

## A Risk-Rated Approach to a Worksite Health Promotion Needs Assessment

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### **Article:**

There is a growing concern within worksite health promotion related to low participation rates in health promotion programs targeted for at-risk employees.<sup>1-4</sup> This concern is warranted because the success of these worksite programs, to a large degree, depends on the level of risk reduction and behavior change among at-risk employees.<sup>1</sup> Perhaps one of the main reasons for low participation rates among at-risk groups can be found within the actual program planning phase. The designs of the many traditional worksite health promotion needs assessment surveys fail to adequately assess the needs and interests of at-risk employees.

Needs assessment is recognized as the essential first step for cost-effective health promotion planning<sup>5</sup> and often is conducted in the form of a survey administered to the target population or a representative sample. Herein lies the design flaw. The traditional needs assessment survey is designed only to provide summary needs and interest information for the total sample and not to provide a method by which the program planner can identify at-risk employees. Thus, the program planner has no accurate information on the specific health-related needs and participation intentions of at-risk employees who are critical to long-term program success. Without this information the program planner may be developing health promotion programs that provide little incentive for the at-risk employee to participate.

This deficiency can be ameliorated with minor modifications to the typical needs assessment survey. Such modifications that involve the addition of questions that allow employees to be classified according to risk levels and permit the expression of individual interest in participating within specific health promotion programs. This information gives the health promotion planner the ability to assess the prevalence of at-risk employees and, their specific problems and concerns, as well as the ability to predict the likelihood of their participation in desired health promotion programs.

The purpose of this research paper is to illustrate a risk-rated needs assessment technique that can be used to improve participation in worksite health promotion programs by at-risk populations. A discussion of the design of a risk-rated survey and a case study will be presented in order to describe the advantages over a more traditional survey design.

### **Risk-Rated Survey Design**

The effective risk-rated needs assessment survey must have two components. First, the program planner must be able to classify the respondent into risk levels for selected behaviors and health status indicators. Standard measures do exist that enable employees to be classified according to low, moderate, and high risk levels.<sup>6</sup> This is accomplished by incorporating questions into the survey that allow for risk levels to be determined for such health-related behaviors as tobacco and alcohol consumption, level of physical activity, the utilization of preventive medical examinations and screenings, and safety belt utilization. Health status indicators include body mass index, blood pressure, blood serum cholesterol, and perceptions related to stress levels and the health of the diet.

**TABLE 1**  
**The Relationship Between Smoking Status and the**  
**Interest in Attending a Smoking Cessation Program**  
**(n = 1,409)**

Smoking Status	Not Attend	Would Attend	Frequency
Never Smoked	98.2%	1.8%	931
Used to Smoke	96.2%	3.8%	240
Current Smoker	61.3%	38.7%	238
Total sample % (n)	91.6% (1,291)	8.4% (118)	

**Source:** Risk rated needs assessment of university clerical employees. (In Review). Health Education Quarterly.

Second, the risk-rated survey must assess respondent interest in actual program participation. This is done by formatting questionnaire items as rating or rank order questions. Ratings are simpler for the respondent to complete and allow their expression of disinterest, whereas rank order requires the respondent to put a value onto each program alternative.<sup>7</sup> Another format alternative is simply to ask the respondents if they would attend a specific type of health promotion program.

### Data Analysis

Once risk-rated data are collected, the association between the health risk levels and the health promotion interests can be best analyzed with crosstabulation tables and chi-square test of independence. The crosstabulation table displays a joint frequency distribution of cases according to two classification variables. The joint frequency distribution can be statistically tested by the chi-square statistic to determine whether or not the variables are related. The significant chi-square statistic provides an indication that two variables are associated. In addition, the strength of the association can be measured by statistics like Cramer's V, phi, tau b, and tau c. Researchers can then examine the frequency (or frequencies) that is (are) substantially different from its expected value. Most importantly, researchers may want to estimate the percentage of at-risk employees who would participate in specific health promotion programs targeted towards them. For example, what proportion of individuals categorized as "over-weight" would likely participate in a weight control program in comparison to those not categorized as being "overweight"? Based on the statistical results and the percentage of at-risk employees that the health promotion program would attract, the health promotion planner can make the judgment as to whether the program is cost-effective and worth implementing.

In practice, the association between the risk level and the health promotion interests may depend on certain covariates. For example, if we suspect that the relationship between the body weight variable and the interest in attending a weight control program may vary at different educational levels, we could perform the Cochran-Mantel-Haenszel (CMH) statistics test while controlling for the education factor. The CMH test can be performed with statistical packages such as the SAS and SPSSX. Interested readers may read references about the CMH test.<sup>8,9</sup>

### Case Study

Recently a risk-rated needs assessment survey was targeted towards female clerical employees (N = 1,409) at a large university with the goal of designing a health promotion program for this population.<sup>10</sup> The researchers designed questions within the needs assessment survey that allowed them to analyze the data in relationship to behavioral risk factors and the interest indicated in attending a specific health promotion program.

The relationship between employee smoking status and the interest in attending a smoking cessation program is presented in Table 1. Overall, only 8.4% (N = 118) of employees reported that they would be interested in attending a smoking cessation program. This in itself provides the program planner with vague information and

does not identify the magnitude of the at-risk population. But when employees are examined by risk level, the program planner now receives an indication of the actual population that a smoking cessation program targets; in this case the percentage of smokers is 16.9%. Yet only 38.7% of these smokers indicated that they would attend a smoking cessation program. Possessed with the information, the program planner is in a better position to make implementation decisions.

**TABLE 2**  
**The Relationship Between Stress and the**  
**Interest in Attending a Stress Reduction Program**  
**(n = 1,539)**

<b>Stress</b>	<b>Not Attend</b>	<b>Would Attend</b>	<b>Frequency</b>
<b>Rare</b>	75.1%	24.9%	197
<b>Occasional</b>	47.9%	52.1%	703
<b>Half the Time</b>	41.5%	58.5%	366
<b>Always</b>	23.4%	76.6%	273
<b>Total sample % (n)</b>	45.5% (701)	54.5% (838)	

**Source: Risk rated needs assessment of university clerical employees. (In Review). Health Education Quarterly.**

This study also demonstrates a second example of how a risk-rated needs assessment can be beneficial to a program planner (Table 2). In this instance a linear relationship is clearly seen. As the perceived stress level reported by respondents increases so does their interest in attending a stress management health promotion program. The total sample interest level (54.5%) fails to consider that 76.6% of those respondents who report they "always" experience stress would attend just such a program.

The researchers concluded that this risk-rated approach to needs assessment seemed to justify the development of health promotion programs for at-risk individuals within this population. They did note that a substantial number of employees at risk because of their tobacco and alcohol behaviors were not ready to participate in health promotional behavioral change programs. The program planner in this instance may elect to conduct limited numbers of smoking cessation programs and direct resources to other health promotion and disease prevention initiatives.

## **DISCUSSION**

A risk-rated approach to conducting a worksite health promotion needs assessment provides the program planner with an excellent tool to target the specific needs and interests of at-risk employees. With these data, the program planner can then determine the size of the at-risk target population and estimate participation levels. Also, data acquired from a risk-rated needs assessment survey provide a foundation for future program evaluation efforts that take into account the number of at-risk individuals actually reached and the overall effectiveness of those programs delivered.<sup>1</sup>

Additionally, a risk-rated needs assessment survey would be expected to promote higher levels of participation among these at-risk employees. This effect is based on the marketing needs assessment model, which assumes that an exchange will occur between a provider, in this case the health promotion program, and the target population (e.g., at-risk employee).<sup>11</sup> This exchange is promoted because the risk-rated needs assessment survey is more sensitive and responsive to the needs of at-risk employees within the target population, thus harvesting feelings that the health promotion program would be of great value to them. This, in turn, creates a willingness of the employees to invest or exchange something of value to them (e.g., time) as they participate in desired programs. And in this exchange, the health promotion provider benefits through the increased

participation rates among individuals most in need. This in turn should result in increased funding for future programs.

In summary, a risk-rated needs assessment provides the health promotion planner with more exact information on targeted at-risk populations, information that can assist in making program decisions that increase the likelihood of participation among these at-risk individuals. Such participation is critical to program success.

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