

# **Application of Protection Motivation Theory (PMT) and Health Action Process Approach (HAPA) in Promoting Women's Adaptive Engagement towards Breast Self Examination**

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## **ABSTRACT**

*The background of this review is based on health risk factors of breast cancer, attitudes and behaviours of women towards early breast cancer detection to reduce its prevalence rate. The Health Action Process Approach (HAPA) propounded by Ralf Schwarzer in 2008 and the Protection Motivation Theory propounded by Rogers in 1975 as explanation for this phenomenon towards predicting behaviours and redirecting actions towards health promotion are diligently examined. Hence, the aim of this study is to apply Protection Motivation Theory (PMT) and Health Action Process Approach (HAPA) to promote women's adaptive engagements towards breast self examination. The health risk behaviour streamlined was poor attitude and behaviour of breast self examination leading to high mortality rate from breast cancer. The theories were scholarly utilized to this behavioural contingent and it is suggested among other points that voluntary and non-voluntary health agencies should periodically organize seminars, conferences and other platforms to educate women on approaches and importance of breast self examination.*

**Keywords:** *Adaptive, Breast Self Examination (BSE), Self Efficacy, Health Promotion.*

## **INTRODUCTION**

Breast cancer is one of the leading causes of death in the world today (Holloway, 2009). Many people contribute to their premature mortality by behaving in an unhealthy way, which could be referred to as health risk behaviours such as tobacco use, poor dietary patterns, unprotected sexual activities, sedentary lifestyles and excessive alcohol consumption (Aideyan, Igudia and Owie, 2013). Breast Self Examination (BSE) is a screening method used in an attempt to detect early breast lumps that are carcinogenic. The method involves the woman herself looking at and

feeling each breast for possible lumps, distortion or swellings, BSE was once promoted heavily as a means of finding cancer at a more curable stage because it is a deadly disease that can only be controlled if detected on time (Reeder and Vogel, 2008). The World Health Organization (WHO), US National Cancer Institute and the Canadian Task Force on Preventive Health Care and many other scientific organizations recommend breast self examination. Breast self examination most suggested approach entails that the woman stand in front of a mirror with the torso exposed to view; she looks in the mirror for visual signs of dimpling, swelling or redness on or near the breast. This is usually repeated in several positions such as while having hands on the hips (standing akimbo) and then again with arms held above the head. Women not breast feeding gently squeeze each nipple to check for any discharge. This approach of breast self examination is necessary in order to promote adaptive engagement in the behaviour towards early detection of abnormality. The utility of Health Action Process Approach and Protection Motivation Theory for explaining health behaviour change towards poor attitude of breast self examination and possible motivational intervention toward redirecting or changing such attitude becomes expedient.

This study utilizes the motivational and behavioural dynamics of education in addressing such issues as: health risk factors of breast cancer, strengthening healthy action towards breast self examination through Health Action Process Approach (HAPA), strengthening healthy action towards breast self examination through Protection Motivation Theory (PMT); reinforcing and maintaining behavioural change/health promotion. Consequently, the major aim of this study is to review the application of PMT and HAPA to promote women's adaptive engagements towards breast self examination.

### **Health Risk Factors of Breast Cancer**

Breast cancer is a chronic disease that records high mortality rate. It is a disease that can be behaviourally modified to help in its prevention and management. Age and gender as factors are not within our control. Others, especially those related to personal behaviours can be modified. Several studies have been carried out on this to exemplify risk factors associated with breast cancer. According to the International Agency for Research on Cancer (2007), there is sufficient scientific evidence to classify alcoholic beverages as Group 1 carcinogens that causes breast cancer in women. Group 1 carcinogens are substance or acts such as smoking tobacco with the clearest scientific evidence that can cause cancer. The more alcohol a woman drinks, the more prone she is to breast cancer. Women who carry a harmful BRCA mutation have a 60% to 80% risk of developing breast cancer in their lifetimes. This is based on familial history (Spiegel, Hil and Wamner, 2009). The most common gene mutations are referred to as BRCA 1 and BRCA 2 which increase risk of breast cancer. People who have previously been diagnosed with

breast, ovarian, uterine or bowel cancer have a higher risk of developing breast cancer in the future (Reeger and Vogel, 2008). There is a relationship between calcium intake and breast cancer, a high dietary intake of calcium shows 33% lower risk of breast cancer and high calcium intake decreases fat induced epithelial hypo-proliferation of mammary gland and chemically induced carcinogenesis (Holloway, 2009; Sulik, 2010). Again, lack of exercise has been linked to breast cancer by the American Institute for Cancer Research (2008). Obesity has also been linked to an increased risk of developing breast cancer by many scientific studies that obese women are more likely to have large tumors, greater lymph node involvement and poorer breast cancer prognosis with 30% higher risk of mortality (American Institute for Cancer Research, 2008; Gaffied, Culwell and Ravi, 2009). The uses of hormonal contraception by women and late childbirth also have significant impact on breast cancer risk or occurrence (Gaffied, Culwell and Ravi, 2009). Breathing second hand smoke increases breast cancer risk by 70% in younger women. Women (premenopausal women) who have received high dose ionizing radiation to the chest have a relative risk of breast cancer between 2.1 to 4.0 (Holloway, 2009). There is a relationship between wearing tight fitted bra and possible breast cancer as a result of tissue and vessels mutation and constriction (Sulik, 2010).

### **Strengthening Health Action towards Breast Self Examination (BSE) through Health Action Process Approach (HAPA)**

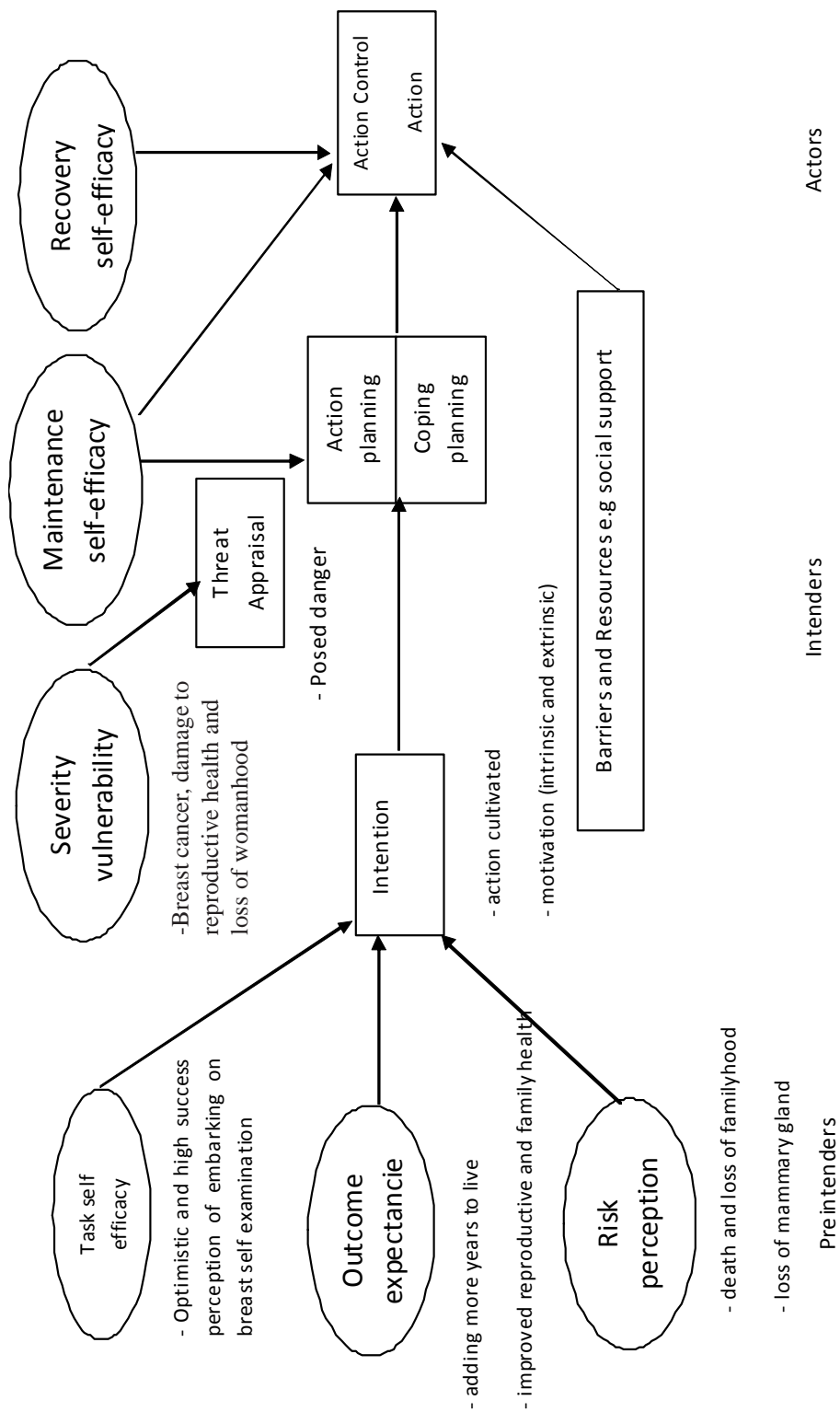
Health behavioural change refers to a replacement of health comprising behaviours to enhance health promotion. The Health Action Process Approach is a motivationally inclined theory that explains behaviours and provides interventions towards healthy living. The theory is developed by Ralf Schwarzer (2008). HAPA suggests that the adoption, initiation and maintenance of health behaviour should be conceived of as a structured process including a motivation and volition phases. The former describes the intention formation, while the latter refers to planning and action. The model expresses the particular role of perceived self-efficacy at different stages of health behaviour change (Sutton, 2005). The application of HAPA will follow the stage approach which assumes that change is non-linear but consist of several qualitative steps that reflect different mindset of people.

HAPA is designed as a sequence of the continuous self regulatory process, a goal setting phase (motivation) and a goal-pursuit phase (volition) which is subdivided into pre-action phase and an action phase. This will subsume self efficacy, outcome expectancies, and risk perception as distal predictor intention and action planning to help redirect action towards promoting adaptive behaviour of breast self examination (BSE). The motivation phase provides a framework for individuals to form an intention to either adopt a precaution measure or change risk behaviour (Schwarzer, 2008). The self efficacy and outcome expectancies are seen as the

major predictor of intentions. This self efficacy explains an individuals belief in his/her ability to carry out the recommended course of action successfully for improved health status, within the contingent of time, resources and values, if an individual's belief can execute a preventive behavioural health, such an individual will not hesitate to embark on breast self examination in this line of practice. Hence, the tendency of possibility in carrying outcome expectancies entails individual injury on possible consequences or benefits of carrying out an action (Schwarzer, 2008). Adequately persuading a woman to believe on the benefits of breast self examination as early detection of carcinogenic lumps is the only panacea to breast cancer development, and women with other mammary gland infections will adopt such recommendations to stay healthy. It is noted that outcome expectancies may have a strong direct influence than self efficacy. It is only after a sufficient level of experience is attained, that self efficacy becomes more influential in forming an intention (Schwarzer, 2008; Gochmann, 1997).

The volition phase otherwise called the action phase which comes immediately after intention has been nursed, this will be looked at in three bases - cognitive, behavioural and situational context (Schwarzer, 2008). The cognition, explains action plan and action control. The individual after nursing healthy intentions towards breast self examination instigates and controls the action through self-regulatory process under dictated instruction by a health facilitator to enhance the need, belief, value and self possibility to carry the action out as adaptive as possible. This is greatly influenced by self-efficacy of the individual since the number and quality of action plans are dependent on one's perceived competence and experience.

Once an action has been initiated, it has to be controlled by cognition in order to be maintained. The behavioural context emphasizes the adaptive engagement of the action by preventing it from being interrupted and abandoned prematurely due to incompatible competing intentions and time factor. This could be sustained by strict follow up, educating on risk predictors and benefit thereto (Sniehotta, Schwarzer, Scholz U. and Scholz B., 2005). The situational context provides the intents of self doubts, barriers and cut of health awareness (Miller and Rollnick, 2012). Self doubts and other barriers need to be removed, the suppression of health detrimental action requires effort and persistence for changing action of poor attitude towards breast self examination, hence health facilitators need to create plan that will be monitored for adaptive engagement. Situational barriers as well as opportunities have to be considered and checked properly to ensure the adaptive engagement of breast self examination. The volition phase contains action plans and action control and is strongly influenced by perceived self efficacy, as well as by perceived situational barriers and support (Schwarzer, 2008; Sniehotta, Schwarzer, Scholz and Scholz, 2005).



**Fig. 1:** Modified HAPA and PMT to promoting adaptive engagement toward breast self examination (Schwarzer, 2008 and Rogers 1975)

## **Strengthening Health Action towards Breast Self Examination through Protection Motivation Theory**

Adaptive behavioural change is sustained through adequate motivation. Protection Motivation Theory (PMT) is propounded by Rogers (1975). Protection motivation theory was significantly created to help clarify fear appeals and is one model that explains why people engage in unhealthy practices and offers suggestions for changing those behaviours. It describes adaptive and inadaptive coping with a health threat as a result of the appraisal process. It outlined four constructs towards behavioural change and these are related to breast self examination.

***Perceived Severity of a threatened Event:*** This explains that an individual with opinion of the fatality rate of a disease situation will direct action to prevent its incidence (Miller and Rollnick, 2012; Roger, 1975). Cognition is imperative in this context. A woman who has a good knowledge on the health implication of breast cancer in relation to reproductive and family health such as loss of breast, prime death leaving children young, spread of cancer to other vital organs will adopt good behaviours to avoid health risk action and promote breast self examination as its panacea.

***Perceived probability of the occurrence or vulnerability:*** Engaging in related health risk factors of breast cancer such as excessive alcohol consumption, smoking, use of hormonal contraceptives, sedentary lifestyles, obesity and wearing tight fitted bra explain the susceptibility of health condition. A woman with valid perception of being exposed to an unhealthy condition will direct her actions to prevent its occurrence by disengaging herself from health risk behaviours prone to breast cancer and other mammary gland infections.

***The efficacy of the recommended prevention behaviour (the perceived response efficacy):*** Efficacy is the individual expecting that carrying out recommendations can remove the threats (Rogers, 1983). This is in line with outcome expectancies explained earlier in HAPA. A woman who is adequately informed on the benefits to be derived from adaptive breast self examination such as prolonged life, early detection of lumps to promote survival, preventing other mammary gland infection will reinforce attitudes and behaviours towards engaging in breast self examination.

***The perceived Self Efficacy:*** This explains the individual competency to carry out the action (Sniechotta, 2009). Adequate demonstration by health facilitators and all concerned will promote self efficacy. Within the contingent of time, resources, socioeconomic status, values and beliefs, if an individual believes she can execute the recommended preventive behaviours successfully; such an individual will not hesitate to carry it out. This is in line with women with poor attitude toward breast self examination. Basically, Protection Motivation Theory is a mediating variable whose function is to arouse, sustain and direct protective health behaviours (Boer



and Segdel, 1996). According to PMT, environmental and personal factors combine to pose a potential health threat.

### **Reinforcing and Maintaining Behavioural Change/Health Promotion**

Many ill health conditions today are directly and indirectly related to our behaviour, both the communicable and chronic diseases. Every woman needs to adopt Breast self examination as adaptive behaviour to ensure prompt detection of any abnormality. Health risk factors associated with breast cancer should be avoided, the cognitive and situational context to enhance its adaptive engagement of periodic examination. Good intentions are more likely to be translated into action when people plan, where and how to perform the desired behaviour. Intention fosters planning which in turn facilitates behavioural change (Gochmann, 1997). Parameters to sustain healthy action should be provided, that is, organizationally, environmentally, sociologically, this is in line with health education definition (Owie, 2005) as the systematic process of persuading people to adopt healthy lifestyles that will promote their health and reject those that are detrimental to their health using health promotion parameters. Behavioural change must be followed up and maintained to become a habit. A healthy intention toward breast self examination though will start disjointedly but with adequate intrinsic motivation, becomes adaptively engaged in. This is imperative to promote reproductive and family health.

## **CONCLUSION AND RECOMMENDATIONS**

In the foregoing pages of this work, Health Action Process Approach and Protection Motivation Theory were critically analyzed to examine its application to redirect actions towards periodic or adaptive engagement of breast self examination via motivation and outcome expectancies indices that will help in prompt curative measures and overall reproductive health of the woman. The theories help to create healthy intention and action that promotes health. Breast cancer is a deadly disease as prompt attention is the key to survival. Health risk behaviours associated with the disease should be avoided and modified where and when necessary. Basically, attention should be given to self efficacy and outcome expectancies which have more intensity to foster adaptive behaviour towards breast examination. For the promotion of adaptive engagement of breast self examination deduced from the theories discussed in this work, the following recommendations are put forward.

- (a) Females should be encourage in breast self examination through persuasion towards the behaviour, hence reinforcing focus towards self efficacy and outcome expectancies.
- (b) Voluntary and non-voluntary health agencies should periodically organize seminars, conferences and other platforms to educate women on approaches and importance of breast self examination.

- (c) Good habit cultivation and maintenance should be engineered early in life by feeding the curriculum with behavioural concepts and values.
- (d) Tertiary institutions should provide room for reproductive health examination unit either administratively or via student union government coordinated by the welfare unit.
- (e) Marriage counseling should incorporate breast self examination and its teachings to help women practice it.
- (f) Various interventions provided for promoting healthy behaviour should be evaluated periodically to ascertain progress (Aideyan, Igudia and Owie, 2013).

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