Maryland Asian American Cancer Program

Comparative Influence of Cultural Views, Social Norms, and Knowledge of Hepatitis B Screening among Three Asian Sub-populations in Maryland

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Study Objectives

To assess the role of cultural views of cancer (cancer fatalism, belief in self-care, and belief in herbal medicine) in hepatitis B screening behavior, compared with social norms, and knowledge on hepatitis B virus (HBV) transmission mode.

Background

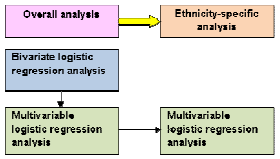
Cultural beliefs of health are critical determinants for health behavior, particularly among immigrant populations (Yu, Wu, & Mood, 2005). Previous research studies show that a strong cultural view is negatively associated with completion of cancer screenings (Liang et al., 2009; Wang et al., 2009). Few studies examined the influence of cultural beliefs of health on hepatitis B screening (Taylor et al., 2004; Coronado et al., 2007; Maxwell et al., 2009). No previous study explored comparative influence of cultural beliefs and social norms on HBV screening.

The Maryland Asian American Liver Cancer Education Program (hereafter the Program), a randomized controlled study, recruited Korean, Chinese, and Vietnamese Americans for hepatitis B/liver cancer education. The present study used only the pre-test data of the Program that captured the information on the past hepatitis B screening behavior, cultural view of cancer, and social norms.

Study Population

- A total of 877 adult Asian American including Korean (294), Chinese (303), and Vietnamese (280), in Maryland, recruited from community-based organizations in Maryland.
- Participated in a self- administered questionnaires of the pre-test.
- Average HBV past screening rate (46.7%), Korean (45.6%), Chinese (54.6%), and Vietnamese (39.4%)

Analysis



Measures

- Primary outcome: Self-reported HBV screening at the pre -test.
- Independent variable: Cancer fatalism, belief in herbal/western medicine, and belief in self-care (Liang et al., 2009).
- Covariates: Descriptive norm and injunctive norm, knowledge on HBV transmission (mutable factors), age, sex, education level, and family history of HBV infection (immutable factors).

Measures (cont'd)

Cancer fatalism (n=839; range: 1 (Strongly disagree) ~ 5(Strongly agree); α=0.86)	**Belief in self-care** (n=867; range: 1 (Strongly disagree) ~ 5 (Strongly agree); α= 0.67)
If I am meant to get cancer, I will get it.	As long as I can take good care of myself and keep myself healthy, I do not need to see a doctor.
If we get cancer, the best way to deal with it is to accept it, just like the old saying: "Listen to heaven and follow fate."	I do not visit doctors if I am not feeling sick.
Health or illness is a matter of fate. Some people are always healthy; others get sick very often.	**Belief in herbal and western medicine** (n=858; range: 1(Strongly disagree) ~ 5(Strongly agree); α=0.81)
I cannot control my destiny.	Herbs are a better choice for preventing diseases than western medicine.
Avoiding cancer is a matter of personal luck.	Herbs are more effective in harmonizing a person's yin-yang than western medicine.
No matter what I do, if I am going to get cancer, I will get it.	Herbs are a better remedy for illness than western medicine.
It is hard to prevent cancer.	We should not take "western" medicine too often, because its chemical ingredients will hurt our bodies.
Getting cancer is like being sentenced to death.	
It is best not to think about cancer. If we think about it too much, we probably will get cancer.	
Descriptive norm (n=842; range: 1 (none) ~ 7(all); α=0.81)	**Injunctive norm** (n=876; range: 1 (strongly disagree) ~ 7(strongly agree); α=0.94)
Do you think how many of your friends living in the U.S. have ever had HBV screening?	My family members would approve my decision to get tested for HBV.
Do you think how many of your family members living in the U.S. have ever had HBV screening?	My close friends would approve my decision to get tested for HBV.
Do you think how many of other Asians living in the U.S. have ever had HBV screening?	Most people I know would approve my decision to get tested for HBV.
	My physician would approve my decision to get tested for HBV.

Results

- Overall, higher fatalism was significantly associated with 22% less odds of the past screening (OR:0.78, 95%CI: 0.63 ~0.98).
- Beliefs in self-care and herbal medicine were not significantly associated with the likelihood of past screening.
- Among other mutable factors, descriptive norm was the strongest predictor (OR: 1.51), followed by injunctive norm and knowledge.
- Significant immutable factors included age, family history and education.

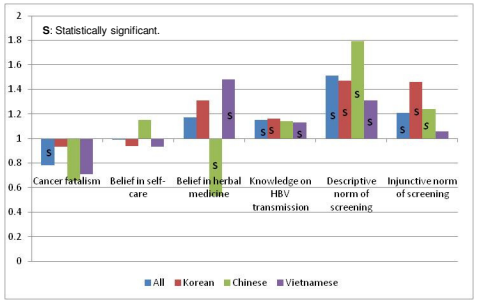
Table 1: Unadjusted and Adjusted Odds ratios for past screening (n=877)

Predictors	Unadjusted OR	95% CI	Adjusted OR (n=793)	95% CI
MUTABLE FACTORS				
Cancer fatalism	0.71***	0.60~0.85	0.78*	0.63~0.98
Belief in self-care	0.84*	0.73~0.96	0.99	0.82~1.19
Belief in herbal medicine	1.02	0.86~1.22	1.17	0.95~1.45
Knowledge on HBV transmission	1.23***	1.16~1.31	1.15**	1.07~1.23
Descriptive norm of hep. B screening	1.63***	1.46~1.83	1.51***	1.34~1.71
Injunctive norm of hep. B screening	1.30***	1.18~1.44	1.21**	1.08~1.35
IMMUTABLE FACTORS				
Age	1.00	0.99~1.01	1.01**	1.00~1.03
Sex (male=1, female=0)	1.30	0.99~1.70	1.30	0.95~1.78
College education (yes=1, no=0)	2.14***	1.61~2.85	1.73**	1.21~2.49
Family history of HBV infection (yes=1, no=0)	2.47***	1.66~3.67	1.85**	1.17~2.92

Results (continued)

- Ethnicity-specific analyses demonstrated variations of significant predictors. Cancer fatalism became insignificant.
- For Koreans, OR for injunctive norms was the largest among the three subgroups.
- For Chinese, descriptive norm was the most important (OR:1.82), followed by injunctive norm and a stronger belief in herbal medicine reduced the odds of screening (OR:0.65).
- Descriptive norm was the strongest mutable predictor for Vietnamese (OR:1.31), followed by knowledge and belief in herbal medicine. A stronger belief in herbal medicine increased the odds (OR: 1.48).

Figure 1: Adjusted Odds ratios for the past screening by ethnicity



Note: The same set of covariates were used for ethnicity-specific multivariable logistic regressions.

Discussion

- The results indicated the importance of social norms and a modest influence of fatalism or belief in herbal medicine in screening behavior.
- Social norm scales more directly related to the screening behavior in the present study, which may support larger ORs of social norms. The cultural view scale does not directly address HBV screening behavior.

Future Research

- Future intervention should address not only an individual's knowledge but also cultural beliefs and social norms, through community mobilizations. Ethnicity-specific factors should be addressed in interventions.
- Need for measurement equivalence analysis with social norm scales and cultural views of cancer among three Asian subgroups.
- Further refinement of measurement of cultural views related to hepatitis B screening/liver cancer.

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