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Fatalism Reconceptualized: A Concept to Predict Health Screening Behavior

Paulin Tay Straughan^{1,3} and Adeline Seow²

Social norms governing health seeking behavior affect perceived self-efficacy which in turn determines if self-directed change is sustained. Using this argument, we contextualized the link between social background and preventive health behavior. We argued that fatalism influenced self-efficacy, which in turn affected acceptability of four screen tests: mammography, clinical breast examination, breast self-examination, and the Pap Smear Test. A seven-item index was developed to measure fatalism. From data obtained through a community survey of women between 50 to 65 years, the index was validated. Logistic regression was conducted to verify the empirical link between fatalism and the four screen tests. A multivariate model that explained variation in fatalism was derived and the results showed that emotional support from family and friends, informational support from personal physicians, as well as social background factors (education, ethnicity, income, and age) were significantly correlated to fatalism. By improving our understanding of the social obstacles that deter women from adopting regular screening, more effective intervention can be employed to improve acceptability of these screen tests.

KEY WORDS: fatalism; social support; mammography; Pap smear; breast cancer screening.

INTRODUCTION

In the study of preventive health behavior of non-white populations, it is not always feasible to adopt models that are widely used in western, white middle-class context. For example, the Health Belief Model was de-

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veloped and tested on predominantly white, middle-class populations, but not well-tested on minority or low income populations (see Duke *et al.*, 1994). More importantly, the Health Belief Model is based on a rational choice model that assumes adherence to western biomedical claims is rational. However, rationality itself is a social construction that is based on cultural and social norms.

A more useful model for understanding and changing health behavior is Bandura's Social Cognitive Theory. This triadic reciprocal causation model highlights the importance of perceived self-efficacy in affecting self-directed change and maintenance of health promotion behavior. Perceived self-efficacy refers to the belief that one can exert control over one's own motivation, thought process, emotional states as well as patterns of behavior (Bandura, 1996; p.26).

This notion is particularly useful for understanding acceptance of screen tests like mammograms, Pap smears, and breast self-examinations. In Singapore, breast cancer is the most common cancer among females (accounting for 17% of all cancers diagnosed), followed by cervical cancer (Lee *et al.*, 1992). The effectiveness of the mammogram and the Pap Smear Test in detecting early stages of breast cancer and cervical cancer respectively are well documented (Forrest, 1986; Miller, 1985a; National Institutes of Health, 1980; Canadian Task Force, 1976). For both types of cancers, early detection decreases mortality significantly (Miller, 1985b; Yu *et al.*, 1982). From a scientific perspective, it appears logical to argue that public acceptability of these health screening procedures is dependent on the clinically proven efficacy of the respective tests. However, to the contrary, the utilization of these well established screening tests is still low (Seow & Lee, 1994). The effectiveness of these screen tests in mortality reduction depends not only on the accuracy of the tests, but also on the uptake by the target population (Forrest, 1986; Tubiana, 1993). Clearly, having access to information is not enough to motivate women to adopt regular screening. Cancer screening for an asymptomatic population is a self-directed activity that requires a strong self-belief in one's efficacy to exercise personal control over one's life events. When perceived self-efficacy is low, self-doubt overrides knowledge and self-protective actions.

One cause of low self-efficacy in cancer screening is the notion of fatalism. Women who are very fatalistic tend to have low self-efficacy. They are not likely to participate in screening tests since they believe that there is very little they can do to change their fate. The primary aim of this paper is to derive a conceptual understanding of fatalism and develop an empirical tool to measure this concept. A second aim is to test the measure in predicting health screening behavior.

LAY EPIDEMIOLOGY AND FATALISM

Fatalism is often inaccurately perceived as encompassing elements of ignorance and irrationality. This largely stems from its association with the health locus of control described in psychology which placed people in one of two polemic categories: the lifestylists—with internal locus of control, and the fatalists—with external locus of control (Wallston & Wallston, 1982). People who believed that health is governed by external, unknown factors (i.e., with external locus of control) are perceived as being ignorant and in need of some education. Thus, health promotion became “a struggle between a modern belief in lifestyle and an atavistic culture of ‘fatalism’” (Davison *et al.*, 1992; p.676).

Davison *et al.* contended that this conceptual understanding of fatalism is inadequate and erroneous. Empirical evidence showed that people seldom embraced a totally “internal” or “external” belief in determinants of health. Rather, health attitudes operated on a continuum, and most people would acknowledge that it is important to strive for good health. As opposed to the dichotomy between “fatalism” and “lifestylism” in health attitudes, these authors argued for a “delicate and reflective balance between the pursuit of an almost universally valued goal (good health) and the realistic recognition that some barriers exist on the road which may not be surmountable through personal, individual effort” (p. 679).

Fatalism is not irrational. Rather, women who are fatalistic are acting rationally when they avoid screening tests. This rationalization of the seemingly irrational is reinforced in part by the practice of lay epidemiology. Variation in the incidence and prevalence of diseases is attributed partly to the lay construction of disease etiology (Brown & Williams, 1996; Popay, 1995; Backett, 1992). Nonmedical participants attach social and cultural meanings to incidence of health and illness. These meanings are reinforced in part by the limited understanding of the etiology of diseases, both from the lay perspective as well as from the bio-medical perspective. The result is often an explanatory paradigm that is not necessarily grounded in scientific evidence but appears logical as well as rational to the bearer of the paradigm. Because these socially constructed epidemiological paradigms offer logical accountability to otherwise mystified notions of disease and ill-health, it is often very difficult for health care professionals to contradict lay notions of well-being.

Lay epidemiology is further reinforced by the advent of the preventive health movement. With current advances in biomedical technology, the etiology of many diseases has become increasingly intelligible. With early detection, the progression of many diseases can be arrested, thus reducing morbidity and mortality. These developments have been accompanied by

a zest for advancing preventive health lifestyles, and the message projected to the lay public is, "If you do this . . . you will not get sick." In the propagation of prevention health measures, the unknown causes of diseases are marginalized in the explanatory paradigm of health and illness. One paradoxical effect of this movement is the highlighting of anomalies, that is, people who embrace healthy lifestyles and still get sick, and people who live dangerous lifestyles and do not get sick. As noted by Davison *et al.* (1992),

Because the everyday practice of lay epidemiology detects both anomalous deaths and unwarranted survivals, the tension or conflict between general principals and individual events is constantly made plain to members of society and has to be dealt with (p.683).

This conflict is resolved through the rationalization of the irrational or the belief in the notion of fate or destiny.

CONCEPTUALIZING FATALISM

In the formative phase of this research, we conducted focus group interviews with 24 Chinese women. During the interviews, the women were asked to talk about their attitudes toward breast cancer, cancer detection, breast self-examination and mammography (see Straughan & Seow, 1995, for detailed findings). From the qualitative interviews, we found that non-acceptability of breast screening was often associated with fatalistic attitudes toward cancer. One common response to non-acceptability of breast screening was: ". . . If you don't die of this, you will die of that anyway!" (Straughan & Seow, 1995:434). Another finding revealed that one method of "preventing" the onset of breast cancer was to avoid talking about it or avoid tempting fate. Thus, among the women we interviewed, perceived susceptibility to breast cancer was confounded by fatalistic attitudes. Instead of confronting their fears of dying from breast cancer by going for screening tests (as hypothesized in the Health Belief Model), our respondents tend to avoid discussing issues relating to cancer all together as a "preventive" measure. Based on these findings, we developed a scale that measured this fatalistic attitude towards health and illness.

Following the scholarship of Davison *et al.*, (1992), we defined fatalism as a belief that some health issues are beyond human control. It encompassed notions of luck, fate as well as destiny. Fatalism involved the notion of predestination i.e., there are some things in life (including the onset of serious illnesses) that would occur regardless of whatever actions we took. However, there are means devised to predict and manipulate one's fate. Examples of manipulative methods included touching wood when mention-

ing misfortune, crossing one's fingers, and refraining from discussion/mention of misfortune in order not to tempt fate. Like Davison, we argued that fatalism varied along a continuum which ranged from the very fatalistic to a very strong belief in one's ability to control outcomes. Based on this conceptual understanding of fatalism, we developed an index to measure fatalistic attitudes among Singaporean women.

METHOD

Participants

Face-to-face interviews were conducted on a random probability sample of 339 women between 50 and 65 years old. The sample profile is summarized in Table I. Most of our respondents were Chinese, married with children, and had little formal education. In light of the average age of the group, this is not surprising. Older Singaporeans tend to be less educated as most of them grew up at a time when the nation was still developing and formal education was a luxury rather than a norm, especially for girls. The median household income for the sample was \$2250.00. Religion correlated very closely with ethnicity. Most of the Chinese respondents were Buddhists, most of the Malays were Muslims, most of the Indians believed in Hinduism, while most of those in the other ethnic groups were Christians. Overall, the sample profile reflected the trend in the larger Singapore population.

Measures

From the findings of our focus group discussion, we created a seven-item index which we labeled FATE to measure fatalist attitude toward health and illness. We conceptualized FATE to have three distinctive dimensions. The first dimension focused on fatalistic attitudes toward health in general. Three items were constructed to measure this dimension. The second dimension focused on fatalistic attitudes toward medical screen test. The third dimension measured individual responsibility toward well-being.

Procedure

Our respondents were interviewed in their homes and each interview took between 45 min to an hour. The 12-page questionnaire was translated

Table I. Demographic Description of Respondents

Variable	<i>n</i>	%
Marital status	338	
Never married	28	8.3
Married	245	72.5
Widowed	65	19.2
Ethnicity	338	
Chinese	285	84.3
Malay	30	8.9
Indian	17	5.0
Other	6	1.8
Religion	337	
Buddhism	179	53.1
Christianity	76	22.4
Islam	34	10.1
Hinduism	8	2.4
Other	40	11.9
Education	337	
No formal education	113	33.5
Some primary school	57	16.9
Completed primary school	39	11.6
Vocational training	7	2.1
GCE 'O' Levels (secondary school)	66	19.6
GCE 'A' Levels (post-secondary)	23	6.8
Diploma	14	4.2
Degree	11	3.3
Other	7	2.1
	Mean	SD
Number of children	3.6	2.1
Age	58.4	5.3

into Mandarin and Malay. The translations were checked for validity and reliability. All the interviewers were trained to conduct the interview in English and a second language. The respondents were interviewed in the language in which they were most conversant. The response rate was 76%.

RESULTS

Validation of Fatalism

Confirmatory factor analysis was conducted using varimax rotation. The results from a scree plot of the eigenvalues showed that the seven items should be grouped into three factors. This supported our conceptual understand of the index. The factor analysis yielded three factors that were labeled: (1) control, (2) responsibility, and (3) repercussions (see Table II). These three factors explained 77.3% of the variation in FATE.

Table II. Factor Structure and Item Loadings for Index on FATEtalism

Items	Factor 1	Factor 2	Factor 3
Factor 1: Control			
Serious diseases like cancer are all fated; we cannot prevent them from happening	0.89	0.05	0.17
If you are fated to get cancer, you will get cancer; there is nothing you can do to change fate	0.88	0.10	0.13
Life and death are all predestined; there is nothing we can do to change our destiny.	0.82	-0.01	0.20
Factor 2: Responsibility			
Whether I enjoy good health or not depends a lot on how well I take care of myself.	-0.20	0.86	0.12
Many types of diseases can be prevented; it's up to us to do something about it.	0.12	0.85	0.13
Factor 3: Rationalization			
If we feel well, we should not go looking for trouble by having medical screen tests.	0.20	0.05	0.87
If you don't die from this, you'll die from that. So there's no point in taking screening tests	0.19	0.24	0.81

Note. Boldface indicates the items that belong to the same factor.

Reliability analysis was conducted on FATE. The reliability coefficient for this index (Cronbach's Alpha) was 0.7676, which confirmed that the seven items held together well as an index. Scores on the FATE index ranged from 7 through 56, with low scores indicating a more fatalistic outlook with regard to one's health status, and high scores indicating a belief that the individual has greater control of her health status. The empirical findings supported our argument that attitude toward fatalism ranged on a continuum. No one scored 7 on the index (i.e., extremely fatalistic), and only 1.9% scored 56 (i.e., they felt in complete control of their health). The mean for FATE was 31.6 ($SD = 10.2$).

Fatalism and Preventive Health Behavior

This notion of fatalism was developed in the context of health promotion behavior. In the course of validating the new index, FATE, we needed to establish the empirical relationship between the index and some forms of preventive health behavior. Using the survey data, we correlated FATE with four preventive health procedures: mammography, the Pap Smear Test, breast self-examination (BSE), and clinical breast examination (CBE). Since all the health behaviors were coded into dichotomous variables

Table III. Logistic Regression With FATE as Predictor

Variable	Odds Ratio	% Accurate Prediction
Mammography	1.03*	66.7
Clinical breast examination	1.08*	66.6
Breast self-examination	1.07*	63.3
Pap Smear Test	1.06*	71.2

*p < .05.

(where 0 = never had procedure and 1 = ever had procedure), logistic regression was used to establish the statistical correlations. The advantage logistic regression has over the conventional difference of means test is that, in addition to identifying statistically significant associations, the logistic model also derives the amount of variation in screening behavior that is due to fatalistic attitude.

The findings of the four logistic regressions models are summarised in Table III. Two sets of information are provided: the exponential of the coefficient [Exp(B)] which gives the odds of adopting a health screening test, and the performance of the model in predicting health screening behavior. In logistic regression, the performance of the model is evaluated based on improvements made in prediction compared to a 50% accuracy rate and thus, by using fatalism to predict whether a woman had a mammogram before, we improved our prediction by about 17%. In all four models, using the fatalism index to explain the respective preventive health behaviors helped improved our accuracy in prediction. From the Exp(B), we see that the odds of a woman practicing any of the four preventive health behaviors increased as they became less fatalistic. For example, for every 1 point increased in FATE (i.e., she became less fatalistic), the woman increased her odds of going for a Pap smear test by 1.06 times.

The logistic results lend support to Bandura's argument that perceived self-efficacy correlates with health promotion behavior. Women who were more fatalistic had lower perceived self-efficacy. This in turn had a significant bearing on their decision to adopt preventive health measures. Those who embraced the belief that life events like catastrophic illnesses were "fated" were less likely to engage in screening measures that detect the onset of breast and cervical cancer. Conversely, women who reported "proactive" attitudes were more likely to adopt early detection measures like breast self-examination, clinical breast examinations, mammography, and the Pap smear test.

The Effects of Social Factors on Fatalism

To further our understanding of fatalism, we investigated how the concept is influenced by the social environment. A multivariate model that explained differential levels of fatalism was created. Three sets of predictor factors were included to explain variation in fatalism: influence of emotional support, influence of informational support, and social demographic factors. Seven aspects of the women's social demographics were taken into consideration: marital status, age of their eldest child, ethnicity, religion, age, formal education, and income.

Ethnicity and religion tapped into cultural variations on health beliefs. There were four ethnic groups in our sample: Chinese, Malay, Indian, and "Other" (which captured all the non-specific minority groups). We hypothesized that the Chinese were more fatalistic about their health because our concept of "fate" was drawn largely from earlier research on Chinese women (Straughan & Seow, 1995). Religion was categorized into four groups: Buddhism, Christianity, Islam, Hinduism, and "other religion." We hypothesized that the Buddhists were more fatalistic than the other groups because Buddhism is mainly a Chinese religion. In the multiple regression analysis, the Chinese and Buddhists were the reference groups. Our third hypothesis argued that women who were more cosmopolitan were more likely to harbor a sense of control over life events. We conceptualized the more cosmopolitan women to be younger, better educated, and commanding a higher income.

With respect to marital status, we hypothesized that women who were widowed were more likely to be fatalistic about life events than those who were married or single. This is because widows were more likely to be older and less educated. In addition, social support theories highlight the spouse as one of the most important sources of social support in the family (Durkheim, 1951). Thus, compared to their widowed counterparts, married women were further advantaged with the presence of informal social support from their spouses. We argued that women with younger children were more likely to be pro-active about health because they perceived the need to stay healthy so that they could continue to be available for their children. Thus, we hypothesized that the older the first-born child was, the more fatalist the women would be.

The social support literature also points to the influence of our "significant others" on our beliefs, attitudes, as well as behaviors (Berkman, 1985; Berkman and Syme, 1979; Calnan, 1985; Gravell *et al.*, 1985; Litwak & Messeri, 1986; Straughan, 1992). We conceptualized influence from informal social networks to come from two different primary groups: the family network, and the informal network of friends. Since our research focused

on predicting preventive health behavior, we measured influence of significant other by asking our respondents whether they had family members (or close friends) with whom they were comfortable discussing health issues like cancer. This indicated the presence of emotional support (see Helgeson & Cohen, 1996).

We found in our field work that women who were extremely fatalistic were also very reluctant to talk about cancer with our interviewers. They believed that it was “bad luck” to talk about such a catastrophic event, and that talking about cancer might actually increase one’s likelihood of contracting the dreaded disease. In light of this finding, we argued that if a woman felt comfortable about discussing cancer with a significant other, it suggested that she was less likely to be superstitious about cancer. In addition, since she had someone to discuss cancer with, it points to the presence of an informal support group member who was also less superstitious about cancer. Therefore, we hypothesized that women who had family members (FAM2) or close friends (FRIEND2) to discuss cancer with were less fatalistic towards their own health.

Finally, we also included an indicator measuring the effect of the formal health care provider. We asked if our respondents had a doctor whom they went to frequently for health advice (DOC1). Women who had doctors whom they consulted with regularly were more likely to accept the biomedical explanations for health and disease because of consistent exposure to western medicine through prolonged contact with their physicians. It is important that they had *regular* physicians (as opposed to incidental visits to different doctors) because they were more likely to be influenced by physicians with whom they were familiar. A “regular doctor” suggested that the physician was someone who was trusted, and whose expertise and opinions were respected by the patient. Thus, this physician may serve as a bridge between the lay world and the biomedical world. As a result, we hypothesized that women with regular physicians were less fatalistic toward health matters. As the physician was likely to provide information, we labeled this informational support.

All together, 10 independent variables were included in the multiple regression model predicting FATE (see Table IV). The adjusted *R*-square showed that 23% of the variation in FATE was explained. The *R*-square was statistically significant ($p < 0.00005$), indicating that the predictive model was good.

At the 90% confidence level, eight predictor variables were statistically significant. Women who were more fatalistic with regards to effecting their own health status were more likely to be Chinese (rather than Malays), widowed (as opposed to being married), less educated, older, with lower

Table IV. Multiple Regression Model Predicting FATE

Independent Variable	<i>B</i>	β
Married	3.71	0.15**
Single	-0.03	-0.0004
Fam2	0.57	0.02
Friend2	1.84	0.09*
Doc1	2.08	0.09*
Educ	1.49	0.32**
Age	0.21	0.11*
Income	0.00054	0.09*
Malay	6.38	0.18*
Indian	2.61	0.06
Other	2.23	0.03
Christian	-1.39	-0.05
Muslim	-3.58	-0.11
Hindu	-0.75	-0.01
Other religion	-1.16	-0.04
Age child	-0.17	-0.13*

p* < 0.10.*p* < 0.05.

household income, with older children, with no regular doctor, and with no close friend to discuss cancer.

DISCUSSION

Results from a cross-sectional survey cannot provide information on cause and effect. At best, they establish statistical correlations. However, in the discussion and interpretation of these statistical correlations, some hypotheses on how and why the predictor variables are related to breast screening behavior and cervical cancer are raised to provide a more comprehensive perspective of the relationship.

Emotional Support

From our data, it appears that women who were more embedded in both informal social support networks were less likely to be fatalistic. Social embeddedness was manifested in four ways: having a confidant to discuss health issues with, being married and having younger children (indicating the presence of emotional support), and having a regular doctor (indicating informational support from the health care system). We will first discuss the implications of emotional support on health attitudes.

Having a confidant to discuss health issues like cancer tends to alleviate the mystification of the disease. Thus, it is not surprising that those with close friends were less likely to embrace fatalistic attitudes. Being able to articulate our fears and concerns about matters that seem to be beyond our control tends to help us overcome some of these anxieties. In our discourse of illness and disease, we are also able to arrive at some agreement on pro-active measures we can take to promote health. In general, women who are embedded in informal social networks have greater access to sources of emotional support, advice, and encouragement. As a result, their perceived self-efficacy with regards to cancer prevention is higher than those who continue to view cancer as an enigma.

When dealing with health conditions that are tied to one's lifecycle (like breast cancer), it is not unusual to find that the influence of friends is significant. Most of our friends tend to be our peers and therefore, they are at a similar stage in the lifecycle and share similar health concerns. Thus, we find that women are likely to discuss their health concerns (especially those involving women's health) with their contemporaries.

Being married was also an important factor in predicting fatalistic outlook. In our model, marital status was divided into three categories: married, single, and widowed. The findings showed that married women were less likely to be fatalistic compared to those who were widowed. Several explanations could be used to account for this association. First, in terms of social support, married women were more likely to be socially integrated compared to those who were widowed. The spouse is often regarded as the most important source of emotional support. Thus, women with husbands had someone whom they could share their most intimate concerns with.

In addition, married women were more likely to benefit from the experience of social embeddedness. That is, because of the presence of a significant other (the spouse), they were more likely to embrace a proactive attitude toward the promotion of a healthy lifestyle—for the sake of their spouse. Similarly, women with younger children were less fatalistic because it is likely that younger children were still dependent on them.

Informational Support

We hypothesized that women who had a regular physician were less likely to be fatalistic than those who did not consult a regular physician. This is because the physician is likely to be a source of informational support. Simply having contact with a physician is not as effective. Being la-

beled a “regular” physician suggests that the physician had gained the trust and respect of his/her patient, and that the patient continued to seek the same physician’s advice on health matters. Through regular contact with a professional health care provider, the women are exposed to scientific medical explanations for the etiology of disease and as a result, they become less fatalistic toward life events.

Social Demographics

Four of the demographic background factors, education level, household income, age and ethnicity emerged as statistically significant predictors of fatalism. As hypothesized, the more cosmopolitan women were less likely to be fatalistic. These women were younger, more educated, and had a higher income. Because of their profile, they were less likely to embrace traditional beliefs and values. Instead, they were more likely embrace modern, western ideals that promoted pro-active notions of self-control. This is especially true for women who were more educated. Formal education opened the channels to, among other things, accessing medical information and knowledge. In addition, formal education operated along the ideals of scientific reasoning. The aim of education is to accumulate knowledge to conquer the unknown. Thus, it is not surprising that people endowed with more education were less likely to embrace beliefs of fate, luck and predestination.

The Chinese women in our study were more likely to display fatalistic attitudes than the Malay women. Aside from the fact that our definition of fatalism was derived primarily from our focus group interviews with Chinese women, another reason for this association could be that notions of luck and predestination played more pivotal roles in the Chinese culture than in the Malay culture.

Consistently, empirical research showed that there are ethnic differences in morbidity and mortality rates with regards to cancer (Backett, 1992; Chia et al., 1995; Simon & Severson, 1996). Many factors have been suggested to explain the role ethnicity plays in health and illness. They included differences in genetic makeup, social class, lifestyle, diet, stress alleviation strategies as well as differential access to social support. This research suggests that one factor that might explain differences in morbidity and mortality among the various ethnic groups is cultural norms toward the notion of fate which ultimately affects attitude towards disease prevention and health promotion.

Conclusion—Implications for Policy Implementation

Link and Phelan (1995) argued that simply correlating social risk factors like ethnicity and social class to health behavior is not sufficient. In the interest of promoting health seeking behavior, we need to contextualize risk factors. In this paper, we have contextualized the link between social background and health screening behavior. We showed that two concepts are linked via fatalist attitudes toward health. Building on the scholarship of Davison et al. (1992) and others, we derived a conceptual and operational definition of fatalism. The seven-item index developed was validated and established to be empirically related to four screening behaviors. As hypothesized, fatalism is a social barrier to pro-screening behavior. Women who were more fatalistic were less likely to be pro-active in health promotion. To improve acceptance of health screen tests, we have to alleviate women's level of fatalism. To facilitate this, we need to understand what affects one's level of fatalism. We developed a multiple regression model that predicted fatalistic attitudes. The results highlighted the importance of informal social support, formal education, and ethnicity. The findings of this paper are significant for policy implementation.

Kleinman (1978) argued that medical systems do not exist in isolation. Instead, the meanings and norms with regards to health-related issues are attached to particular social relationships and social settings. Thus, to ensure that the target population is receptive to preventive health interventions, we must overcome barriers due not only to lack of information, but also social and cultural barriers. Unless we can identify and alleviate social and cultural barriers to health seeking behavior, there will always be a large segment of the population who will be systematically deprived of the benefits of early detection.

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REFERENCES

- Backett, K. (1992). The construction of health knowledge in middle class families. *Health Education Research: Theory and Practice*, 7, 497-507.

- Bandura, A. (1994). Social Cognitive Theory and exercise of control over HIV infection. In R. J. DiClemente & J. L. Peterson (Eds.), *Preventing AIDS: Theories and methods of behavioral interventions* (pp. 25-59). New York: Plenum Press.
- Berkman, L. F. (1985). The relationship of social networks and social support to morbidity and mortality. In S. Cohen & S. L. Syme (Eds.), *Social support and health* (pp. 241-262). Orlando: Academic Press.
- Berkman L. F., & Syme S. L. (1979). Social networks, hosts resistance, and mortality: A nine-year follow-up study of Alameda County residents. *American Journal of Epidemiology*, *109*, 186-204.
- Brown, P. (1995). Naming and framing: The social construction of diagnosis and illness. *Journal of Health and Social Behavior, Extra Issue*, 34-52.
- Cainan, M. (1985). Women's beliefs and feelings about breast cancer and its control. *Health Education Journal*, *44*, 74-75.
- Canadian Task Force. (1976). Cervical cancer screening programs: the Walton report. (Report of the Task Force Appointed by the Conference of Deputy Ministers of Health). *Canadian Medical Association Journal*, *114*, 1003-1033.
- Chia, K. S., Lee H. P., Seow, A., & Shanmugaratnam, K. (1995). *Trends in cancer incidence in Singapore 1968-1992*. Singapore: Singapore Cancer Registry.
- Davison, C., Frankel, S., & Smith, G. D. (1992). The limits of lifestyle: re-assessing "fatalism" in the popular culture of illness prevention. *Social Science and Medicine*, *34*, 675-685.
- Duke, S. S., Gordon-Sosby, K., Reynolds, K. D., & Gram, I. T. (1994). A study of breast cancer detection practices and beliefs in black women attending public health clinics. *Health Education Research*, *9*, 331-342.
- Durkheim, E. (1951). *Suicide: A study in sociology*. New York: The Free Press.
- Forrest, A.P.M. (1986). *Breast cancer screening*. (Report to the Health Ministers of England, Wales, Scotland and Northern Ireland). London: Her Majesty's Stationery Office.
- Gravell, J., Zapka, J. G., & Mamon, J. A. (1985). Impact of breast self-examination planned educational messages on social network communications: an exploratory study. *Health Education Quarterly*, *12*, 51-64.
- Helgeson, V. S., & Cohen, S. (1996). Social support and adjustment to cancer: reconciling descriptive, correlational, and intervention research. *Health Psychology*, *15*(2), 135-148.
- Kaplan, R. M. (1996). Measuring health outcomes for resource allocation. In R. G. Frank, G. R. Bond, & J. H. McGrew (Eds.), *Psychological practice in a changing health care system* (pp.101-133). New York: Springer Publishing Company, Inc.
- Kleinman, A. (1978). Concepts and a model for the comparison of medical systems as cultural systems. *Social Science and Medicine*, *12*, 85-93.
- Lee, H. P., Chia, K. S., & Shanmugaratnam, K. (1992). *Cancer Incidence in Singapore*. Singapore: Singapore Cancer Registry.
- Link, B. G., & Phelan, J. (1995). Social conditions as fundamental causes of disease. *Journal of Health and Social Behavior, Extra Issue*, 80-94.
- Litwak, E., & Messeri, P. (1989). Organizational theory, social supports, and mortality rates. *American Sociological Review*, *54*, 49-66.
- Miller, A. B. (1985a). *Screening for cancer*. Toronto: Academic Press, Inc.
- Miller, A. B. (1985b). Screening for cancer of the cervix: Implications for public health policy. *Journal of Public Health*, *6*, 43-57.
- National Institutes of Health (1980). *Cervical cancer screening: The Pap Smear*. (National Institutes of Health Consensus Development Conference Summary. Vol. 3 No. 4). Washington, D.C.: U.S. Government Printing Office.
- Popay, J., & Williams, G. (1996). Public health research and lay knowledge. *Social Science and Medicine*, *42*, 759-768
- Seow, A., & Lee, H. P. (1994). Prevalence and determinants of cervical cancer screening: a community-based study in Singapore. *Annual Academy Medicine Singapore*, *23*, 342-347.
- Simon, M. S., & Severson, R. K. (1996). Racial differences in survival of female breast cancer in the Detroit metropolitan area. *Cancer*, *77*, 308-324.

- Straughan, P. T. (1992). *Screening for early detection of cervical cancer: the relationship between social integration and preventive health behavior* (Department of Sociology Working Papers No. 111, pp. 1-30). Singapore: National University of Singapore.
- Straughan, P. T., & Seow, A. (1995). Barriers to mammography among Chinese women in Singapore: A focus group approach. *Health Education Research, 10*, 431-441.
- Tubiana, M. (1993). Organisation of screening. *European Journal of Cancer, 29A*, 587-588.
- Wallston, K. A., & Wallston, B. S. (1982). Who is responsible for your health? The construct of health locus of control. In G. S. Sanders, & J. Suls (Eds.), *Social psychology of health and illness*. Hillsdale NJ: Lawrence Erlbaum Associates.
- Yu, S. Z., Miller, A. B., & Sherman, G. S. (1982). Optimising the age, number of tests, and test interval for cervical screening in Canada. *Journal of Epidemiology and Community Health, 36*, 1-10.