted to hang out with the popular kids, so she decided to take some alcohol out of her dad's cabinet. On the way to school she decided she was going to drink and tell her friends about it...[at school] Susie passes out. They end up having to rush her to the emergency room at which point in time they look in her book bag and find out that half of the bottle of alcohol was drunk, so she drank over half the bottle...and on top of it, they found all of these pills - prescription pills - in her bag. So, they end up rushing her to the hospital. Once she's at the hospital, they end up pumping her stomach - which means they stick a tube down you and they pump all the contents of your stomach out so that you don't die - and they found 21 different pills that had not be ingested. That had not be like absorbed or whatever. So now, Susie wanting to be cool, the only person by her*

*bedside is her mom and dad. None of her friends that she is trying to impress are there. None of the cool kids are there. Her mom and dad are there trying to hopefully pray and think hard that she is going to survive. Now, I haven't heard anything other than the fact that now she actually had to be taken out of school and put into like a placement until she can get better. (KG-R14, Lesson 2)*

### ***Narrative Quality and Student Engagement***

Since the narrative engagement theory posits that narratives serve to make the complex comprehensible and heighten audience engagement, we examined the relationships among number of narratives, overall lesson narrative quality of the lesson, and student engagement. The mean score for overall lesson narrative quality was 2.52 ( $SD = 1.31$ ) and student engagement was 3.43 ( $SD = .53$ ). Computing a one-way Pearson correlation coefficient among these variables finding that overall narrative quality of the lesson (the general promotion of narrativity within the lesson) was significantly related to student engagement ( $r = .20, p < .01$ ), but not the total number of teacher narratives (*ns*, [ $r = .14, p > .05$ ]). We considered that perhaps the number of teacher narratives would not be as consequential as the function of the narratives, so we computed a post-hoc analysis to explore the relationships among narrative functions and student engagement. The results of this analysis indicated that fear appeal stories were the only narrative functions to be significantly (negatively) related to student engagement ( $r = -.20, p < .01$ ).

### **Discussion**

This study was designed to investigate teachers' use of narratives in a narrative-based middle school drug prevention intervention. The first research questions asked if teachers incorporate

their own spontaneous narratives when teaching the lessons and, if so, what were the elements of those narratives. Additionally, the second question tested the claim of narrative engagement theory that increased narrative quality in a lesson will increase student engagement.

### *The Stories They Tell*

Teachers did share narratives when implementing the *kiR* drug prevention curriculum. Most teachers only told one narrative per 45-minute lesson and they were relatively brief and not very complex (a few characters undertaking some action, many without a clear setting or resolution). The most frequently occurring stories functioned to heighten engagement with a lesson concept, were brief and illustrative, sometimes fictional/hypothetical, but regularly putting the teacher in the center of the action; a first-person anecdote frequently set outside of school and involving some social interaction and sometimes involving peer pressure. Teacher narratives often asked students to “imagine you are...” and then placed students into a scene where they would need to imagine characters and actions. This approach was particularly common when covering concepts such as alcohol or other drug offers and refusal strategies such as refuse, explain, avoid, or leave.

Not only were there few stories per lesson, but the stories were generally not well developed and missing clearly defined characters or settings. This, perhaps, could have impeded the youth audience members from fully identifying with the narratives. The majority of the narratives were on-topic with the curriculum, yet 16% of the coded narratives functioned to induce fear or just catch the students’ attention and did not serve to exemplify a concept, heighten identification with a concept, or provide personal experience with the lesson content. Further research should explore the nature of teacher narratives that serve to induce fear or are told to titillate and capture kids’ attention as their primary function, such as the overdose story

described earlier. These narratives may be less effective and, as our findings indicate, narratives functioning as fear appeals may have a boomerang effect and lessen student engagement.

### *Student Engagement*

This study discovered that overall narrative quality of the lesson was significantly related to student engagement; thus, finding support for narrative engagement theory. However, the strength of this relationship was not particularly strong. Additionally, although it approached significance, the sheer number of teacher narratives told during the lesson was not significantly related to student engagement. The overall narrative quality of the lesson was operationally defined as the opportunity and frequency of storytelling by the teacher and his or her elicitation of student narratives. Therefore, it may be teachers' elicitation of students' narratives that keeps students engaged and interested in the lesson. Some teachers were better at this than others and there was wide variability across teachers in the overall narrative quality of the lessons. It may be that some teachers shared counter narratives; that is, stories that contradicted the messages of the lessons. For example, although the story told above about college drinking indicates that the character still had fun even though she did not drink, the story itself carries a message that frat parties and drinking to excess is normative and that the character was the "odd person out." This is counter to the message of the curriculum that substance use is not normative. Additionally, the story of the student overdose was well-developed but was not related to the lesson for the day, was counter to the curriculum philosophy of being non-judgmental and not inducing fear, and addressed substances other than the target substances of alcohol, tobacco, and marijuana. In this study, fear appeals such as these were negatively related to student engagement.

At the same time, youth were generally interested in the lessons with little variability in engagement scores. It could be that quality of the lessons in this particular curriculum are

engaging in and of themselves due to their emphasis on student narratives, perhaps future research could examine narrativity across different curricula. Additionally, we believe further examination of lessons at each end of the spectrum, both low and high in narrativity, might provide further insight into the role of narrative in student engagement. This is beyond the scope of the present study, but is being pursued by the authors in a separate study. Additionally, considering the nature of the data (i.e., lessons nested in teachers, teachers nested in schools), future research can further investigate the relationship among quality of narratives, student engagement, and substance use behavioral outcomes by employing a hierarchical linear modeling (HML) analysis method.

### *Strengths and Limitations*

This study benefitted from a number of important strengths. Key among them is the careful, in-depth coding of narrative elements (characters, settings, etc.), forms, and functions to fully understand the narratives spontaneously told during lessons. Another is the focus on teachers implementing prevention education in rural schools. Rural youth are considered a vulnerable population because of their high risk for substance use (Pettigrew, Miller-Day, Krieger, & Hecht, 2012). For this reason, understanding the stories teachers tell in these contexts is vital to informing interventions to help reduce substance-related problems in vulnerable, rural locales. As with all research, there are some limitations that should be noted. Due to the decision to sample underserved, rural schools, there was very little ethnic diversity among the teachers and students. Second, the time and labor intensive coding methods used in this investigation necessitated sampling fewer lessons. Future research could take a different approach to data analysis by focusing more on overall narrative quality instead of the more detailed narrative analysis, speeding up the procedures, and allowing for a larger sample.

### ***Practical Implications***

All teachers who taught the *kiR* curriculum were informed about the narrative philosophy behind the curriculum and were encouraged to tell stories and elicit student stories. They did not, however, receive any specific training on strategies for how to competently integrate their own personal narratives into the lessons. Given the promising direction in the relationship of overall narrative quality in the lesson and student engagement but the low quality of the narratives produced this way, we propose that teachers who are being called upon to deliver these kinds of curricula be provided with explicit training in narrative pedagogy. We encourage the trainers to draw on the concept of communication competence to inform this training. Many teachers are not skilled in telling narratives that effectively and appropriately serve the purpose of the lesson. For example, a teacher who incorporates a detailed story about a recent hunting expedition into a substance use prevention lesson would likely increase student interest, but not effectively communicate the main idea of the lesson. Likewise, a 30 second personal testimony about a teacher's experiences being offered illicit substances may not be fully developed enough to provide students the opportunity to cognitively link the story to the lesson concept. This is not to criticize teachers; they typically do not receive training in narrative pedagogy in their formal education, nor do they receive this training during the *kiR* curriculum training. For this reason, it seems prudent for prevention experts to evaluate the potential benefits of increased implementer training in narrative pedagogy.

### **Conclusions**

Stories, or narratives, are at the heart of human experience. Storytelling in general is something most people do quite often and naturally. However, the ability to tell stories to achieve a specific

outcome is a learned skill. Narrative approaches to prevention are known to be quite effective; however, this research demonstrates the importance of expanding theory and research to connect narrative quality with educational or social influence outcomes. Without training, teacher stories are infrequent and lack key components associated with narrative effectiveness (e.g., clearly defined setting). These results indicate the need for more theory and research on how teachers can be trained to construct more effective messages and how message construction links to specific student outcomes.

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No conflicting interests.

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<sup>i</sup> While Miller-Day & Hecht (2013) discuss this as a narrative engagement framework, this is more correctly a theory (including assumptions and propositions) and is currently being referenced as a theory.

<sup>ii</sup> The citations for direct excerpt include the participant code and the lesson number.

TEACHER NARRATIVES IN DRUG PREVENTION

Table 1  
*Rating Scale for Lesson Narrative Quality*

Rating	Definition
5 = EXCELLENT	Excellence is all of the following areas: The instructor encouraged storytelling by the students, students frequently shared personal experience, the teacher cultivated a climate of interest and respect for student stories, the teacher provided examples through story form, and offered personal accounts if necessary and appropriate.
4 = ABOVE AVERAGE	Less than excellent in 1-2 of the following areas: The instructor encouraged storytelling by the students, students frequently shared personal experience, cultivated a climate of interest and respect for student stories, provided examples through story form, and offered personal accounts if necessary and appropriate.
3 = AVERAGE	The instructor might have asked the students to share narratives, but did not really encourage them or give opportunities, did not cultivate a climate of interest or respect for students' personal experience, did not provide examples of a narrative, or did not share appropriate personal accounts.
4 = BELOW AVERAGE	Inadequate emphasis on narrative. Provided little opportunity for students to share stories, cut student stories off, did not use stories as examples, and did not offer personal accounts.
1 = POOR	Did not meet minimum standards for adequacy in any area

TEACHER NARRATIVES IN DRUG PREVENTION

Table 2  
*Frequencies and Percentages of Narrative Elements, Forms, and Functions*

<u>Narrative Elements</u>	<u>Frequency</u>	<u>%</u>
<i>Character:</i>		
The teacher him/herself	95	36%
Hypothetical, generalized "You"	87	33%
A friend of the teacher	74	28%
Hypothetical "student"	43	16%
A parent	40	15%
Other generalized student at the school	38	14%
A specific student	25	10%
Child of the teacher	11	4%
Other family member of the teacher	10	4%
Partner/Spouse of the teacher	8	3%
Other adult	7	3%
Media personality	7	3%
Stranger	1	<1%
<i>Setting:</i>		
Public setting other than school	66	25%
School	28	11%
Home	27	10%
<i>Topic:</i>		
Social interaction (other than Peer Pressure)	90	34%
Peer Pressure	73	28%
Risky behaviors (other than substance use)	45	17%
Alcohol	36	14%
Tobacco	23	9%
Miscellaneous	18	7%
Marijuana	13	5%
Stress	11	4%
Leisure time	11	4%
Taking responsibility	9	3%
<i>Action:</i>		
Enacting refuse, explain, avoid, or leave	110	42%
Negative or positive nonverbal action	48	18%
Negative or positive verbal action	35	13%
<i>Resolution:</i>		
Positive resolution	91	35%
Negative resolution	69	26%
Neither positive nor negative	13	5%
<u>Narrative Form</u>		
Other/Fiction	111	42%
Self/Nonfiction	89	34%
Other/Nonfiction	35	13%

TEACHER NARRATIVES IN DRUG PREVENTION

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Self/Fiction	28		11%
<u>Narrative Function</u>			
Heighten identification with a concept		79	30%
Testify	78		30%
Exemplify	64		25%
Fear appeal	32		12%
Gain attention	10		4%