

Determinants of Health Coverage Awareness for Poor Beneficiaries of the Thai Universal Health Coverage Scheme

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Abstract

The Thai universal health coverage scheme (UHCS), or “30 Baht Scheme”, has played an important role in increasing the accessibility of health care services for low income earners. The objective of this paper is to study poor beneficiaries’ awareness of the UHCS. Quantitative research methods were employed. Data were collected, and multiple regression performed, to explore the determinants of health coverage awareness. The regression shows that age, education level, and number of years as card holder are significant determinants of health coverage awareness. Those with a higher age or level of education scored higher than those who were younger or with a low level of education or no education. Those who held UHCS cards for long periods of time possessed higher health coverage awareness than those who had recently received their membership cards. Greater exposure to news and information, therefore, is needed for those of a younger age and those who have less education, if awareness is to be increased. The same applies to those who have only held UHCS cards for a short period.

Keywords: awareness, health coverage awareness, Universal Health Coverage Scheme, Poor Beneficiaries, 30-Baht Scheme

1. Introduction

The Thai Universal Health Coverage Scheme (UHCS), originally known as “30 Baht Scheme”, was established by the Thai government in an effort to provide every Thai citizen with an equally dependable and efficient health care service under section 52 of the National Health Insurance Act of 2001, part of the Thai National Constitution. The scheme aims to provide equitable access to health services for all Thais who are not under any health care schemes. The USC scheme also provides health care or treatment to the poor. It aims to reduce the cost of health care services, particularly for those with low incomes and those otherwise unable to afford treatment. The benefits of UHCS include both preventive and curative care.

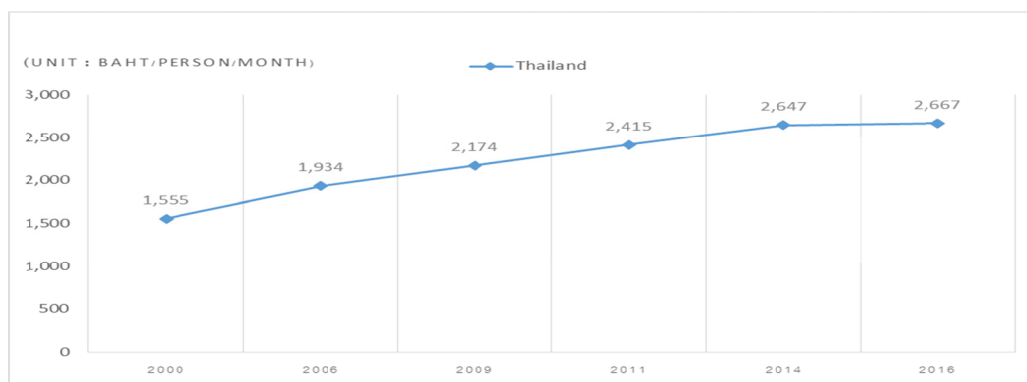


Figure 1. Poverty Line in Thailand for years 2000, 2006, 2009, 2011, 2014 and 2016
Source: National Statistical Office (2017)

According to the Labour Force survey (1988-2016) conducted by The National Statistical Office of Thailand, 8.61% of the Thai population, or around 8 million people, still have an income of less than 2,667 baht per month (see Figure 1). Since the poor, marginalized and most vulnerable populations would have difficult access to information, this research aims to quantify the awareness of the Thai Universal Health Coverage Scheme amongst poor beneficiaries. We also identify the determinants of said awareness score.

This paper addresses the question of whether low income earners are in fact able to access news and information and gain awareness of the UHC scheme, and what factors affect their awareness of the scheme or cause variance in levels of awareness of the scheme. For this report the results of a survey of 1,021 Thai citizens from rural areas in North Eastern Thailand were analyzed. The subjects consisted of low income earners, and were selected from varying geographical areas, ease of transportation, and accessibility to health services.

2. Literature Review

The objective of The Thai Universal Health Coverage Scheme is to provide comprehensive health insurance coverage for the entire population. It aims to enable every Thai citizen to receive necessary health treatment as and when needed, as a basic social right. For this reason, access to news, information and knowledge regarding the scheme is an essential factor in the success of the scheme.

2.1 Universal Health Coverage Scheme

The main objective of the Thai Universal Health Coverage Scheme or “30 baht Scheme” is that every member of the scheme should receive an acceptable standard of health care, and that those members with low income earnings are able to receive government health care services without being charged for it. Subsequent to the Thai government introducing the “30 baht Scheme”, the health care coverage of Thais increased across the population when compared to the level it was prior to the introduction of the policy. Those in low income groups received outpatient services at public health centres, local community hospitals, and provincial hospitals at a noticeably greater rate than in the past. Interestingly, there was also increased use of private clinics and private hospitals among low income earners. Inpatient services used by low income earners in local community hospitals also increased. However, there was a decline in inpatient services used by low income earners, and those in the high earning bracket, seeking treatment or health care at tertiary hospitals. (Prakongsai, Tangcharoensathien, & Tisayatikom, 2007). The UHC also helped reduce many low-income households’ health care service costs, and reduced the number of poor households (V. NaRanong & NaRanong, 2006). Studies of the Thai Universal Health Coverage Scheme showed that those with low earnings have benefited more from the scheme than those with average or high earnings. In addition to this, households’ hospital costs have been reduced after the introduction of the scheme (Tanmantong, 2010).

Research on other countries’ universal health coverage is also available. The study of inequality within the UHC system in Vietnam for instance, which uncovered the fact that those who were retired, disabled or in a low income group actually received unequal treatment when compared to other members of society and that they often received treatment away from main hospitals (Palmer, 2014). After the UHC system was introduced in China, research conducted in 30 provinces in the Szechuan region in years 2004 and 2011 showed that there was a greater level of inequality in service utilization caused by the fact that many of those with higher income began using hospitals instead of clinics or health centres, especially when compared to those with lower income (Flato & Zhang, 2016). A further study in Ghana showed that those with high earnings had a tendency to reap greater benefits from the National Health Insurance Scheme (NHIS) than those with lower earnings (Akazili, 2010). The same public survey also showed that those in the lower income bracket or living on the poverty line were less likely to be able to register for the NHIS than those with higher earnings, and that those with a high school education or above had more opportunity to register and receive treatment than those with a lower level of education or no education at all. Lower income earners in South Africa also received little or no benefits from a government health scheme when compared to those with higher incomes (Ataguba & McIntyre, 2012).

2.2 Awareness of Health Insurance Coverage

The “30 baht Scheme” has been implemented in Thailand for over a decade and many groups have carried out research regarding public awareness of the benefits of the scheme. There are many independent variables that affect and influence awareness of the scheme. One factor is education; those with higher levels of education tend to have a greater level of awareness regarding health care schemes (Jaisoongnern, 2008; Bunkum, 2014). In addition, those with higher average salaries tend to have a more accurate and comprehensive awareness. Awareness is higher in males than in females and those in the age bracket of 30-39 years tend to have a more accurate awareness of the scheme. Unemployed members of society or housewives/husbands tend to have a misled or factually inaccurate awareness regarding health care (Jaisungnern, 2008) but on the whole research

proves that occupation is a factor which has little effect on awareness of the scheme. (Tumvijit, 2002). Another study of such factors, conducted on patients in a private hospital in Nakorn Rachisima showed that education levels had an effect on Awareness scores, but not a significant or decisive one in regard to statistics (Aphisoontharangkoon, 2016). Aside from this, research into awareness of health care rights and the use thereof found that most of those in the sample group were aware of the hospital or health centre that they were registered at with the UHC scheme and were also aware of the fact that it is a legal right to receive this kind of health care. However, the majority were unaware of the fact that they were able to change their hospital or healthcare centre up to four times per year (National Health Security Office, District 8, Udon Thani, 2013)

Regarding Universal Health Coverage schemes in Europe, the main objective for the scheme is to provide the general public with access to a quality health care service which is financially protected. However, in some European countries such as Bulgaria, Croatia, Latvia, Poland, Romania and Sweden, there is still up to 10% of the population that are unable to take advantage of the scheme. A recent research study regarding awareness of health care access in Europe, conducted over 29 countries, found that people living in relative poverty who had health issues, were female, aged between 20 and 30 and were not nationals in their current country of residence were, for the most part, unable to utilize such health care schemes. The study also highlighted the fact that most people in the low income bracket believed that they were not eligible for or entitled to free, government sponsored health care (Cylus & Papanicolas, 2015). Inequality in the health care service sector does not end there, however, as a survey regarding awareness in the community and the factors which affect awareness in rural societies in Southern Nigeria found that use of health care service had no relationship to gender, level of education or age. However, awareness of lack of health care quality amongst the community determined the use of healthcare service and in turn was a serious obstacle to user satisfaction. Increased primary level education had a direct effect on the level of knowledge and understanding regarding health and wellness but males still received preferential treatment to females in terms of health care (Bakeera et al., 2009). Besides this, initial studies in America looked into ethnic variables and the way in which they affect access to health services and perceptions of health. In the case of females with a history of diabetes during the pregnancy period, it was found that there was a distinct and worrying lack of access to and advice regarding health care within this high-risk group. The study uncovered the fact that 1 in 5 women in this group experienced problems with such issues as lack of insurance, financial restrictions and lack of basic care and moreover, 1 in 4 women in this group had experienced dietary problems in the past and had not been advised by a doctor or healthcare specialist. This constitutes a missed opportunity to utilize glucose screening as a useful aid to family planning. When considering dieting, exercise and other forms of prevention, 1 in 5 females at high risk of pregnancy did not incorporate these elements into their family planning. Risk of cardiovascular disease was also greatly increased and 1 in 5 women had problems with cholesterol levels. Most conclusively, 15% of young adults in their early 30s, both male and female had very little awareness whatsoever regarding health. (Kim, Sinco & Kieffer, 2007).

A further study on awareness of health insurance among lower income groups in Punjab, India found that those with upper secondary level education were more likely to realize the importance of healthcare insurance awareness than those with less or no education. It was also apparent from the same study that those with earnings of 150,001-200,000 rupees were more likely to realize this fact than those who earned in the region of 50,000 rupees (Kansra & Gill, 2016a). Regarding occupations, Kansra and Gill (2016b) discovered that in shopkeepers, those aged under 30 and those aged between 31-40 were more aware of health insurance. Construction workers of primary level to up to lower secondary level education were more aware than those with no education. In the case of vendors, those with upper secondary levels of education had a higher level of awareness regarding health insurance than illiterate vendors. Vendors who earned 150,001-200,000 rupees had a higher level of awareness than those who earned in the region of 50,000 rupees, whereas income was not an important factor in the level of awareness amongst shopkeepers and construction workers. For all occupations the factors of gender, marital status, religion and family size had no effect on the level of realization regarding healthcare insurance awareness.

3. Methodology

This research paper aims to study awareness, both of treatment and prevention, concerning the Thai Universal Health Coverage Scheme for low income earners. The study employed quantitative research. Data were collected using survey questionnaires. The sample group was selected with the intention of covering all possible independent variables which could affect awareness of universal health care coverage rights amongst the low income earners. These included gender, age, marital status, level of education and health record. With these variables in mind the group was selected from households whose average earnings comparing to Poverty Line (Expenditure) by Region and Province: 2006 - 2015 placed it on or around the poverty line, a measurement of poverty calculated by measuring earnings against essential outgoings such as food and other household products.

The study used multiple regressions to estimate the relationship of determinants of Health Coverage Awareness. The model regression specification is as follows:

$$\text{awareness score} = \beta_0 + \beta_1\text{age} + \beta_2\text{gender} + \beta_3\text{Status} + \beta_4\text{education} + \beta_5\text{chronic disease} + \beta_6\text{year of experience as UC card holder} + \varepsilon \tag{1}$$

Health Coverage Awareness concerns awareness of available treatments, health support and disease prevention and control. Health Coverage Awareness scores are based on the percentage of correct answers on the respective topics.

The independent variables involved are age (in years), gender (male/female), marital status (married/single), level of education (less than primary level/ primary level/lower secondary level/upper secondary level and above), chronic diseases, and years as a UHC card holder.

4. Results

The investigation, carried out on a sample group of 1,021 people, found that the average Treatment Awareness Score is 69.91% and the average Prevention Awareness Score is 95.45% (shown in Figure 2). This result shows that members of low income groups have very high prevention awareness concerning the Thai Universal Health Coverage Scheme (UHCS) whereas treatment awareness is substantially lower in comparison, at 69.91%.

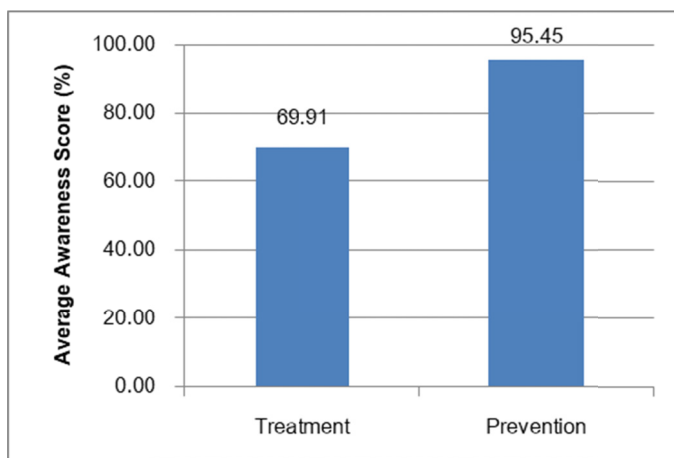


Figure 2. Average Awareness Score (%)

When treatment awareness is examined according to groups based on age, it becomes evident that those over 60 years of age showed the highest awareness (72.53%), followed by those aged 21-40 years (69.30%), aged 41-60 years (68.71%) and aged less than 21 years (63.85%) respectively (See Figure 3). Results also showed there was little difference in results regarding awareness of health coverage entitlement between males (70.04%) and females (69.75%) (Figure 4). Those who were married also showed higher awareness (70.21%) than those who were unmarried (64.88%) (Figure 5)

Those who were educated to lower secondary level had the highest awareness of health coverage entitlement (73.22%) , closely followed by those educated to upper secondary level (69.85%) and those educated to primary level (68.79%). Those who were educated to less than primary level possessed the lowest level of awareness (62.74%) (Figure 6).

Individuals who suffered from chronic diseases had a higher level of awareness (73.08%) than those without chronic diseases (69.29%) (Figure 7). Individuals who held UHC cards for a period of over ten years had the highest level of awareness (70.54%) when compared to those who held UHC cards for shorter periods of time (Figure 8).

When prevention awareness is examined according to groups based on age, it becomes evident that those aged over 60 years, groups aged 41-60 and 21-40, and those aged under 21 all showed similar levels of awareness with only negligible differences between them (95.60%, 95.50%, 95.07% and 95.56% respectively) (Figure 3).

The research showed that there was little difference in results regarding awareness of health coverage entitlement between males (95.63%) and females (95.31%) (Figure 4) and that there was not a considerable margin between the awareness of those who were married (95.53%) and those who were unmarried (94.13%) (Figure 5).

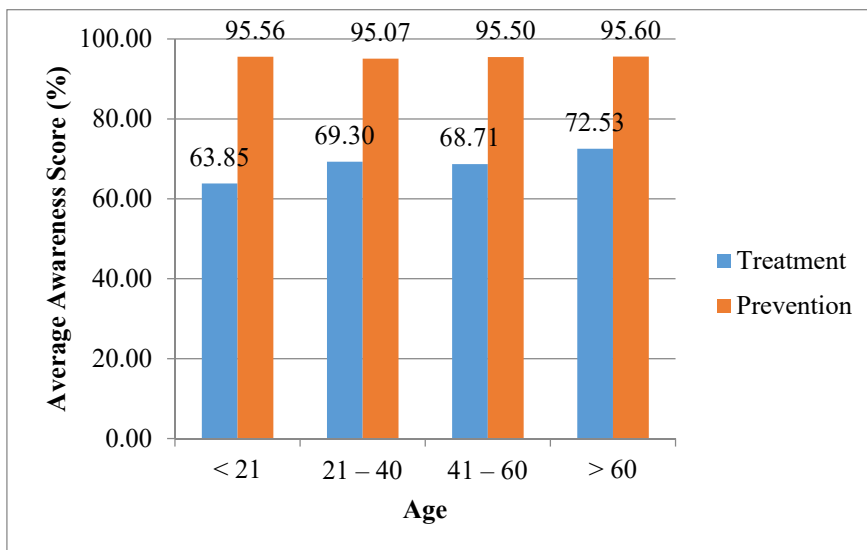


Figure 3. Average Awareness Score (%) by Age

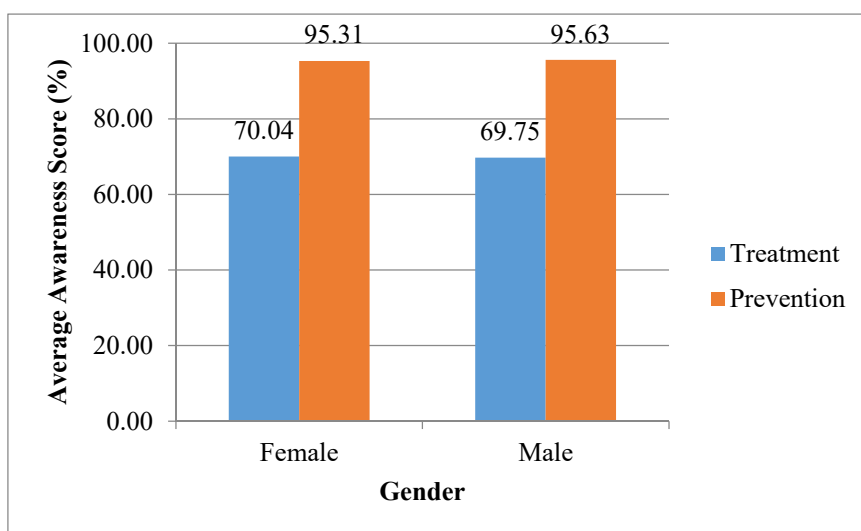


Figure 4. Average Awareness Score (%) by Gender

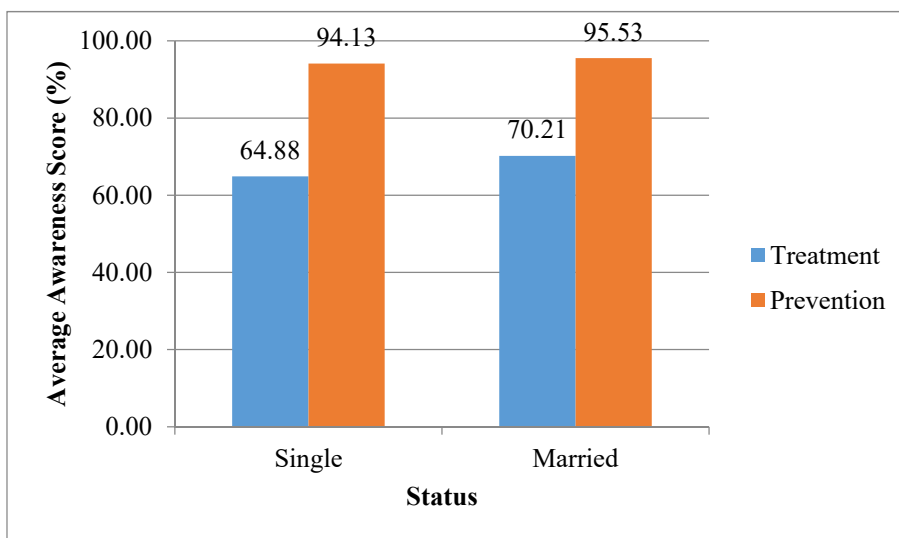


Figure 5. Average Awareness Score (%) by Marital Status

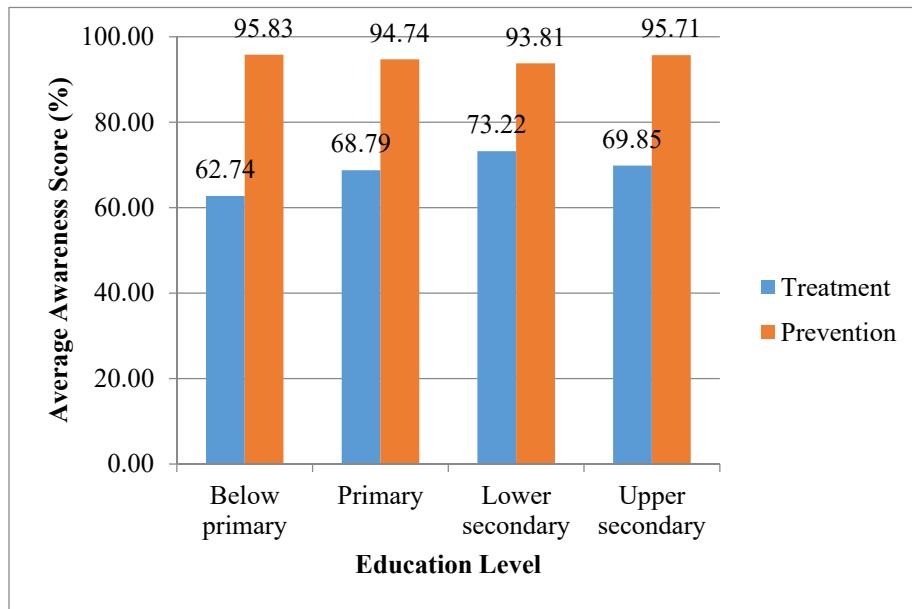


Figure 6. Average Awareness Score (%) by Education

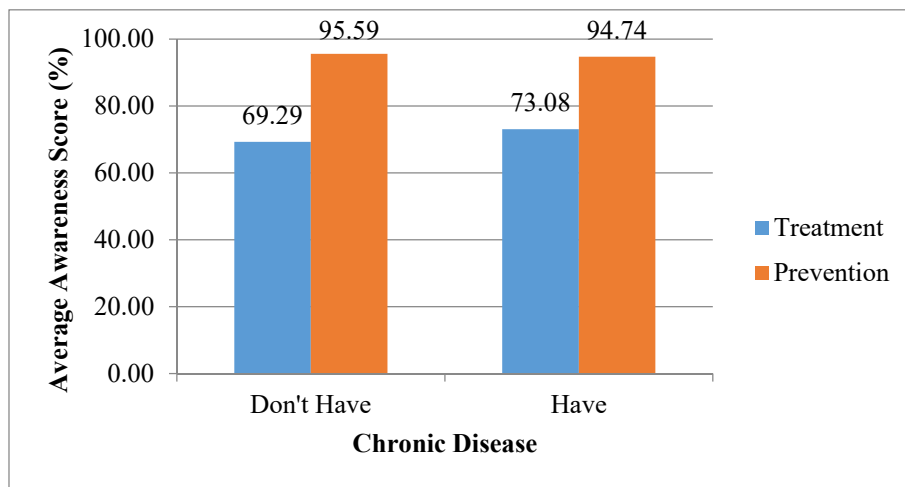


Figure 7. Average Awareness Score (%) by Chronic Disease

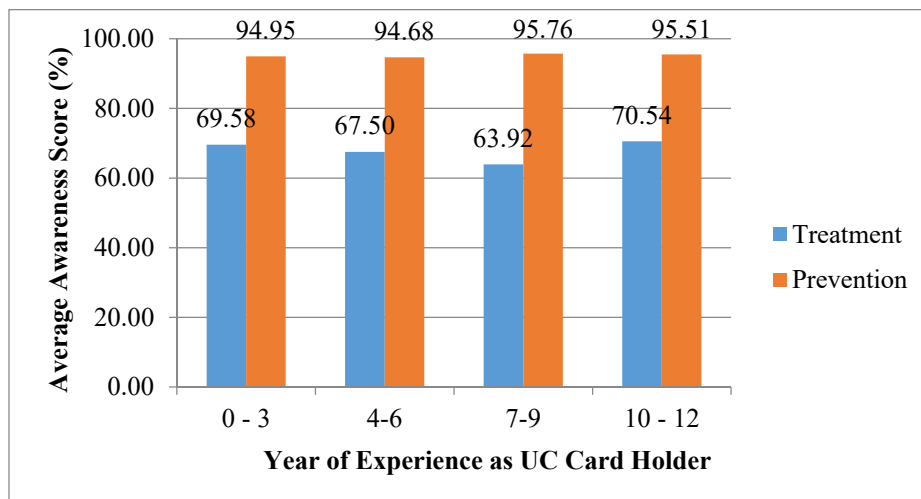


Figure 8. Average Awareness Score (%) by Year of Experience as UC Card Holder

The level of awareness for those with below primary level education and those with an upper secondary level education were almost identical (95.83% and 95.71%, respectively), followed by those educated to primary level (94.74%) and finally those educated to lower secondary level (93.81%) (Figure 6).

There was also little difference in the level of awareness between those members of the sample group who suffered from chronic diseases (94.74%) and those who didn't (95.59%) (Figure 7). Those who held a UHC gold card for a period of 7-9 years had the highest level of awareness of the entire sample group (95.76%) (Figure 8).

5. Model Results

Table 1 is composed of four regression models, which shows the relationship between health coverage awareness and the independent variables of age, gender, marital status, level of education, chronic diseases and number of years as a UC card holder. This is done by adding independent variables to the models individually and observing both coefficient and significant values of the independent variable in question.

Model 1 shows the relationships between age, gender and marital status and awareness score and found that age is significant associated with awareness score. A one year increase in age leads to an increase of 0.07% in awareness score. By contrast, gender and marital status are not significantly related with awareness score. However, from observation of coefficient values, it is apparent that on average females have slighter higher awareness score than males (with a margin of 0.12%) and that married individuals have higher awareness score than those who are unmarried (3.07%) (See Table 1).

When the variable 'level of education' was added to model 2, the relationship among age, gender and marital status remained the same, but with slightly changed coefficients. The most notable finding was that the relationship between education level and awareness score is a significant one. Individuals who were educated to upper primary, lower secondary and upper secondary and above levels tended to have higher awareness score than those who were educated to a lower primary level (8.50%, 8.33% and 13.25% respectively) (See Table 1).

Model 3 adds the 'chronic disease' variable and the results showed that chronic disease is not significantly associated with awareness score. Nonetheless, those with chronic diseases tended to have higher awareness scores than those without (1.48%). When the 'number of years as card holder' variable is added in Model 4, it become apparent that the number of years that the individual has held a membership card is significantly associated with awareness score, and a one year increase for the card holder leads to an increase of 0.51% in awareness score (Table 1).

Table 1. Relationship between personal factors and awareness score

Dependent Variable Choice Variable	Model 1	Model 2	Model 3	Model 4
Age	0.0730 (2.0705) **	0.1249 (3.1423) ***	0.1080 (2.5329) **	0.0866 (1.9364) *
Sex (Female = 0)				
- Male	-0.1157 (-0.1164)	-0.2466 (-0.2485)	-0.1727 (-0.1744)	-0.1947 (-0.1971)
Marital status (Single = 0)				
- Married	3.0646 (1.5328)	3.1752 (1.6021)	3.2628 (1.6424)	2.9718 (1.5025)
Education level (No education to lower primary education= 0)				
- Upper primary		8.5029 (2.2516) **	8.4442 (2.1934) **	8.0155 (2.0687)**
- Lower secondary		8.3295 (2.1453)**	8.5767 (2.1451)**	8.7125 (2.0757)**
- Upper secondary and above		13.2458 (3.5252) ***	13.0125 (3.4529) ***	13.4375 (3.2326) ***
No chronic diseases = 0				
- chronic diseases			1.4817 (1.0863)	1.4965 (1.1031)
Number of years as card holder				0.5100 (2.3667) **

Constant	61.8444 (28.7983) ***	58.6857 (22.7163) ***	59.2201 (22.4419) ***	55.1423 (18.6315) ***
Adjusted R-square (%)	5.23	10.65	16.54	20.50
F-statistic	2.8103 **	3.8341 ***	3.4452 ***	3.6695 ***
Observation	1,021	1,021	1,021	1,021

Notes: T-statistics shown in parentheses.

* Significant at $p < .10$.

** Significant at $p < .05$.

***Significant at $p < .01$.

6. Discussion and Conclusion

This paper examines low income earners' awareness of the UHC scheme to see if they are able to access information on said scheme, and what factors influence their awareness of the scheme. The study found that age, education level, and number of years as card holder were significant variables influencing awareness of the UHC scheme.

Age has a positive relationship with awareness of the UHC scheme. From this we can hypothesize that, as individuals grow older, they develop a greater number of ailments or diseases and therefore require more regular treatment, thus increasing their awareness score. This is in line with the findings of Kansra and Gill (2016a), whose study shows that experiences of inpatient care increase awareness of health insurance.

Aside from this, higher levels of education result in a more accurate understanding and higher awareness of the UHC scheme. Individuals with a high level of education were able to access a greater volume and variety of health care-related news and information with greater speed and effectiveness. This reinforced the findings of Bakeera et al. (2009), who found that an increase in the number of people educated to a primary level had a direct effect on the potential for increased knowledge and understanding in the realms of health care.

The number of years as a card holder also causes an increase in the accuracy of awareness, and one can surmise that this leads to increased use of the card to receive treatment.

Greater exposure to news and information is clearly needed for those between teenage and middle-age if awareness is to be increased. The same applies to those citizens who are educated only to a primary level or below. This kind of awareness improvement will be of benefit to the public, enabling them to prepare and plan for occasions which require the use of a universal healthcare service. Currently, sections of the population decline to use healthcare services for financial reasons. It is for this very reason that increased exposure to news and information regarding benefits and entitlements will produce more efficient policies and a more efficient healthcare service overall.

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