

MEANING OF PICTURE-BASED HEALTH EDUCATION IN DIABETES WITH LOW HEALTH LITERACY POPULATION

JULIE ZUNIGA¹, PHD, RN & JUNGMIN PARK², PHD, RN

Assistant Professor, School of Nursing, The University of Texas at Austin,¹ California State University, Chico

Diabetes

- 29.1 million people (9.3%) have diabetes in US
- 7th leading cause of death in US
- 86 million prediabetes
- 1.7 million new cases each year (people > 20 years)
- 245 billion in direct and indirect costs

Diabetes disparities- Health Literacy

- Health Literacy is the ability to read, comprehend, and act on medical instructions.
- Only 12% of people have proficient health literacy in the United States.
- Over a third-77million people-have difficulty with common health tasks (ex: following directions on prescription drug label (NAAL, 2003))

Diabetes disparities- Health Literacy (cont)

HL level	HL examples	Percentage
Proficient	Using a table, calculate an employee's share of health insurance costs for a year.	12%
Intermediate	Read instructions on a prescription label, and determine what time a person can take the medication.	53%
Basic	Read a pamphlet, and give two reasons a person with no symptoms should be tested for a disease.	21%
Below Basic	Read a set of short instructions, and identify what is permissible to drink before a medical test.	14%

Diabetes and Health Literacy

- Health Literacy is positively correlated with DM control, higher rates of retinopathy and other complications.
- Diabetes Self-management has a relationship with the pt's level of health literacy.
- Healthcare providers need to educate people using appropriate tools in relation to their health literacy level.

Purpose

- To explore the meaning of pictures-based health education regarding self-management of T2DM by people who have low health literacy using a theoretical framework, the Health Belief Model (HBM).

Health Belief Model



Methods

- Design: Qualitative explorative descriptive design.
- Post-positivist theoretical perspective along with her modification of the HBM.
- Measuring HL status: Short Test of Functional Health Literacy in Adults (S-TOFHLA)
- Open-ended interview, filed notes, audio recording.

Open-ended questions

1. What has been your experience with diabetes?
2. What does it mean to live with diabetes?
3. What do you think about this picture?
4. What is this picture telling you?
5. Do you think this picture help you manage your diabetes?
6. What do you think about your diabetes?

Example



Step five

- Push the needle through the center of the rubber top of the insulin bottle.

Results

- N=12
- Mean of S-TOFHLA=14 (inadequate)
- Korean Americans – all interviewed in English
- Recruited from a Korean Church

Participants voice of diabetes self-management health educations using the HBM

Category	Participants voice
Perceived susceptibility	<ol style="list-style-type: none">1. Worry about diabetes complications.2. Have diabetes family history.
Perceived severity	<ol style="list-style-type: none">1. Known severity of diabetes complications.2. Known they need to diabetes knowledge.
Perceived benefits of Pictography	<ol style="list-style-type: none">1. Pictography diabetes education materials helped to diabetes self-management.
Perceived barriers	<ol style="list-style-type: none">1. Limited health literacy.2. Deficiency of diabetes health education classes for low health literacy people.3. Hard to avoid unhealthy diet.
Cues to action	<ol style="list-style-type: none">1. Try to get diabetes self-management care information.2. Monitoring blood glucose level.3. Try to do healthy diet.

Perceived Susceptibility

The most problem of the diabetes care in these days, I am too old so, I am getting tired when blood sugar is low...Diabetes is my part of my life but, I am still worried about complications.”

Perceived Severity

“It was very hard time when I diagnosed diabetes. I did not know well about diabetes and when I heard complication of diabetes, it was really scared to me...When I saw leg amputation picture, oh my God. I think, I am almost killed”,

Benefit of Pictography

- “This picture makes me really comfortable”
- “I just can see pictures and figure out what picture look like”
- “Big picture, not in small text is good to understand”

Perceived Barriers

- “I am not good at English so, sometimes, I cannot understand the meaning of diabetes management papers even though I lived in U.S. during the 10 years but, it is hard to understand medical terms.”

Cues to Action

- There was a lack of cues to action
- All the participants mentioned that there is no guidelines to take care about T2DM and it is hard to find T2DM care information.

Conclusion

- The pictography health education materials for T2DM self-management proved useful.
- Health care providers do provide cues to action, but participants were not able to understand those cues
- Low literacy DM education is available but is either not used or is not seen as a cue to action.

Acknowledgement

- This research was funded by the Sigma Theta Tau, Epsilon Chapter in 2016-2017 ,at the University of Texas at Austin School of Nursing.

Thank You