

Health Belief Model: Evaluating Marketing Promotion in a Public Vaccination Program

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National health objectives are driven to increase participation rates. Individual health decisions are determined by attitudes, behavior, lifestyles, and government policies. This research, therefore, examined not just the development and delivery of a message targeting individual voluntary behavior change, but the intention of changes in social structures that will facilitate individuals reaching their potential; thus the purpose of this article is to shed light on the uptake of the human papillomavirus (HPV) immunization using the health belief model (HBM). Research was conducted with the use of focus groups by drawing on the framework of the HBM. This research approach is conceptual by nature, based on the virtue of marketing promotion and on HBM literature. Though offering the vaccine free to the general public provides additional evidence to certain groups on the intention to act or uptake of the vaccine, awareness levels were found to be poor despite increased efforts by the government trying to promote this vaccine. There was evidence that social capital and trust can produce effective communication message strategies that reinforce social bonds. This article provides an interesting basis for further investigation; however, as implausible as it seems the article also contributes to the concept of perceived benefits and of self-efficacy.

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INTRODUCTION

The need for immunization is increasingly important, particularly when they protect against illnesses that pose significant health problems to the community. Marketing these programs requires detailed research and complex system-wide implementation in order to uptake any vaccination in the public health system. If mismanaged, these marketing programs could result in being ineffective. Additional intricacies in the effective marketing of the immunizations also lie in the hands of a number of stakeholders in any worldwide vaccination programs. These include: government funding entities, health promotion organizations, nurses and doctors involved in public health and immunization programs, and vaccine developers and manufacturers.

In Australia, strategies devised to increase population immunization levels have been clearly recognized (Nutbeam, 1991; R. J. Donovan & Robinson, 1992) within the context of social marketing (Lefebvre & Flora, 1988; Andreasen, 1995). However, research on marketing promotion and immunization dominate the literature and while these contribute to our understanding, they do not provide a passable analysis of how the decision on the intention to act to take the vaccine was determined.

Rogers (1995) supported the notion that there are certain characteristics of innovation that can and do facilitate a vaccine's adoption. One could draw an analogy from the work of Houston (2002), whereby strong support has been indicated for the utility of diffusion of innovations theory in marketing of tuberculosis prevention programs by government health care agencies. Their study sheds light on two major criticisms of the diffusion theory, in that it presupposes both a pro-innovation bias and individual blame bias. The former implies:

That an innovation should be diffused and adopted rapidly by all members of a social system without the consideration of re-invention or rejection when it is deemed inappropriate or ineffective. The latter, individual-blame bias points to the tendency to hold an individual responsible for his or her problems, rather than the system of which the individual is a part. (Houston, 2002, p. 12)

In other words, diffusion will take place with certain groups of people irrespective, and programs need to be managed efficiently. Public health initiatives are not commonly thought of as being marketable commodities, and programs that address immunization, screening for diseases, safe

environments, and healthy behaviors are usually aimed in some way at behavior modification (Lin, Smith, & Fawkes, 2007; Baum, 1998). In seeking to understand how young people begin to take responsibility for their own health, this project is approaching the idea of healthy behavior from a different perspective.

Social marketing strategies have been quite successful in the past for changing behaviors. Evaluation of social marketing effectiveness through systematic reviews and primary studies has shown that social marketing involvement works successfully with a range of target groups in varied settings, and establishes that social marketing can be used as a potential framework for improving health issues (Gordon, McDermott, Stead, & Angus 2006). Helmig and Thaler (2010) conducted a meta-analysis on the effectiveness of social marketing that provided for an objective appraisal of the evidence on social marketing programs. Of the models used to conduct various studies, highly significant (22.1%) was the theory of reasoned action (Ajzen & Madden, 1986), followed by a combined 16.2% for social or observation learning theory (Bandura, 1977) and social cognitive theory (Bandura, 1991), and 11.8% for the health belief model (Janz, Champion, & Strecher, 2002).

Against this backdrop, questions such as: What models will help us understand the decision to uptake the vaccine that will contribute to developing appropriate marketing promotion of new immunizations or across different types of health issues? By using the human papillomavirus (HPV) vaccine as a case example and drawing on the framework of the health belief model (HBM), this research embarks on identifying marketing promotion knowledge that can be applicable to other parallel health promotion programs. We considered basic questions about the nature of the vaccine and the intention to act to determine the causal relationship between the uptake of the vaccine and marketing of the vaccine.

The first section of this article examines the literature on the HPV vaccine. The following sections describe and discuss the results of focus group research and the use of the HBM to evaluate a framework to identify health-based decision-making processes in young women. Finally, we evaluate marketing implications from the constructs of the HBM that can be used in future research or other parallel health promotion marketing campaigns.

BACKGROUND TO THE STUDY

In November 2006, the Australian Government, along with the recommendation of its expert advisory committee, the Pharmaceutical Benefits Advisory Committee (PBAC), stated that the HPV vaccine Gardasil should be funded

under the National Immunization Program. Three segments were considered (Department of Health and Aging Fact Sheet, 2006) that consisted of a school-based program comprising students who were 12–13 years old, a catch-up group of 13–18 years old, and a further catch-up group of young women up to the age of 26 that were considered in a community-based program. These programs ended on December 31, 2009.

Whilst this vaccine was freely available to a selected segment, many did not take up this offer. For example, in South Australia, it was unclear why there was a poor response (Watson, Shaw, Molchanoff, & McInnes, 2009). Survey results also indicate other factors that explain the few numbers that take up the vaccine; these are the high cost and inconvenience of taking the three shots, low number of visits to the doctor among that particular age group, and parental concern on immunizing children against a disease that is contacted through sexual activity (Springen, 2008).

Although there are investigations and research conducted in the area of HPV vaccination (Walsh, Rudd, Moeykens, & Moloney 1993; Darrow & Biersteker, 2008; Swart, Panday, Reddy, Bergstrom, & De Vries, 2006; Thackeray & Brown, 2005; Thackeray & Neiger, 2002), little information exists on how the public sector has disseminated knowledge and awareness to create effectiveness in the uptake of the vaccine.

Awareness levels and knowledge about the vaccine are critical in terms of its acceptance to uptake. In the United States, the popularity of this particular vaccine despite Gardasil's million-dollar marketing promotion, failed to create awareness levels in the link between the virus and cancer. For instance, about 99.7% of cervical cancer patients have shown to be HPV-infected (Walboomers et al., 1999). Studies that have indicated that sexually active female college students in their early 20s are often not aware of HPV and know of the disease only after they have acquired it (Yacobi, Tennant, Ferrante, Pal, & Roetzheim 1999; Vail-Smith & White, 1992).

Some studies indicate weak awareness levels of HPV (Lambert, 2001; Dell, Chen, Ahmad, & Stewart, 2000). While Kahn et al. (2003) identified around 85% awareness rates, not only of HPV but the HPV vaccine, Gardasil, as well; around 29% who did not know what HPV was but had heard of the brand Gardasil. However, they identified that the knowledge of HPV did not correlate directly to knowledge of HPV vaccine.

While the acceptability of the vaccine were examined by Boehner, Howe, Bernstein, and Rosenthal (2003), they found that 74% of females were affirmative about the vaccine. Subsequently, recent studies (Carson, Kispert, & McGrath, 2009) identified that 75.3% of women were more likely to receive the HPV vaccine if it were offered for free; unlike other studies that indicated little knowledge about HPV (Lambert, 2001; Pitts & Clarke 2002; Dell et al., 2000), this study found that a majority of the women were knowledgeable about HPV. Studies in a similar field have indicated that to increase the rate of influenza vaccination, efforts should be made in creating knowledge

on the benefits of vaccination and risks associated with flu (Shahrabani, Benzion, & Din, 2009).

HBM

Since the uptake of the vaccine is associated with consumer decisions, beliefs, knowledge, and behaviors, a number of multiple models have been suggested. This includes the HBM social learning theory and the theory of reasoned action (Johnson, 2002; Harrison, Mullen, & Green 1992; Rosenstock, Strecher, & Becker, 1988). We found it useful to use the well-established HBM to develop the conceptual framework, identify the influences, and deploy measures for identifying the decision-making process that will help support marketing promotion strategies with the public sector.

The initial HBM was the behavioral model in health education developed in the 1950s by social psychologists Hochbaum, Rosenstock, and Kegels, who worked with the U.S. Public Health Service to determine participation and nonparticipation in screening programs for tuberculosis (Becker, 1974; Maiman & Becker, 1994; Rosenstock, 1974). Since then it has been successful in promoting greater use of condoms, seatbelts, and health screenings. While this model falls short of some limitations (R. Donovan & Henley, 2002), it has been reported that the HBM significantly predicted health behaviors by focusing on attitudes and beliefs of individuals (Janz & Becker, 1984) and has considerable empirical support for the efficacy of the HBM (Becker, 1974).

HBM has been used not only to understand the underlying health-related behaviors but also noncompliance behaviors (Becker & Rosenstock, 1984), which, to a certain degree, can help to provide guidelines for marketing programs.

The HBM consists of four constructs, namely perceived susceptibility, perceived severity, perceived benefits, and perceived barriers. These concepts advocate people's "readiness to act." While "cues to action" promote and stimulate evident behavior, another concept by Rosenstock (1974) added to this was self-efficacy (i.e., one's confidence in the ability to successfully perform an action). This would indicate that besides females having awareness of the problem, the intention to act on it or not can be examined.

The HBM proposes that when individuals see a threatening disease and how they can benefit by taking prevention action, then that individual is likely to take action. Generally, most researchers were found to apply quantitative methods using this model to address the intended behavior (Von Ah, Ebert, S., Ngamvitroj, Park, & Kang, 2004; Wdowik, Kendall, Harris, & Auld, 2001; Garcia & Mann, 2003; Deshpande, Basil, Basil, 2009). This research used qualitative analysis to get a deeper understanding of these concepts.

METHODOLOGY

Prior to undertaking the research, a HPV research project consultative committee was created. The members were drawn from the community, local government, schools, and tertiary education to provide strategic leadership and direction to this research. Qualitative research aims to find a rich understanding of the research object and to develop constructs in a previously unexplored area. This can, of course, be followed up by quantitative research to test these constructs and look for underlying patterns to generate a statistically valid response.

Focus groups were used to identify how health decisions are made amongst individuals where parental consent is sometimes required; this would allow for unanticipated issues and the need to postulate questions to develop a deeper understanding. We believe the interaction among school-age children would be more effective in groups than in in-depth interviews and would provide adequate understanding of this sensitive topic. A focus group is also able to obtain data in line with the synergy of group interaction (Green, Draper, & Dowler, 2003).

Focus groups are particularly useful for investigating the people's knowledge and their experiences. They are often used to examine how people think and why they think in that manner (Kitzinger, 1995). This method is commonly used for evaluating health education messages and examining infirmity and health behaviors of the general public (Basch, 1987; Kitzinger, 1993; Ritchie, Herscovitch, & Norfor, 1994; Duke, Gordon-Sosby, Reynolds, & Gram, 1994). It is proposed that focus group discussions can product a far greater critical analysis on a topic than interviews (Watts & Ebbutt, 1987).

Since the local government in Victoria, Australia was the recipient of approximately \$9.5 million in funds to propagate the school-based immunization program (Department of Human Services, 2008), the selection of the focus groups were taken from the Northern Metropolitan local government region of Melbourne. Demographic information that was collected demonstrated the participant ages varied from 16 to 25 years and consisted of school-age girls, and youth center and university participants. The level of education was determined by the recruitment method. Participants in schools were in Grades 10–12. Youth center participants were not currently attending school. University-based participants were at the undergraduate level. Participants were from a range of backgrounds, with the majority being born in Australia (approximately 80%); the balance drew from southern Europe, west and southeast Asia, the Pacific Islands, Africa, and Central America. This is demographically similar for the region to the population distribution from the 1996 Australian census. The sample included the following groups, not necessarily as individual focus groups: rural and metropolitan; English and non-English speaking background;

TABLE 1 Framework for Health Belief Model

Concept	Requirement for the vaccine	Research outcome
1. Perceived susceptibility	Females believe they can get HPV or cervical cancer	Identify awareness levels and beliefs of female views
2. Perceived severity	Females believe that the consequences of getting cervical cancer are significant enough to try to avoid	Identify the severity of the problem among females
3. Perceived benefits	Females believe that the recommended action of immunization would protect them from getting cervical cancer	Identify what perceived benefits will they receive
4. Perceived barriers	Females have personal barriers to immunization	Identify what personal barriers females have with this concept of immunization (e.g., embarrassment, religious, understanding, ethnic views, etc. Research will explore ways to reduce barriers)
5. Cues to action	They require cues for action	What reminder cues for action in the form of incentives can be given?
6. Self-efficacy	Females are confident about taking the vaccine	What type of guidance to be provided? (Such as information on the vaccine, pros and cons, etc.)

Australian-born and recent arrivals to Australia; and those of a high, middle, and low socioeconomic status.

ASSUMPTIONS AND STATEMENT

The HBM is based on the understanding that females will take a health-related action (i.e., immunization) if that person:

- feels that a negative health condition (i.e., HPV) can be avoided;
- has a positive expectation that by taking a recommended action, they will avoid a negative health condition (i.e., immunization will be effective at preventing HPV); and
- believes that they can successfully take a recommended health action (i.e., the vaccine is available and she can take it with confidence).

FINDINGS BY APPLICATION OF THE MODEL

Perceived Susceptibility

The research outcome here was to identify awareness levels and beliefs of female views on the HPV vaccine. Key questions were asked to determine

whether the groups were aware of, namely, two things: not only the HPV vaccine but also their knowledge and belief on HPV.

With reference to just having HPV knowledge, across all of the groups there was very little consistent knowledge about HPV itself. Prior to taking the vaccine, the majority of participants knew nothing or had superficial knowledge. Only one group indicated that they thought it was cancer or “some virus.” Many indicated that since having the vaccine their knowledge and beliefs about the virus and vaccine had increased.

With reference to what knowledge and beliefs the groups had about the HPV vaccine, this question was asked primarily to balance Question 1. It also helped with supporting evidence for the original aims of the project in identifying useful aspects on the need to generate marketing awareness of the vaccine and the feasibility of promotional methods.

After taking the vaccine, there were varying levels of knowledge about the vaccine and what it prevents, but all the groups were able to say that the vaccine prevented cancer. Three of the five groups (school-based and the youth service groups) were able to make a link between the virus and cervical cancer, though this was sometimes tenuous. Even within these groups, there were some that could only say that they knew the vaccine prevents cancer. The university-age group questioned whether or not the vaccine “actually prevents” cervical cancer.

The Gardasil brand name was not widely known and was never used by participants in relation to the vaccine. Only one group made a connection between the vaccine and the Gardasil brand when prompted.

Perceived Severity

The research outcome was to identify the severity of the problem among females. It was almost universally accepted amongst participants that to be vaccinated is to prevent cancer. Health was considered by many as one of the primary reasons for having the vaccine. Comments related to this included:

To keep safe.

If it's going to help us in the long run.

I don't want to get sick or anything.

If it's going to save my life, then I'll take it.

It is probably best for my well-being and stuff.

Being vaccinated for health reasons in many ways appeared to lie outside of the decision-making process, because it was so accepted that vaccinations

have a positive impact on health. This could be as a result of the advertising, but could also relate to comments made about vaccinations having become very routine:

Because you have grown up with that.

Perceived Benefits

The research outcome was to identify what perceived benefits would be received. Another benefit that assisted with the uptake of this vaccine was that it was government-funded and hence, for a limited time it was free of charge.

Again, there was a difference between the focus groups in the relative importance of the vaccine being provided free of charge. However, all participants in two of the school-based groups spoke about the benefits of it being free to have influenced their parent's decision-making (often without mention of their own). For example:

They were doing it for free, so mum was like, "You'd better go."

Mum was like, "It is best to get it, just to be safe. And it doesn't cost anything.

My mum said to get it because the school was providing it.

This is reinforced by the comments in one of these groups that the vaccine being provided for free was "just a bonus." This indicates cost to be of little consequence because they would have wanted to have the vaccine, regardless. If their parents are responsible for costs as they say, then this is reasonable.

It is interesting to note that cost was not specifically raised in any one of the school groups or the youth service groups. This may add to the suggestion that in the school-age groups, cost is not critically important because it is not of primary concern to them; it is to their parents that this is of concern. In the youth service group, this may indicate the expectation that the vaccine would be provided for free because many other services in the center are free.

The cost of the vaccine was much more of a concern to university participants. In response to the question as to whether the main reason for deciding to have the vaccine was that it was free, there was agreement in the group that this was the case. This is a time when these individuals are likely to be more financially independent, so the cost of a vaccine such as this is prohibitive.

If everyone was doing it, and it was a \$150 a needle, I probably wouldn't do it.

Something that was possibly more persuasive in the decision to have the vaccine among university students was that there was a deadline for when it would no longer be free. Being free-of-charge alone may not be impetus to have the vaccine. By adding some urgency to the situation, this was enough to persuade some participants to have the vaccine:

It's free at the moment. Until June, so, probably that makes it more appealing to go to your doctor and get it.

I just didn't see the need at the time, and then as I saw, like the deadline was approaching, I'm like, I better go get it.

This points to other factors being important in the decision-making process, but providing the vaccine at no cost for a certain amount of time was not only incentive to the university-age participants, but also to the parents of the younger age groups.

Perceived Barriers

The research outcome was to identify what personal barriers females have with this concept of immunization. The extent to which the vaccine protects from cervical cancer was discussed in three of the groups (two school-based groups and the youth service group). In each of these cases, the groups could not specifically say how protected they were, but generally knew that there was still a chance that they could develop cancer even after being vaccinated. Also, there was no group who could say how long they would be protected for. Again, as with other aspects of virus and vaccine knowledge, there was little in-depth discussion and participants could not elaborate beyond a basic level of understanding.

There was still discussion, particularly amongst the university group, that there may be side effects or adverse effects of vaccination. Despite this, participants generally expressed the opinion that the HPV vaccine was beneficial for health.

While not discussed in great detail, potential side effects of the vaccination were raised in all of the groups except the youth service group. In the three school-based groups, there was recognition that there had been advertising and media attention given to possible side effects of having the vaccine.

Fear of needles was also perceived as a reluctance to take the vaccine. Concern about having the needle was a significant area of discussion in all of the groups, except the youth service group. In each of these groups,

there was discussion about how the needle hurt, which injection hurt more, and whether or not they liked needles. Fear of needles (and concern about having three needles) was mentioned as a factor that stopped some having the injection.

Setting was also considered a barrier. While not important for the school-age participants, the university-based group found that the setting in which they could receive the HPV vaccine was prohibitive. This was significant because while at school there had been no extra effort required beyond taking the consent form home to their parents.

Everyone go down to the gym . . . to get the vaccine. So it wasn't really, I didn't think about it that much.

However, once leaving school, participants found it inconvenient to organize their own vaccination.

Last time I got a needle was in high school. So, the fact that I had to ring up and make the appointment, and ask questions about it . . . it kind of made it, a little bit more difficult.

Even though all of the girls in the focus group had had the HPV vaccination, they had taken the free vaccine at different times. They stated many of the reasons that have been discussed (side effects, advice of their friends, etc.) as contributing to their decision, but ultimately inconvenience delayed some participants from organizing their vaccination.

This was not discussed explicitly in the school-age groups, but it was inherent in the discussions that were had as the participants indicated the ease at which they were able to receive the vaccine. For example:

If the school hadn't told us about it I don't think we would have gone out and done it.

I just seen it, and they were saying that like, all, school students, like all the girls had to get the needle done. And then a couple of weeks later we got told we had to have it.

This indicates the importance of the school environment for delivering the vaccination, particularly in light of the discussion in the university group.

Cues to Action

The research outcome determined as to what reminder cues for action in the form of incentives and information could be given. What sources of

information were provided? In discussions about the HPV vaccine and associated knowledge, the sources of this knowledge were similar to responses about health information generally, but the extent to which the sources were important differed. Girls gained knowledge about the HPV vaccine and virus through their school, family, friends, the media, and advertising material, and to a lesser extent, their doctor. In the school-age groups doctors became less important, whilst the school increased in importance. Online sources were not very important in the school-age groups, though they were more important for the university group.

SCHOOL

In school, girls said that they could recall learning about the HPV virus or about vaccines generally in science and health classes, but the depth of recalled knowledge was low:

I think we studied it in health but I don't remember much.

Actually, there might have been a point in Year 8 when we went through STDs . . . I didn't choose to study it.

FAMILY

Families were stated as a source of information, however, the only girls who stated this were those whose parents or siblings were medical professionals involved with the vaccine as part of their work or study. Family may not have been a source of information for many, but they were active in decision-making.

GENERAL PRACTITIONERS

In terms of accessing doctors or general practitioners for information, in this case only one person stated that they went to their doctor for information. Initially many stated the doctor as an important general source of health information, yet in this specific example the doctor was not so important. In general terms, the doctor appears to be the most obvious source of health information, however girls were more likely to gain information from their school, family, and friends or from advertising.

ADVERTISEMENTS

In three of the five groups, only some of the participants could not recall any advertising related to the vaccine. When prompted about different forms

of media, this did not help with recall. Typical responses to questions about advertising were:

I cannot remember at all.

Was it advertised?

I don't really remember anything.

This was, however, not common within these groups. In many cases, the advertising made a lasting impression. The main types of media that participants remembered as advertising the vaccine were the radio (in particular, Fox and Nova radio stations), billboards and posters (at bus stops or on the back of public toilet doors, for example), information sheets handed out at school, and pamphlets.

In addition, advertising related to the vaccine being free until June was specifically mentioned in two focus groups. For example:

They said, get yours by June.

To get them before, like June, you have to pay for them.

Self-Efficacy

In line with social cognitive theory (Rimal & Real, 2003) we conceptualized the self-efficacy as the girls' confidence to uptake the vaccine. In terms of uptake of the vaccine, ultimately across all of the groups all of them had been vaccinated. Whilst there were discussions about barriers to decision-making, there were no participants who had not been vaccinated. To help build up confidence and word-of-mouth, promotional messages of reinforcement were manifested in the advertising strategies. The participants remembered several points about the content of the advertisements. The most common content remembered related to the "I did it" ads that were mentioned in three of the five focus groups. The responses related both to the television and billboard advertising, which many then linked to receiving the "I did it" Band-Aid after they were vaccinated. These advertisements clearly indicated positive reinforcement of the vaccine.

MARKETING IMPLICATIONS

There were many similarities between groups in terms of sources of general health information and specific information related to the HPV vaccine.

Awareness of the virus and vaccine was varied, but it was evident that all groups were very aware that the vaccine prevented cancer and that it was beneficial for health. There were, however, gaps in the knowledge of participants in all of the focus groups. This could be attributed to the promotion of the vaccine, lack of interest, or lack of involvement in decision-making, particularly within the school-age groups. In order to create higher awareness levels, there are three issues that can be explicated in the nature of the transfer and development of knowledge to this target group. These are trust (Husted & Michailova, 2002), the capacity of the recipient to understand the information provided, and its relevancy (Patterson & Hobley, 2003). The content of the advertisement and messages would play an integral role in attempting to transfer this knowledge on HPV.

An understanding of the focus groups' awareness levels and knowledge, along with participants' beliefs, provides us with insights for setting communication objectives. It can be seen here that although these groups were targeted, most promotional measures failed to get the message through. There was limited knowledge in the school-based groups about HPV—what the virus is and how it is transmitted—but also specifically how this relates to a vaccine that prevents cervical cancer. Though for many, this knowledge was not necessary as part of decision-making because they trusted their parents to read the vaccine-related information and make the decision on their behalf. In other words, it was only after the vaccine was taken that their awareness and knowledge levels increased. The behavioral effects took place mainly by parental consent and the integration of authorities making this possible. Other studies have found parents were concerned that receiving the HPV vaccine may be seen as encouraging early and frequent sexual activity (Ogilvie et al., 2007). That didn't seem to be the case here. Parents were, in fact, the decision-makers for the school-based children, and marketing strategies need to be directed to this group, more so in terms of informative advertising that provides some education about the vaccine. It has been stressed that there is an utmost need for the vaccine to be supplemented with awareness for education (Carson et al., 2009). Another point raised was the fact that everyone around them was being vaccinated, meaning that the girls were less inclined to question whether or not they should have the vaccine.

For example, in the school-based groups, the most important influences were authority figures, in which they placed immense trust. There were some participants, particularly in the school based groups, who did not feel themselves to be involved in the decision-making process at all, because they completely trusted the authority figures in their lives (their school and their parents, mainly). Social capital, which is identified by Putnam (1995, p. 66) as "the degree of interaction between people, both formal and informal and the levels of civic engagement, trust, mutual obligation and caring in the community," can be seen as a support system. It

is also the most important determinant of health (Lomas, 1998). Kotler and Roberto (1989) advocated that all social causes have a social objective to achieve. These objectives administer changes in people in terms of cognitive changes, changes in action, behavioral change, and changes in values. Marketers need to target these authorities that are seen as the influencers with marketing communication strategies that reinforce social bonds to bring about these changes.

Free Vaccine

This research undertook formative research to increase our understanding of the perceived costs and benefits associated with HPV immunization. From the marketing perspective, this is relative to understanding the dynamics of the exchange that the marketing program attempts to obtain. For instance, consider the range of costs, including psychological, emotional, and time, as well as financial. What benefits will be perceived as paying these costs?

In the youth service discussion, whilst the responsibility for the decision rested more with the participants themselves rather than a parent figure, they very much trusted the advice given to them by the staff at the center. Having said this, they were well informed and understood what it was that they had received. Health was a very prominent reason for having the vaccine. Though it was not raised in the discussion, the fact that the vaccine was provided free-of-charge is likely to have influenced their decision. This may not have been mentioned because most services at the center are provided free of charge so there may be an inherent expectation of this.

Decision-making in the university group was the most diverse, and the most considered by participants compared to the younger groups. There was a complex set of factors contributing to their decision-making that were not always completely distinct from each other. The advice of family and friends, relationship status, and the further research they had done were of primary importance in their decision. The provision of the vaccine free of charge was an important factor for the participants, though it was not the sole factor in the decision. Provided the other factors were positive, it was considered by many as a final reason to have the vaccine. However, even at this stage, the inconvenience of organizing the receipt of the vaccination may have stopped the participants. Participants were encouraged to have the vaccine, more so with the addition of a deadline after which the vaccine would no be longer free. Interestingly, this survey found that most participants indicated they would take the vaccine since it was free, which contradicts other research conducted in the United States that although it was free, it was the lack of knowledge that prevented individuals from obtaining the vaccine (Carson et al., 2009). Being free-of-charge also increases the rate of potential users and other costs benefits such as

preventing pain and suffering in case of contracting the disease. This could be weighed up against economic costs, such as intervention-related costs, vaccine and administration fees, and time factor costs and could be marketed accordingly.

Promotion

The content was considered by some to lack depth, and that it provided, “just your basic frequently asked questions,” and was “more of a, ‘look we’re here’ campaign.” There was quite a lengthy discussion in the university group about the HPV virus mode of transmission being absent from the advertising and information. Others mentioned that whilst the advertising campaign did not give a lot of information, there were phone numbers and other avenues for information provided within the advertisements.

The design of the advertising material was not widely discussed in school-age focus groups, though it was covered in more detail in the university-age group. In one of the school groups, it was recalled that advertising material was on “colorful paper,” whilst another remembered that a well-known female swimmer was on one of the billboard posters. In the university-age group, it was mentioned that the advertising was “appealing to youths” and that it was clear, well presented, and easy-to-read. They considered the layout to be “just a standard layout,” similar to those used produced for other vaccination campaigns. Generally, participants had difficulty remembering a lot of specific detail about visual presentation of advertising materials.

From the perspective of the participants, the advertising campaign appears to have been quite effective in raising awareness about the HPV vaccine. For example, comments were made that the advertising made the participants more interested in the vaccine:

If you are sitting there with you mum [when you hear a radio ad or see a television commercial], you will say “Oh yeah, yeah, I will go and get that.”

It [the advertising] generated an interest and made you go and look into it a bit more.

Others reported that the advertising campaign was not effective; for example, one of the school-age participants talked about her older sister who “hadn’t even looked it up until I got it.” She had not taken in the mass advertising campaign at all.

In the university group, they felt the advertising was more effective when there was a hard copy that could be taken away and read at a later time, such as a pamphlet.

Whereas in reference to the large billboard advertisements:

I find I tend to ignore them because like, you know, they're always there.

Just another massive advertisement there, I just, like, look at them and then I forget about it a minute later.

However, many agreed that if they had not seen or heard anything about the vaccine in television, radio, and billboard advertising they would have been unlikely to take hard copies of that advertising. It appears there was not one particular form of media that was more effective than another; it was the combination of different sources and repetition of the health promotion message that was important. This calls for a need to use different types of promotion more effectively.

One type of advertising promotion is "fear and threat appeals." Fear and threat appeals have been frequently used as a persuasion approach, more so extensively used in social marketing campaigns, especially those intended for changing negative health-related behaviors. A cursory evaluation of the literature provides much in terms of contribution or the relative effectiveness of fear appeals, including the impact of fear for different target groups succumbing to varied behaviors. Though it has been identified that the higher the level of threat, the greater the likelihood of behavior change (Higbee, 1969; Sutton, 1982), contradictory evidence indicates lower levels of threat to be more effective (Janis & Feshbach, 1953; Leventhal & Niles, 1964). Extreme fear appeals may also result in either disregarding messages or developing fear but not acting on it (Leventhal & Niles, 1964; Rossiter & Percy 1997). Meta-analysis supports a minor but reliable relationship between increasing levels of fear and resultant attitude and behavior change (Boster & Mongeau, 1984; Mongeau, 1998; Witte & Allen, 2000).

Jones and Oven (2006) identified that the level of threat had no impact on intentions of the women to undergo breast screening, but indicated that high threat messages had stronger negative emotional reactions and higher perceived susceptibility among younger women. Similar to our study on free vaccines, Dillard and Anderson's (2004) investigation about obtaining free flu vaccinations and fear appeals as a persuasive measure, identified that the perceived fear produced by the message and the peak level of fear produced were both important predictors of persuasion. Most of the groups expressed fear as one of their reasons to undertake the vaccine; this fundamentally raises an important issue on fear or threat messages and whether social campaigns should limit the use of high levels of fear or threat appeals? Or do we consider target groups cautiously to position for promotion purposes?

Implications

In summary, the participation in a program to vaccinate against communicable disease is a conscious decision. To bring about cognitive changes, social campaigns use dissemination of new information to people and raise their awareness. In the case of the HPV vaccine, the government made all efforts since the announcement of funding for a HPV vaccination program in 2006 to promote the program.

From the analysis of the focus group, it appears that information campaigns have not met with much success, and one of the reasons for this was attributed to the use of mass communication to change public attitudes or behaviors. Kotler and Roberto (1989, p. 8) proposed the following factors that mitigate the impact on mass media: People's characteristics like apathy, defensiveness, and cognitive ineptness, in addition to ineffective messages, failure to use appropriate media, and lack of response mechanism factors are other factors that mitigate the impact on mass media. Here, awareness levels about the vaccine were poor.

Another strategy such as that of marketing campaigns should be used to persuade the target audience to perform a particular act or practice within a specified time (Robertson, O'Neill, & Wixom, 1972). For example, the mass immunization programs for HPV targeting a certain age group that needs to be undertaken within a particular time, generally got most of the individuals to take up the vaccines.

The last strategy in any marketing campaigns, particularly social marketing campaigns, involved changing beliefs or values that are designed to alter people's belief or ideas. Since the program is carried out at school requiring parental consent, most of the parents gave their consent.

This article provides an interesting basis for further investigation; however, as implausible as it seems that we might be able to suggest that the article also contributes to the concept of perceived benefits and of self-efficacy, as such: Perceived benefits includes knowledge as justified true belief that encompasses mental models, beliefs, and perspectives based on prior learned information the understanding of which allows the participant to understand and apply knowledge as a believed fact rather than having simple, ungrounded faith in that fact (Nonaka, 1991; Popper, 1972; Swanson, Power, Kaur, Carter, & Shepherd, 2006). New knowledge is not the displacement of what was known originally but is the development of or creation of something new. Therefore, learning is a change in the way we understand, absorb, or react to a new or an existing situation or environment. That knowledge is a series of facts, events, and concepts whose meanings are context-dependant according to their use and on the external environment or framework (Spender, 1996). Better understanding of these factors and improved delivery of that knowledge flow to HPV vaccine recipients as the true end-point in this particular health care market segment should therefore have an increased potential to positively influence self-efficacy.

CONCLUSIONS

The study sought to determine the application of the HBM with the uptake of the HPV vaccine, assess the marketing implications, and identify the enabling factors that can outline possible future avenues that health practitioners might explore. National health objectives are driven to increase participation rates. Individual health decisions are determined by attitudes, behavior, lifestyles, and government policies (Donner, Busch, & Fontaine, 2000). This research, therefore, examined not just the development and delivery of a message targeting individual voluntary behavior change, but the intention of “changes in social structures that will facilitate individuals reaching their potential” (R. Donovan & Henley, 2003, p. 6). As most individuals have access to health facilities, they are in a position to be provided with information regarding concerns that affect their health status, and also understanding how one can motivate an individual to take the vaccine via marketing campaigns.

The limitations of this research are on the use of focus groups, which only provide a diagnostic aim; further quantitative research should be administered to generate statistically valid response. The HBM was used to outline how effectively marketing can be used to influence decision-making in the uptake of the HPV vaccine. The HBM provided insight on various concepts and shed some light on the use of social marketing strategies. These findings offer varied perspectives on pertinent health promotion that public health practitioners, industry groups, and governments may want to consider when developing integrated promotion strategies in other immunization programs. Awareness levels were found to be poor, but by offering the vaccine free to the general public, additional evidence was provided to the intention to act or uptake the vaccine. It was evident that social capital and trust can produce effective communication strategies messages that reinforce social bonds.

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