Premium Exemptions and Active Health Insurance Membership among Teenage Migrant Head Porters in Ghana: A Cross-Sectional Study

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Abstract

Ghana's national health insurance scheme (NHIS) aims to provide financial risk protection to vulnerable populations by making provisions for premium exemptions for all people below 18 years. This study assessed the factors associated with active insurance membership and access to premium exemptions among teenage migrant head porters in Ghana. Data collected from 257 migrant female head porters (10-17 years old) in Accra and Kumasi in a cross-sectional survey were analysed using descriptive statistics and regression models. Only 25% of participants had active membership cards although about 54% had ever registered with the NHIS. Among registered members, only 40% benefited from NHIS premium exemptions as per the insurance policy. Respondents who benefited from premium exemptions were more likely to maintain active membership (OR=3.58, p-value<0.01). Relatively higher income earners (OR=2.72, p-value<0.05) and those who migrated to Kumasi (OR=5.17, p-value<0.01) were more likely to maintain active membership. Although benefiting from premium exemptions improves active enrolment, many migrant teenage head porters were unable to benefit from exemptions. We recommend that the National Health Insurance Authority takes pragmatic steps to identify and enrol all female head porters below 18 years to improve their access to healthcare.

Key Words: *National health insurance, health insurance membership, Premium exemptions, migrants, teenaged head porters*

Introduction

Universal access to affordable and equitable healthcare is a global health priority. The agenda for Universal Health Coverage (UHC) has its roots in the 1978 Alma Atta Declaration of Health for All (World Health Organization (WHO), 1978). The 2005 World Health Assembly and the current Sustainable Development Goals (SDGs) enjoin countries to speed up progress toward UHC (United Nations, 2015a; World Health Organization, 2005). In an effort to improve access to healthcare, most developing countries have adopted national health insurance programs (Carrin et al., 2005; Ekman, 2004; Gottret et al., 2008). One of the main challenges of implementing such nationwide insurance programs is the risk of exclusion of informal sector workers and vulnerable populations such as children, adolescents, migrants, the aged and indigents from enrolment (Abiiro & McIntyre, 2012). Many existing social protection programs make provisions for exemptions from contributions (premium payments) for the vulnerable. However, existing studies have reported challenges associated with the enforcement of such exemptions (Abiiro & McIntyre, 2012; Agyepong & Nagai, 2011; Aryeetey et al., 2010; Derbile & Van Der Geest, 2013; Meng et al., 2002). For example, Aryeetey et al., (2010), reported that while about 18-28% of the Ghanaian population was considered poor in 2010 and required exemptions, only an estimated 2% of the insured who benefitted from premium exemptions were within this poor group. The authors attributted the low inclusion of the poor in exemptions policies to the difficulties in identifying the very poor (Aryeetey et al., 2010). Evidence further suggests that premium exemptions have been ineffective in addressing equity challenges in Ghana because poor people hardly accessed them (Derbile & van der Geest, 2013). Exemptions policies in China have also been reported to be ineffective because they covered small proportion of the poor, covered small fraction of hospital services, which were mostly low cost or low use items, and that people who benefitted from the exemptions where really not poor (Meng et al., 2002).

The implementation of fee exemptions is a key social protection mechanism for improving access to healthcare by poor and vulnerable populations, given that social security is a human right (International Labour Organization (ILO), 2021). Providing social protection to migrant informal sector workers is crucial to guaranteeing income security, decreasing poverty, and inequality, lessening vulnerability and social exclusion (ILO, 2021). Globally, approximately one billion people are migrants, and internal migrants constitute 763 millions of this global figure—representing one in every seven people in the world (World Health Organization, 2019). Women and children constitute about 70% of internal migrants (Gilmore, 2018). Inadequate access to healthcare and sexual exploitation are common among vulnerable populations such as adolescents (Boateng et al., 2017; Lattof, 2018; Owusu-Ofori, 2018; Yiran et al., 2015). Indeed, migrant adolescents are likely to be marginalized, vulnerable and unable to benefit from available resources in urban settings. In developing countries, migration of young people turns to be skewed towards the urban areas because urban residents are often perceived to be more prosperous and have access to better opportunities including better health care and education than rural dwellers—thus equating urbanisation with social and economic development (Cyril et al., 2013; Rice, 2008).

The movement of people from northern to southern Ghana used to be a male-dominated venture. In recent times however, migration trends reveal the movement of predominantly adolescent girls aged 10 to 19 years mainly from northern Ghana to the cities of Accra and Kumasi in search of better economic opportunities (Awumbila & Ardayfio-Schandorf, 2008). In the big cities, these young migrant adolescent girls engage in head load carrying (*kayayei*) business considered as part of female occupational career structure. "Kayayei" is considered a small form of trading culturally understood as being women's work— head-load carriers are self-employed, informal sector workers. These migrant adolescent girls carry loads of goods on daily basis on their heads in the commercial cities to enable them raise money to help improve their economic fortunes (Tufeiru, 2014).

However, female head porters in Ghana's cities live and work in very deplorable conditions. Studies have reported that they are among the poorest of urban dwellers (Awumbila & Ardayfio-Schandorf, 2008; Oberhauser & Yeboah, 2011). Recent estimates reported the daily average income of migrant adolescent girl head porters in Ghana as US$ 2.41, for those who worked only as head porters and US$ 7.89 for those who did additional jobs (Alatinga, 2019). Alatinga (2019) reported that only 36% of migrant adolescent girl head porters were able to remit to their families back home, with amounts ranging between US$18.5-55.57 annually. In addition, the physical nature of their work and the poor circumstances under which these adolescent girls work and live expose them to several health risks including malaria, skin diseases, aches and pains, accidents, injuries, rape and unwanted pregnancies as well as physical abuse (Awumbila & Ardayfio-Schandorf, 2008; Tufeiru, 2014). Also, their low incomes may prevent them from enrolling onto contributory social protection schemes such as the NHIS, which aims to ensure equity and universal access to health care for the poor and protect them against the costs of illness (National Health Insurance Act, 2012 (ACT 852), 2012).

Ghana introduced the National Health Insurance Scheme (NHIS) through an act of Parliament in 2003 as a means of improving access to affordable healthcare for all its citizens. The NHIS Membership falls into two broad groups—the premium paying and the premium exempt groups. The premium paying group encompasses informal sector employees and formal sector employees uncaptured by the Social Security and National Insurance Trust (SSNIT contributors) pension scheme. These people pay and renew annual premiums in order to be in good standing to access healthcare under the NHIS. Persons in the exempt group do not pay annual premiums. Formal sector employees and the self-employed who contribute to the SSNIT pension scheme, persons under 18 years of age, persons in need of ante-natal, delivery and post-natal healthcare services (pregnant women) are included in the exempt category. Also included in the exempt category are the indigents, persons with mental disorder, SSNIT pensioners, persons above seventy years of age and other categories prescribed by the Minister of social protection (National Health Insurance Authority, (NHIA) 2020; National Health Insurance Act, 2012 (ACT 852), 2012). The registration and renewal of NHIS membership for pregnant women and indigents are entirely free of charge. However, other exempt groups pay a small processing fee for the membership card. This includes people below the age of 18years like the teenage head porters (NHIA, 2020; National Health Insurance Act, 2012 (ACT 852),

2012). Research suggests that the estimated national active coverage rate of NHIS was 38%, in 2013, and rose to 41% in 2015 over a three-year period, and dropped again to 39% by the end of the year 2016 (Andoh-Adjei et al., 2018; National Health Insurance Authority, 2013; Nsiah-Boateng & Aikins, 2018b). According to Nsiah-Boateng and Aikins (2018a), the national enrolment rate further dropped again to 35% in 2017.

Additionally, the NHIS premiums are supposed to be structured based on individual or household's ability to pay but because of the large informal sector and corresponding difficulties in assessing income and living standards of those in the informal sector, flat rate insurance premiums are charged by the NHIS at the district level. Interestingly, it is reported that the regions with the highest number of NHIS membership are the Greater Accra and Ashanti regions, where the current study was conducted, with the Greater Accra region recording second highest active membership of 1.7 million, while the Ashanti region recording the highest active membership of 2.2 million respectively (Naatogmah, 2020). Remarkably, females dominate the list of NHIS membership in these two regions, representing 59.1% in both the Greater Accra and Ashanti regions (Naatogmah, 2020).

The NHIS, alongside other health system strengthening initiatives like the Community-based Health Planning and Services Program (CHPS), have largely improved access to healthcare in the country (Kanmiki, et al., 2019; Nguyen et al., 2011). Even so, gaps such as the difficulties associated with the enforcement of exemption exist in the implementation of the NHIS policy (Akazili et al., 2014; Alhassan et al., 2016; Anafi et al., 2018; Kanmiki, et al., 2019). For this reason, this paper examines the active enrolment status and access to NHIS premium exemptions among teenage migrant female head porters in Accra and Kumasi. While previous studies have contributed to understanding NHIS enrolment among female head porters in Ghana (Boateng et al., 2017; Lattof, 2018), to the best of our knowledge, no study has specifically examined access to premium exemptions among this vulnerable population. Our study is therefore, an important contribution to Ghana's efforts towards improving access to healthcare for its marginalised population.

Overview of Fee Exemption Policies in Ghana's Healthcare

At independence in the year 1957, Ghana chose a socialist path to healthcare delivery by making healthcare entirely free at all public health facilities (Nyonator & Kutzin, 1999). However, by the late 1960's through the enactment of the then Hospital Fees Decree, minimal user fees were introduced to help supplement government financing of care. From the 1970's through to early 1980's, substantial user fees were progressively introduced as sustaining the growing levels of cost required to meet adequate quality of care and improving access became more challenging. By 1985, as part of the structural adjustments programs by the World Bank and the International Monetary Fund (IMF), the government of Ghana introduced the full cost recovery program. Also known as the "cash and carry system", the full cost recovery program placed a significant burden of healthcare cost on individuals seeking care. Although the financial objectives of this program were achieved, full cost recovery led to huge inequalities in healthcare access and

utilisation in Ghana (Creese et al 1991). In spite of user-fee exemptions embedded within the program to support the poor and indigent in accessing healthcare, the implementation of this exemption policy were fraught with challenges and most poor people who were eligible did not benefit from it leading to significant reduction in the utilisation of healthcare and the detention of poor people at hospitals for non-payment of fees became common in the country (Garshong, Ansah, Dakpallah G, Huijts, 2001; Nyonator & Kutzin, 1999). The situation became so dire that by the 1990's the Ministry of Health began considering alternatives to the user-fee regime by testing viability and feasibility of alternative financing arrangements. Consequently, by early 2000's there were several government-initiated pilot schemes and over 159 community-based mutual health programs in the country, most of which improved healthcare access and utilisation within areas they were implemented—yet less than 1% of the population was covered (Atim and Grey, 2001; Akazili 2014). Ghana's current national health insurance scheme was implemented in response to these financial barriers to healthcare seeking (Akazili et al 2014).

Fee Exemptions and Access to Healthcare: Towards a Theory of Equity and Social Justice

Fee exemption policies are as old as the existence of health systems. The major aim of fee exemption policies is to improve access to healthcare services for the poor and vulnerable by removing financial barriers at the point of healthcare delivery (Yaogo, 2017). Yaogo (2017) asserts that exemption policies are a catalyst for vulnerable groups to access healthcare. In sub-Saharan Africa, countries have implemented various exemption policies in the spirit of promoting equity in access to healthcare especially for the poor, aged, children and people living with varying degrees of disabilities (Beaugé et al., 2020; Dake & van der Wielen, 2020; Maluka, 2013; Ntahosanzwe & Rwegoshora, 2021; Yaogo, 2017). Sen (2002) argues that given the ubiquity of health as a social consideration, health equity is a central feature of fairness and justice in social arrangements in society. According to Sen (2002), the lack of opportunity to access healthcare because of situations such as poverty is serious injustice, and undermines a person's capability to achieve good health. Processes and procedural fairness are integral to social justice because the processes are important in helping to achieve valued outcomes—in this case, while the outcome improved access to healthcare is important, the processes and social arrangements put in place to realise equitable access to healthcare are equally important. Importantly, focusing not only on the delivery and distribution of health care allow us appreciate how social arrangements in society either enhance or impede access to health care (Sen, 2002). Rawls (1999) argues that social justice is the first virtue of social institutions, and for this reason, these institutions need to expand the life prospects of the vulnerable in society. In fact the SDGs reinforced the principle of fairness and social justice in line with the value of leaving no one behind (United Nations, 2015b).

Drawing on these theoretical insights, various exemption policies aim to maximise the poor and vulnerable populations' access to healthcare. In this direction, some empirical evidence from Cambodia and Cameroun suggests that fee exemption policies increased the use of healthcare services among beneficiaries (Flink et al.,

2016; Hardeman et al., 2004; Jacobs et al., 2007; Jacobs & Price, 2006). For example, Flink et al., (2016) reported that following the introduction of fee exemptions, access to healthcare had improved, in addition to improvement in the quality and promptness of care for the poor and vulnerable people in Cameroun. While fee exemption policies are intended to remove financial barriers linked with healthcare access as reported above, other studies also present contrary evidence—thus fee exemptions do not improve the use of healthcare. For example, in Burkina Faso, Atchessi et al. (2016) demonstrated that fee exemptions were not associated with increased use of healthcare services.

Similarly, Beaugé et al. (2020) also reported that fee exemptions did not increase the use of healthcare services in Burkina Faso. Beaugé et al., (2020), however, argue that the fact that fee exemptions did not increase the use of healthcare services does not undermine the importance of fee exemptions for achieving universal health coverage, but suggests that other equally important barriers to universal access to healthcare other than financial ones exist. Further, the effectiveness of fee exemption policies have been questioned in different contexts (Derbile & Van Der Geest, 2013; Maluka, 2013; Yaogo, 2017). For example, Maluka (2013) reports that the effectiveness in implementing exemption policies in Tanzania has been undermined by challenges in determining who the poor are for the purposes of exemptions. Another study in Tanzania also asserts that old people who deserved exemptions are often denied because they look younger than their age (Ntahosanzwe & Rwegoshora, 2021). Scholarship also indicates there are limited public awareness about premium exemptions and lack of education on the modalities and procedures that potential beneficiary need to follow to accessed these exemptions (Garshong et al., 2001; Derbile & Van Der Geest, 2013). Derbile and Van Der Geest (2013) further note that NHIS exemptions are largely skewed to public servants to the detriment of the poor in society. In like manner, Dake and van der Wielen (2020) assessed the old-age exemption policy under Ghana's NHIS, and found that more than half of eligible older adults did not benefit from premium exemptions. The authors attributed the low level of exemptions to inadequate public awareness about the existence of the exemption policies, and concluded that the old-age exemption policy is not achieving the intended goal of providing financial risk protection for some older adults (Dake and van der Wielen, 2020).

Methods

Study Setting

This study was carried out in Accra and Kumasi. These cities were selected because they are the biggest centres of attraction to youth in Ghana owing to being the most urbanised cities with more economic activities and relatively lower poverty levels in the country (Ghana Statistical Service, 2018). In addition, these two cities have the best modern social amenities and infrastructure including health and educational institutions, big shopping malls, financial institutions, hotels, better roads, electricity and communication networks in Ghana. Thus, many youths including teenage adolescent girls migrate to Accra and Kumasi in search of economic opportunities. One of the common activities young migrant females especially engaged in is the head load carrying business.

Study design, Sampling and Data Collection

This study is a cross-sectional quantitative study. Because there are no accurate statistics of the number and distribution of female head porters in Accra and Kumasi, and the fact that migrant populations are often hard-to-reach using standard probability methods (Gile & Handcock, 2010; Boateng et al., 2017; Lattof, 2018), time-location and centers of aggregation sampling approach was deemed appropriate for this study. According to Reichel and Morales (2017), the time-location or centers of aggregation sampling is suitable for sampling migrant populations due to their highly mobile tendencies and the absence of adequate data to inform a sampling frame for identifying them (Reichel & Morales, 2017). This approach to sampling is based on the assumption that by randomly sampling from predefined locations that serve as aggregation centers for the study population at different times, the researcher may be able to adequately capture the population of interest (Reichel & Morales, 2017).

Data collection was therefore carried out at different centers where female head porters were known to aggregate in the markets of Accra and Kumasi. We interviewed adolescent girls who had worked as head porters for at least six months or more. Six (6) female graduates were trained and deployed for data collection under the supervision of a research coordinator. The study questionnaire collected data on respondents' demographics and income, healthcare utilization, enrolment onto the NHIS, access to premium exemptions, and reproductive health behaviour among others. A total of 503 female head porters were interviewed (Alatinga et al., 2022). However, this paper makes use of data from 257 participants, representing those below the age of 18years who are eligible to benefit from premium exemptions under the national health insurance policy.

Data Processing and Model Specification

Data was entered into Epidata and exported into STATA Version 14.0 for analysis. Double entry was done to minimize errors and serve as a quality control measure. Binary logistic regression models were fitted separately to establish the determinants of active NHIS enrolment and benefiting from premium exemptions. The authors postulate the following variables could potentially influence the NHIS enrolment and benefiting from premium exceptions; age, educational status, marital status, ethnicity, religion, years of working as head porter, city of migration, socio-economic status (measured by income), and NHIS registration. In determining the socio-economic status of participants, the World Bank's poverty line of $1.90 a day was applied in determining those considered poor or otherwise. The binary logistic regression model was used to assess the determinants of NHIS active enrolment among these teenage migrant head potters. The equation is given as:

$$AE = \beta_0 + \beta_1 A_g + \beta_2 E_d + \beta_3 M_a + \beta_4 E_t + \beta_5 R_e + \beta_6 E_x + \beta_7 Y_h + \beta_8 O_j + \beta_9 C_m + \beta_{10} S_e + \beta_{11} S_i \quad \text{.....(1)}$$

Where: AE is active enrolment status, thus the probability of being actively enrolled onto the NHIS. β_0 is the intercept or constant term. $\beta_1, \beta_2, \ldots\ldots. \beta_{11}$ are the coefficients

of the explanatory variables. A_g is the age of respondent, E_d represent the highest educational level of respondent. M_a is marital status, E_t is ethnicity, R_e is the religious affiliation of respondent, E_x is access/benefits from premium exemption, Y_h represents number of years working as head potter, O_j represents involvement in other job in addition to the head porter job. C_m is the city of migration, S_e is the socioeconomic status, S_i represents sick/injured within the last 12months. The binary logistic regression model for assessing the determinants of benefiting from NHIS premium exemption is also given as:

$$PE = \beta_0 + \beta_1 A_g + \beta_2 E_d + \beta_3 M_a + \beta_4 E_t + \beta_5 R_e + \beta_6 Y_h + \beta_7 O_j + \beta_8 C_m + \beta_9 S_e \quad \text{..... (2)}$$

Where; PE is the probability of benefiting from NHIS premium exemption. Similarly, β_0 is the intercept or constant term. β_1 , β_2, ……. β_8 are the coefficients of the explanatory variables. A_g is the age of respondent, E_d represent the highest educational level of respondent. M_a is marital status, E_t is ethnicity, R_e is the religious affiliation of respondent, Y_h represents number of years working as head potter, O_j represents involvement in other job in addition to the head porter job. C_m is the city of migration, and S_e is the socioeconomic status.

Ethical considerations

Approval to conduct this study was granted by the Department of Social Development under the auspices of the Ministry of Gender, Children and Social Protection, and leadership of the Kayayoo Association, who act as gatekeepers to the female head porters. Given the low levels of literacy among the study population, oral/verbal informed consent was obtained from them before interviews were conducted. In the conduct of this study, researchers have endeavoured to ensure anonymity and confidentiality of participant's information throughout the study.

Results

The background characteristics of our study respondents are presented in Table 1. Remarkably, only 25% of the respondents aged 10-17 years had active NHIS cards. Those within 15-17years had a high proportion of active NHIS membership (26%) compared with those 10-14years old. About 14% of our study sample were within 10-14years of age whiles almost 86% were between 15-17 years. 35% had never been to school, 30% attained only up to primary school education and 31% obtained up to junior high school. Only 3% achieved up to senior high school or technical education. About 5% of our study sample were married. Respondents from the Dagomba ethnicity were the majority (46%) followed by the Mamprusis (42%). As high as 95% of our respondents were affiliated with Islamic religion. Most respondents had worked as head porters for less than a year (66%) and 5% had at least one other job in addition to their head porter business. About 54% had Accra as their city of migration while 46% were based in Kumasi. Based on information on their income, 42% were classified as being poor (earning less than $1.9 a day) and as high as 74% had reported being sick or injured within the last 12 months preceding the interview.

Table 1: Background characteristics of the respondents (10–17-year-olds)

Background Characteristics	Frequency(n)	%
Age		
10 - 14	37	14.40
15-17	220	85.60
Education		
Never been to school	90	35.02
Primary	79	30.74
JSS/JHS	80	31.13
Secondary/Technical	8	3.11
Marital Status		
Married	14	5.45
Single	242	94.16
Ethnic Group		
Dagomba	118	45.91
Mamprusis	107	41.63
Others	32	12.45
Religious Affiliation		
Islam	245	95.33
Others	12	4.67
Years worked as Head Porter		
<1year	169	65.76
1year	44	17.12
Above 1year	44	17.12
Additional jobs		
Yes	14	5.45
No	230	89.49
City of Migration		
Accra	138	53.70
Kumasi	119	46.30
Socio Economic Status (SES)		
Below poverty line	109	42.41
Above poverty line	148	57.59
Sick/Injured in the last 12 months		
Yes	190	73.93
No	67	26.07
Form of NHIS Membership		
Not Exempt	155	60.31
Exempt	102	39.69

Active NHIS Membership

The logistic regression results on factors correlated with NHIS active membership are presented in Table 2. Respondents who were exempted from premium payments, those based in Kumasi and those not poor were significantly more likely to have active NHIS membership compared to their counterparts (p-value <0.05). Other variables including age, educational attainment, marital status, ethnicity, religious

affiliation, number of years working as head porter and having been sick within the last 12 months were not significantly associated with having active NHIS membership.

Table 2: Logistic Regression on factors associated with NHIS Active Membership

VARIABLES	Adjusted Odds Ratio	Confidence Interval
Age (compared with 10-14years)		
15-17	2.10	(0.74 - 5.97)
Education (compared with Never been to school)		
Primary	0.50	(0.21 - 1.20)
JSS/JHS	1.69	(0.74 - 3.90)
Secondary/Technical	1.39	(0.20 - 9.41)
Marital status (compared with Married)		
Single	0.84	(0.19 - 3.72)
Ethnicity (compared with Dagomba)		
Mamprusis	0.79	(0.35 - 1.77)
Others	1.54	(0.53 - 4.52)
Religious affiliation (compared with Islam)		
Others	0.49	(0.10 - 2.41)
NHIS exemption during registration (compared with Not exempt)		
Exempt	3.58***	(1.77 - 7.24)
Years worked as Head Porter (compared with <1year)		
1year	1.19	(0.51 - 2.79)
above 1year	1.12	(0.46 - 2.71)
Additional jobs (compared with Yes)		
No	1.18	(0.25 - 5.64)
Migration Destination (compared with Accra)		
Kumasi	5.17***	(2.23 - 11.97)
SES (compared with Below poverty line)		
Above poverty line	2.72**	(1.26 - 5.87)
Sick/Injured in the last 12 months (compared with yes)		
No	0.53	(0.24 - 1.19)

*** p<0.01, ** p<0.05, * p<0.1

Respondents who had benefited from premium fee exemption in accordance with the NHIS policy were 3.58 times more likely to maintain an active NHIS registration relative to non-beneficiary of premium exemptions (OR= 3.58, p-value <0.01, CI:1.77-7.24). Respondents in Kumasi were also 5.17 times more likely to be actively registered under the NHIS compared to those in Accra (OR=5.17, p-value <0.01, CI: 2.23- 11.97). Socio-economic status was also significantly associated with active NHIS membership. Respondents who were categorised as earning above the poverty line had 2.72 higher chance of being actively registered with the NHIS compared to the poor (OR=2.72, p-value <0.05, CI: 1.26- 5.87). Figure 1 shows the proportion of active NHIS membership by variables that showed significant association with NHIS membership. It can be observed that 17% of those who did not benefit from premium exemptions were actively enrolled while 37% of those who benefited from exemptions were actively enrolled. Also, 33% of study participants in Kumasi were

actively enrolled as against only 17% of those in Accra. Similarly, 30% of participants earning above the poverty line were actively enrolled compared to 18% of those deemed to be poor.

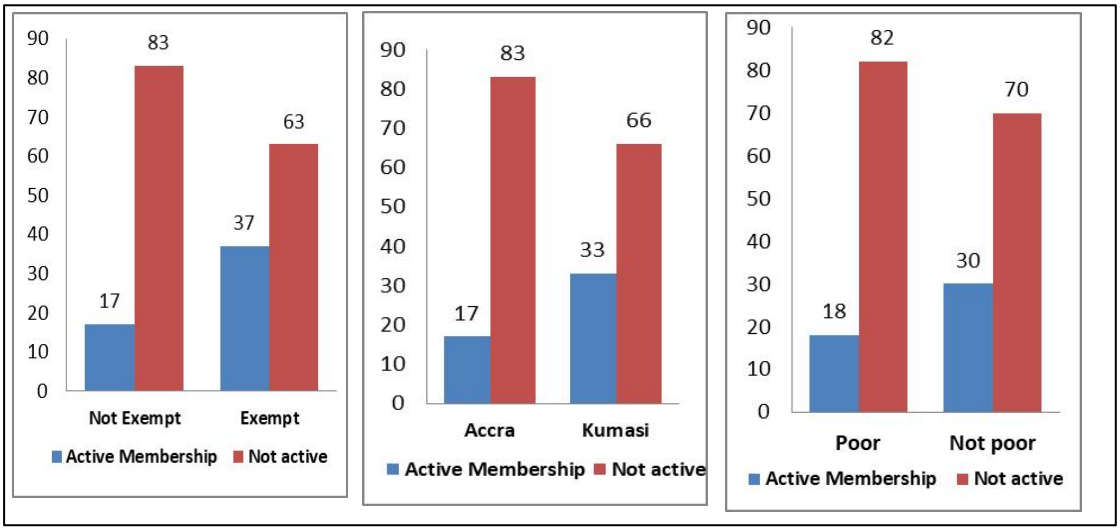

Figure 1: Percentage of NHIS active membership by premium exemption, Migration City and Socioeconomic status

Correlates of access to NHIS Premium Exemptions

Table 3 presents the results of binary logistic regression on correlates of benefiting from premium exemption under the NHIS among our study sample (10-17years). Age, educational attainment, marital status, religious affiliation, city of migration, involvement in other job in addition to head porter and SES were all not significantly correlated with benefiting from premium fee exemption. The only variables that showed significant association with premium exemption were ethnicity and the number of years worked as head porter.

Table 3: Regression Model for NHIS Exemption amongst 10–17-Year-Old Migrant Head Porters

VARIABLES	Adjusted Odds Ratio	Confidence Interval
Age (compared with 10-14years)		
15-17	0.70	(0.33 - 1.51)
Education (compared with Never been to school)		
Primary	1.46	(0.74 - 2.87)
JSS/JHS	1.05	(0.51 - 2.14)
Secondary/Technical	1.63	(0.35 - 7.60)
Marital status (compared with Married)		
Single	1.15	(0.32 - 4.12)
Ethnicity (compared with Dagomba)		
Mamprusis	2.04**	(1.00 - 4.13)
Others	1.96	(0.81 - 4.79)
Religious affiliation (compared with Islam)		
Others	2.22	(0.59 - 8.43)
Years worked as Head Porter (compared with <1year)		
1year	1.57	(0.77 - 3.21)
above 1year	1.99*	(0.97 - 4.10)
Migration Destination (compared with Accra)		

Kumasi	0.84	(0.42 - 1.68)
Additional jobs (compared with Yes)		
No	0.58	(0.16 - 2.07)
Socio Economic Status (compared with poor)		
Not poor	1.10	(0.61 - 1.98)
Constant	0.62	(0.08 - 4.60)

*** p<0.01, ** p<0.05, * p<0.1

Respondents of the Mamprusis ethnicity were 2.04 times more likely to benefit from premium exemption compared with those of Dagomba ethnicity (OR= 2.04, p-value< 0.05, CI: 1.00 - 4.13). Also, respondents who had worked for more than a year were 1.99 times more likely to benefit from premium exemption compared to those with less than one year involvement (OR=1.99, p-value <0.1, CI: 0.97- 4.10). Figure 2 presents the percentage of respondents who benefited from health insurance premium exemption by ethnicity and years of work as head porter.

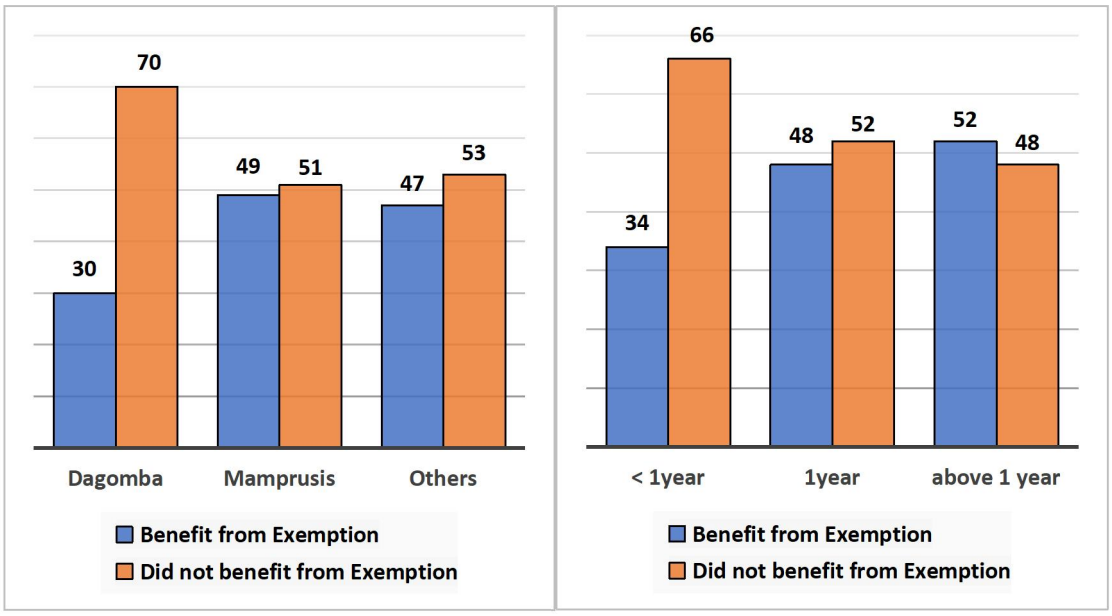

Figure 2: Percentage who benefited from premium exemption by ethnicity and length of work as head porter.

Discussion

In this study, we assessed active health insurance enrolment and access to premium exemptions among migrant teenage head porters in Ghana. The study found that only 25% of the teenage head porters had active health insurance cards although a greater number had ever registered with the NHIS. Majority (60.31%) of the teenage migrant head porters did not benefit from NHIS premium exemptions. This suggests that the majority of the teenage girls would have to self-finance their healthcare expenditure out-of-pocket, when in fact, the NHIS law exempts all persons below the age of 18 years (Alatinga et al., 2022). The low access to NHIS premium exemptions for the teenage migrant head porters reported here could be attributed to poor awareness of the exemption policy (Dake & van der Wielen, 2020; Derbile & Van Der Geest, 2013). The teenage head porters may also be intimidated by the unfriendly urban environment because they lack the social support to access healthcare services. In addition, the membership card processing fee may still be a barrier to the

registration or renewal for some of these girls. The findings are revealing as they question the effectiveness of the NHIS exemption policy, particularly for the teenagers who are legally entitled to free healthcare. In the absence of exemptions, the teenage head porters do have to self-finance their healthcare needs out-of-pocket (Alatinga et al., 2022). This finding questions the robustness of social arrangements and processes (Rawls, 1999; Sen, 2002) put in place by the National Health Insurance Authority to ensure that vulnerable people such as migrant teenage head porters fully benefit from a pro-poor policy such as the NHIS.

The robustness of these social arrangements and processes is very crucial because previous studies have shown that migrant head porters with active NHIS cards were more likely to use healthcare facilities when sick compared to those without valid cards (Boateng et al., 2017; Lattof, 2018). For those migrant head porters without active NHIS cards, this finding interrogates the equity and universal access to healthcare objectives of Ghana's NHIS—, especially low incomes earners in the informal economy who spend a lot of money on feeding and healthcare, and live in poor conditions (Alatinga, 2019). It further reinforces health inequity between employees in formal and informal economies and provides a strong rationale for the provision of social health protection for poor and vulnerable populations such as the teenage head porters in Ghana. Put differently, as illustrated earlier, providing fee exemptions to poor and vulnerable people is not new in healthcare financing in Ghana because during the era of full cost recovery between 1985 and 2003, Ghana had an exemption policy for the poor and indigent. However, the implementation of the exemption policy was fraught with challenges and most poor people who were eligible did not benefit from it which led to poor health seeking behaviour and detention of people at hospitals for non-payment of fees (Garshong, Ansah, Dakpallah G, Huijts, 2001; Nyonator & Kutzin, 1999). Therefore, these findings are important for informing practice improvement and identifying gaps for supporting the poor and marginalised in the Ghanaian society.

On the determinants of enrolment, we found that study participants who were exempted from premium payments, those based in Kumasi and those who earned above the poverty line were statistically more likely to have active NHIS membership relative to their counterparts. While the influence of benefiting from premium exemption on active insurance enrolment among teenage migrant head porters in Ghana has not been previously studied, our findings on socio-economic status confirm earlier studies on the subject matter. Boateng et al (2017) in their assessment of health insurance enrolment among migrant female head porters in Kumasi also found that those with relatively higher income were more likely to be actively enrolled in the NHIS compared with lower income earners. Lattof (2018) in her study of health seeking behaviour and health insurance registration among female migrants in Accra revealed that financial barriers were largely responsible for non-registration or renewal of health insurance cards. Although females dominate the list of NHIS membership in the Accra and Kumasi, the low inclusion of these teenage migrant girls in the NHIS income probably reflects the general difficulty in identifying the poor. In practice, since its implementation nearly two decades ago, the NHIS has struggled to determine the number of the very poor in order to grant them health insurance fee waivers (Alatinga & Williams, 2019). But in the context of

this study, any proof of the date of birth of the teenagers could be enough to identify and enrol them onto the NHIS because the NHIS law makes provisions for enrolling all persons below the age of 18 years.

Our study did not find any significant relationship in active enrolment with regards to age, educational attainment, marital status, ethnicity, religious affiliation, number of years working as head porter and having been sick within the last 12 months. Boateng et al (2017) however, found age, education and marital status to be correlated with active health insurance membership but their study was conducted in Kumasi only, and was not focused on only teenage migrant head porters. Studies in China also reported that the young, low-paid, and less educated unskilled female migrants were more likely to be uninsured and pay out-of-pocket for healthcare compared to their counterparts (Mou et al., 2009).

We also found that teenage migrants who have been head porters for more than one year were significantly more likely to benefit from exemptions compared to those engaged for less than a year. The association of length of work as head porter with that of benefiting from premium exemptions could also be related to activities of NGOs that occasionally run programs to support head porters which sometimes includes sensitisation on health insurance. For example, in 2016, the Pamela Bridgewater Project, a non-governmental organisation that supports female head porters and their children worked with the NHIA to freely register about 200 female porters in Accra for the NHIS to enable them access health care (Graphic Online, 2016). It is also possible that those head porters who have been in the business for a year or more have knowledge about the existence of the NHIS exemption policy, and would take advantage of the opportunity to demand for their rights. Also, those belonging to the Mamprusi ethnicity had higher chances of benefiting from premium exemptions compared to those belonging to Dagomba ethnicity or others. This phenomenon could be due to differences in how the national health insurance is promoted in the different places of origin of the migrant girls.

Study Limitations

This study is limited in its ability to draw causal inferences due to its cross-sectional design. We also acknowledge that the relatively small sample size used for the data analysis and the focus of the study on the two main cities in Ghana imply that the results cannot be generalized for other female teenage migrant head porters located in relatively less urbanised areas in Ghana and beyond. Despite these limitations, this study has shed light on the situation of active enrolment on the NHIS as well as benefiting from premium exemptions by these vulnerable teenage migrant head potters in Ghana.

Conclusion and Recommendations

Ghana's efforts to attain UHC may remain a dream if conscious efforts are not put in place to aid vulnerable and marginalised sections of the population to gain access to healthcare. Teenage migrant head porters are among these marginalised populations whose social and economic adversity predispose them to a wide range of health problems but for which access to good healthcare is lacking. We found that active health insurance membership among these vulnerable adolescent female

head porters is low. Although benefiting from premium exemptions improves active enrolment, majority of these migrant teenage head porters do not get the opportunity to benefit from exemptions. We recommend that the NHIA takes pragmatic steps to liaise with the "Kayayei" Association, the Ministry of Gender, Children and Social Protection, and NGO's supporting the head porters to identify all teenage head porters below 18 years using their dates of birth and enrol them onto the NHIS. The NHIA in collaboration with the Kayayei Youth Association should also educate and sensitise the entire Kayayei population on the existence of the exemption policy to enable them take advantage of it. These strategies may go a long way to contribute towards UHC in Ghana, and make good the 2030 agenda of leaving no one behind.

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