Behavioral Medicine REVIEW

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Advocating for Behavior Change With Education

Abstract: *Education is ubiquitous with clinical care. However, not all education supports behavioral change. Education is a broad term that encompasses the process of obtaining general knowledge, personal awareness, and skills training. Although not sufficient, education is a necessary component for behavior change. This article outlines the role of education in behavior change and offers practical suggestions for how clinicians can provide education to their patients to help them change behavior.*

Keywords: behavior change; education; self-efficacy; knowledge; training

Knowledge is not enough to change behavior. If it was, no one would smoke or overeat to the point of becoming obese, and everyone would wear seatbelts and exercise. However, knowledge is important. It is critical to explain to patients *why* behavioral changes need to be made. For example, understanding the health risks associated with smoking is essential in order to make a decision about quitting. In this issue, McDonald and colleagues recommend that clinicians follow the "three Es of injury prevention"—education, engineering, and enforcement.[1] Their recommendation highlights the importance of education, suggesting that through education patients' knowledge can be increased. The recommendation also illustrates how education alone is insufficient to support behavioral change. This point is exemplified by the familiar occurrence of health care providers giving their patients multiple educational handouts to offer additional information about and suggestions for how to improve their health condition. These types of educational "interventions" rarely have the desired impact on patients' actions.[2-4]

It is critical to explain to patients *why* behavioral changes need to be made.

At the core of this issue is how education is being defined and applied in regard to behavioral change. The terms education and knowledge are often thought of interchangeably. However, education is a comprehensive term that can be defined as "the process of receiving or giving systematic instruction" or as "an enlightening experience," whereas knowledge is defined as "facts, information, and skills acquired by a person through experience or education."[5] Knowledge is the desired outcome of education. As the definition suggests, there are multiple types of knowledge: general knowledge or information, knowledge that increases personal awareness, and knowledge that increases skills.

In regard to health behavior change, education to increase general knowledge is rarely needed. For example, most people know that it is important to adhere to medication recommendations. Despite this, some individuals make a determination about the importance of continuing to take the medication. They might feel better and no longer deem it important to keep adhering. Other individuals do not currently possess the skills to adhere to the regimen long term. For example, they may forget to take their medication on a regular basis. For

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these individuals, education is required to increase awareness of why it is important and to provide training on how to do it successfully. Once symptoms subside, general knowledge that they should continue taking their medicine as recommended is insufficient. A higher level of awareness of why adhering to a medicine prescription is personally important for individuals to continue. Those who repeatedly forget to take their medicine may need to be trained on how to develop a system to help them remember to take their medicine. Patients need to both fully understand *why* a change needs to be made and *how* to make that change.

Education to Increase Awareness

For education to increase awareness, it must provide an individual with a better understanding of the personal relevance of the information. Providing general knowledge will not do that. Educating individuals on the definition and consequences of obesity is not likely to lead to behavior change. Behavior change is more likely if education increases individuals' awareness that they suffer from obesity and are personally experiencing consequences of obesity. Tailored education is necessary to increase awareness because tailoring ensures that the information is relevant to the individual. Tailored education is also more likely to include explanation on why the information is pertinent specifically to the individual.

A randomized control trial[6] comparing safety behavior change following injury prevention education provided by either a kiosk or an injury prevention specialist provides a good example. All families completed an injury screener. Families identified to be at risk were then provided tailored education by an injury prevention specialist or given a kiosk printout with targeted recommendations based on the family's areas of risk. Only 1% of families provided education by the kiosk improved their safety behaviors. The injury prevention specialist elicited significantly more improvements in safety behaviors than the kiosk. Although both groups received advice more specific to them than generic recommendations, those who received prevention advice from the professional received dynamic, tailored communication, whereas those in the kiosk group received targeted communication.[7] Clinicians have a greater ability to tailor education to be relevant to patients than a kiosk. Patients also report preferring to hear information from a health care provider rather than read it.[4] Besides the ability to tailor health communication, education delivered by a professional includes additional factors that may be important to behavior change such as credibility and the development of patient rapport. This further complicates the role of education in behavior change by pointing to the importance of how education is delivered.

Education to Develop or Improve Skills

A common assumption inaccurately made in behavior change is that general knowledge and information drive behavior.[8] Examples of this abound in the health behavior change literature. Educational curriculum–based reproductive health programs are rarely effective at decreasing sexually transmitted disease or pregnancy rates among adolescents.[9] Knowledge is also insufficient in facilitating acute stroke treatment. Prompt 911 calls when patients are suffering from a stroke are critical to the delivery and success of acute stroke treatments. Many interventions have focused on increasing the general public's knowledge of stroke warning signs in the hope that people will call 911 earlier if they are able to recognize that someone is having a stroke. However, those with such knowledge are not more likely to call 911 than people without this knowledge.[10,11]

A final example of when general knowledge is insufficient for behavior change includes the consumption of vegetables to improve health. Despite most people reporting awareness that eating vegetables has health benefits, few meet recommendations for vegetable consumption.[12] Educating patients on the nutrient content of vegetables is not likely to increase participants' awareness of why vegetables should be consumed and is unlikely to result in increased intake. In contrast, a lack of skills in vegetable preparation is sometimes cited as a barrier to eating vegetables.[13] For this population, interventions that both reinforce the importance of vegetable consumption and include training on how to clean, chop, and cook vegetables are likely to increase participants' skills and may encourage a higher vegetable consumption.[14]

Education on Why and How a Change Needs to Be Made

Social learning theory includes the construct of self-efficacy as an important component of behavior change.[15] Self-efficacy is a function of the perception that outcomes will result from engaging in a behavior and perceiving one's own ability to successfully execute those behaviors.[16] Education plays a role in both components of self-efficacy. The first step is to increase patients' awareness of why they need to make the change. This often includes explaining how the behavior change will result in a desirable health outcome. For example, almost all interventions aimed at increasing child car seat use include an educational component explaining the importance of this behavior in preventing child injury.[17,18] In some instances, outcomes from the behavior change that are not directly related to an individual's health may be more relevant or immediate to the patient. For example, awareness of fines for violating child car seat laws has been shown to predict the use of car seats.[19]

The second component of self-efficacy comes from patients' perceptions that they are able to make the change. Education incorporating skills training is required for patients to understand how to make a change. Discrepancies

between reported awareness and practice have been documented regarding the importance of child car seats and sitting in the back seat.[20] Awareness that car seat use can decrease a child's risk for injury is important, but knowing how to install the car seat is necessary before parents will have their child ride in a car seat. A review of educational programs on proper usage of child car seats revealed that, overall, such programs resulted in an associated reduction in injuries and/or increased car seat use.[21] Ultimately, both raised awareness and skills are necessary components of education that can be facilitated by health care providers.

How to Deliver Effective Education for Behavior Change

1. *Ask questions and listen*. In order to increase awareness or skills, the health care provider should first assess what the patient knows and what the patient considers the most important issue. Information that increases knowledge but does not increase personal awareness or skills will not be productive in inciting behavioral change.
2. *Do not send patients home with packets of handouts* in hope that some of it will increase a patient's personal awareness. This overwhelming amount of education is likely to go unread by most patients, increasing neither personal awareness nor skills. Instead, health care practitioners should prioritize patients' gaps in knowledge and training most inhibiting behavior change. Handouts should only address the most pressing knowledge and training gaps and should supplement discussion.
3. *Be patient*. Just because a patient knows why and how to make a behavior change does not mean that the change is going to be easy. There are many potential barriers patients face when attempting to make a behavioral change that influences their real or perceived ability to make the change being asked of them. Slowly work through barriers with patients. It is likely that multiple smaller behavior changes will have to be accomplished to help patients overcome barriers before they are able to make the suggested behavioral change for their health.

Conclusion

Despite its importance in behavior change, education is a broad term that is often misinterpreted. Health care providers can be better advocates for patient behavior change by increasing personal awareness of why the change needs to be made and training on how to make the change. Tailored education will be most effective at increasing personal awareness and skills. Health care providers are cautioned against providing education that does not increase a patients' personal awareness or skill level as this will likely not result in desired behavioral change.

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