

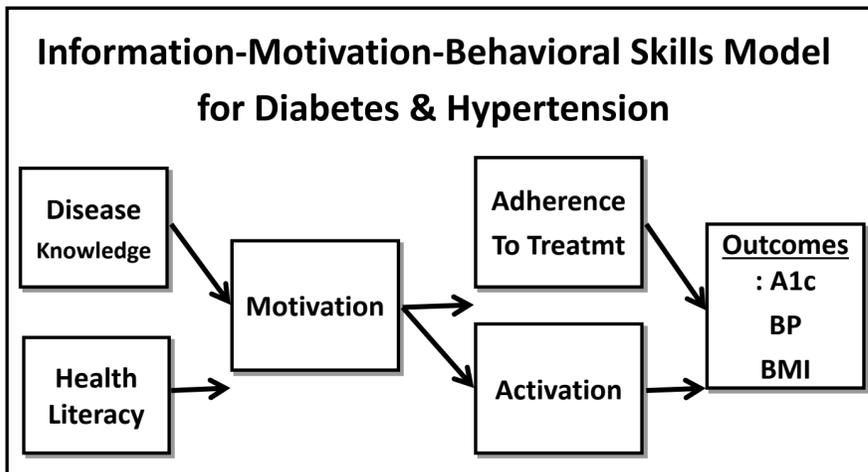
Unlocking Better Health Outcomes: Disease Knowledge and Motivation

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Introduction

Patients with one or more poorly controlled chronic diseases are often perceived by physicians as difficult patients. This is especially true in the current healthcare environment where health outcomes and metrics are constantly monitored and used to gauge a physician's success managing a patient population.

Studies have examined the relationship between health literacy, disease knowledge, motivation, and patient activation and their individual effects on patient outcomes (Greene 2011; Zhang 2014; Eckman 2012; Lichtman 2004). **No study to date** has taken into account how all these factors collectively affect measurable patient outcomes. In this study we examine the correlations between patients' disease knowledge, their readiness to self-manage their disease, their adherence and activation, and their disease outcomes.



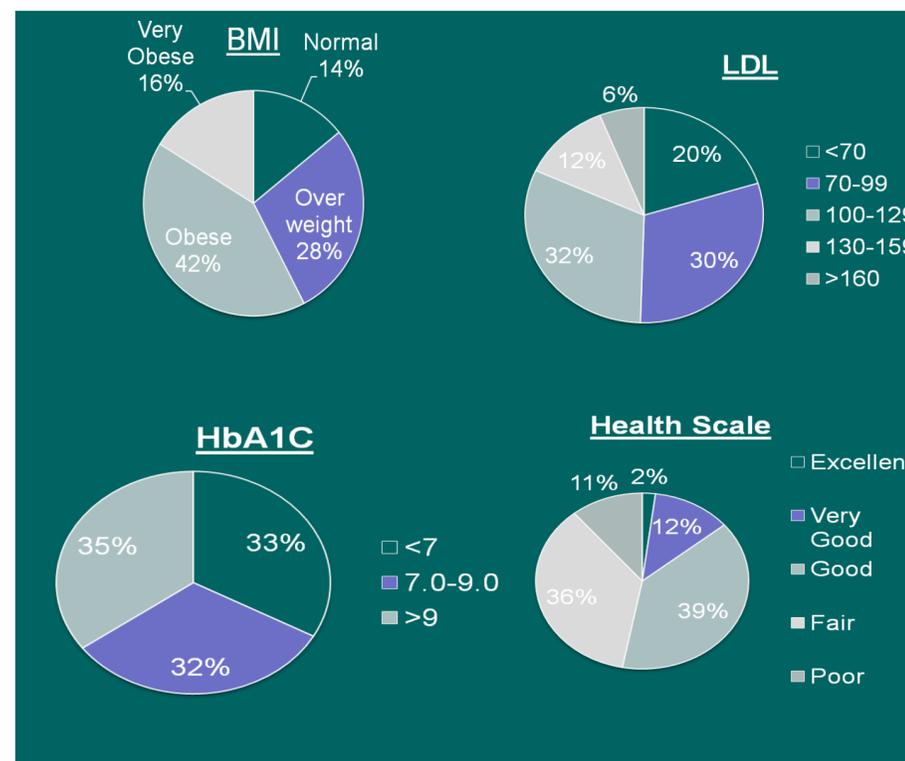
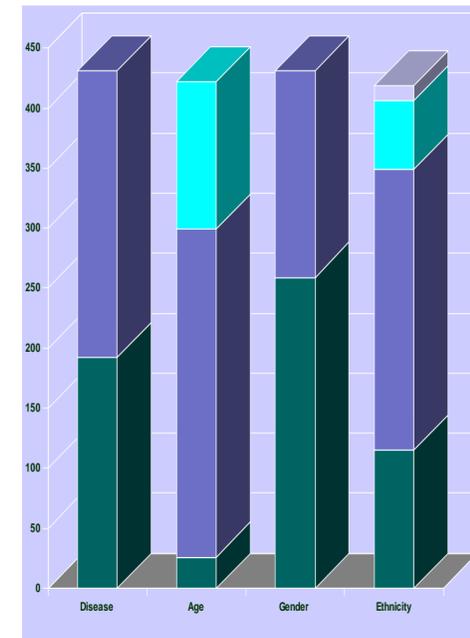
Methods

This is a cross-sectional design study performed at 8 family medicine residency programs in Texas. The sample size includes 402 adult patients with diabetes or hypertension. During a routine visit, patients were surveyed regarding knowledge of their diagnosis, health literacy, motivation, medication adherence, and patient activation.

The outcome measures were drawn from medical records: diastolic and systolic blood pressure, most recent A1c, and body mass index. Multilevel linear and logistic regression analysis determined the relationship between predictor variables and disease outcomes.

Results

OUTCOME VARIABLES	BMI All Ss	A1c N=189	Normal BP N=125
PREDICTORS	Beta (p)	Beta (p)	OR (p)
Age	-.255 (.000)	-.175 (.009)	Ns
Education	ns	ns	1.322 (.021)
Female	+.113 (.035)	ns	Ns
White	ns	-.171 (.010)	0.303 (.020)
Income	ns	ns	Ns
Literacy	ns	+.111 (.098)	Ns
Knowledge	-.125 (.020)	ns	Ns
Importance	+.114 (.034)	ns	0.463 (.066)
Activation	ns	ns	Ns
# HTN meds	+.191 (.001)	ns	Ns
Adherence	ns	ns	ns
Insulin use		+.390 (.000)	
R ²	.099	.203	.121



Conclusion

Some results of the study are not instinctive. For instance, hypertensive patients with normal blood pressure at the time of their clinic visit tend to rank their disease of lower importance. One explanation is that these individuals may be satisfied with normal blood pressure while taking antihypertensive medications and feel their diagnosis is less of a threat to their overall health, and therefore less important.

Another puzzling finding is patients with a higher BMI tend to be younger, female and rank disease of high importance representing higher motivation for health behavior change. One explanation may be the great emphasis our culture places on weight and weight management. Weight is also a tangible health outcome. Heavier patients tend to "feel worse" than their normal weight counterparts. This may be the ultimate signal change is necessary for some and therefore will rank their health of greater importance and ready for health behavior change.

Based on this study, primary care physicians should investigate patients' barriers to achieving the change they desire. With those who express high motivation we should find how we can support their efforts for change. Our patients who seem to lack motivation should be encouraged with disease education and promotion of their health literacy.

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