Social marketing: its role in making professional optometry the preferred primary eye care provider in Ghana.

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Abstract

There is no optometry law in Ghana - as pertains in a lot of other more advanced jurisdictions – that regulates and protects the sanctity of the profession as well as bar unqualified persons from venturing into such practice. Under the circumstance all manner of persons are in the practice of eye care in Ghana with relatively little knowledge among eye care service patrons of the differences between the optometrist and other eye care professionals, nor of that between him and the quack. A lemons problem could possibly result. There are consequences. Apart from the real danger of possibly causing harm, sometimes irreversible, the presence of quacks could in the long run drive the eye care market into one of low quality and possibly lead to a loss of the professional optometrists to other jurisdictions with better controls and rewards. There is a very strong perception that Social marketing is one signaling tool that can be applied to help check the situation by way of promoting professional optometry, making it more visible, known, rewarding and its services the preferred choice, such that there is a safe, higher quality, value- for- money service provision. This it is hoped would eventually help reduce the quack problem whilst an optometry law is waited upon.
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Love Y’all.
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Chapter 1
1.0 Background

The optometry profession is relatively young in Ghana when compared with other health professions, with a lot of educated folks not exactly knowing the difference between the untrained practitioner (quack) and the professionally trained optometrist or that between such interrelated professionals as the optician, the optometrist and the ophthalmologist.

It is the case therefore that rather than use the services of professionally trained optometrists in primary eye care, some people - either ignorantly or through long practice (old habits) - rather patronise the services of uncertified, untrained or unqualified practitioners (Quacks), with the effect that apart from the dangers associated with such quackery, what one really ends up with is, low quality services with no value –for –money guarantee, whilst valuable jobs and revenue are also lost to the professional optometrists.

With respect to the four P’s of marketing, in professional optometry one largely has a product, with a price and place or channel of delivery component so that what would be left is a marketing or promotion of the product by careful adaptation and coordination of the variables involved. Considering the concept of product life cycles in marketing and the kinds of promotion interventions relevant to different stages of a product’s life, the introduction stage is a very good time for advertising and public relations activities necessary for achieving high awareness. Sales promotion is useful in promoting early trials whilst personal selling is a must to get the trade to carry the product. In the growth stage, advertising and public relations continue to be powerful influences whereas sales promotion can be reduced since fewer incentives are needed.

It is believed a marketing problem (of marketing, promotion and communication) is involved in the Ghanaian optometry situation especially as regards the relative newness of optometry in Africa in general and Ghana in particular, where professional optometry as a product is arguably at an introduction stage or at best the growth stage. The belief is that professional Optometry needs to be better marketed to help make its services better known, appreciated and utilized in the society as well as make it more profitable to the rightful practitioners as well as for the nation to gain revenue through taxation etc.
Indeed as will be shown in section 2.4, optometry is an attractive, highly rated, high income profession in places with good regulations and controls. From a marketing perspective - aside from the care services offered to the community - there is always the revenue component which accrues to practitioners. This is by way of “professional fees” charged for various categories of services rendered as well as from the sale of eye care products etc.. This revenue, is more likely than not, to reduce in the face of a lack of marketing of professional optometry, the absence of an optometry law and therefore a free –for- all quack eye care industry. The profession and the professionals therein become worse off for it. In terms of national income professionally registered optometrists are more easily captured in the tax net due the formality of their work and therefore the nation would be able to tax them appropriately whereas this is less so for quacks in the unique circumstance of Ghana where a vast majority of informal sector workers are not yet in the tax net; a serious concern for Governments in their revenue mobilization drive. The proper marketing of professional optometry as a product becomes imperative since the quack issue in the long run boils down to a case of loss of jobs, income, profits or margins for that matter. Social marketing specifically, with special emphasis on promotion and communications is suggested.

**1.1 Purpose of study**

This study intends to measure and analyse the perceptions of eye care patrons as regards the potential role social marketing may have in making professional optometry the preferred primary eye care provider in Ghana, as well as look into such matters as eye care patrons’ general knowledge of the differences between the different eye care professionals. Knowledge of the difference between professional optometrists and quack practitioners would also be looked at; then among a host of factors, the single most important factor which accounts for the seemingly thriving quack practice in Ghana. It will also go into the sources and dangers of the quack practice in general.

The outcome of this study is expected to better position the optometry profession to enable it improve business opportunities and maximize value through appropriate social marketing efforts, by making people first of all know and understand who the optometrist really is and what he does; as well as reduce medical risk by helping to eliminate or reduce drastically the dangerous
practice of quacks and to safe guard the noble optometric practice; to stimulate action in respect of relevant legislation to regulate optometry practice in Ghana and also help offer the general population safe, better quality, value-for-money services.

The hope is that such a very critical and important practice would be left to the rightful people with the effect that there is increased visibility, acceptability and patronage of the optometric profession as the preferred primary eye care provider in Ghana. This way one can safely guarantee the general populace safe, high quality, good value-for-money eye care services. The effect on overall national productivity in this regard cannot be overestimated.

1.2 Optometry Practice in Ghana and the Lemons Problem

The case on hand in this study can be likened to the asymmetric information – lemons market model of George Akerlof, in which it is believed, that due especially to, the lack of (1) government action- to restrict opportunism and, (2) properly well focused information to the general public about what optometry is all about- what the professionally trained optometrist does - there exists information asymmetry- vis a vis his/her relationship with the ophthalmologist, the optician and the general populace, (even among the highly educated).

The problem of the seemingly thriving quack eye practice thus persists.

Government action in this case will be with the view to restrict opportunism by way of, (a) the optometry law which would regulate the practice of the profession and, (b) the setting up of an optometry council which would deal with issues of registration, licensing, certification, continuing education etc.

Information from the side of the profession itself- the Ghana optometry association, professional optometrists, the optometry training institutions; Government institutions- the health ministry, the standards board; consumer protection agencies; vision-care-interested Non Governmental organizations (NGOs) etc. to the public, would be a way of signaling with the view to equalize information. All of the above with the sole aim of reducing the negative effect(s) of the apparent lemons problem on hand.

Due to information asymmetry and the lack of the necessary mitigating measures that would stem problems arising thereof, the public lacks the ability to differentiate the well trained,
professionally qualified optometrist from the charlatan, leading to adverse selection and its concomitant undesirable ills. People through no direct fault of theirs are driven rather dangerously to put their eyes and visual system into hands of dangerous practitioners. Such poorly trained or totally untrained hands, for example are more likely than not, going to charge less for services rendered-having neither the true value of the essence of the work at hand nor of the totality of considerations that go into determining compensation(s). The rates of the true professionals is obviously likely to appear exorbitant on the surface.

With no self regulation or control by any organized body, no reputation to protect or any ethics to follow, quacks could easily engage in sharp practices; which possible malpractice(s) could be ascribed to the profession as whole with the end result of sullying the good name of the optometry profession.

In not being able to differentiate, eye care services patrons in the worst case scenarios would assume all professed optometrists as one and the same and therefore be prepared to pay only a certain “fair” amount for services, in the face of likely low rates advertized by unrestrained charlatans in the system. That “fair” amount only goes to the advantage of the quack. Since the professional would most likely not settle for that average/fair price as would have been ignorantly fed into the public psyche.

But information asymmetry as reflected in the lemons problem comes with dire consequences. It is able to drive good quality products away from the market and in the worst case scenario markets are collapsed altogether.

For example, in deciding not to practice for cheap in a society which it would appear does not appreciate merit and excellence, and in which such an important primary eye care profession is neither protected nor properly regulated in any way, the professional(s) would opt not to practice in that environment in the first place, preferring to set up shop where there is proper recognition and appreciation of his value. At least in such an environment quacks dare not go near the practice in the first place let alone compete, because the protective law which is strictly enforced to the letter, forbids it. Professional optometrists here get the jobs that rightly and legally ought to come to them and with it the right remuneration for it.

The brain drain phenomenon is a possible result of such loose environments which encourage quack practices. The society these professionals shun are the worse off for it, since it would
have been deprived of some of its best trained human resources, in which case these valuable assets are unwittingly sacrificed for dangerous, low quality, less-value-for-money alternatives.

As mentioned earlier it is the view that certain interventions by way of government action and information equalization (signaling) especially could be used to limit, if not eliminate the problem altogether, and in this instance, social marketing with special emphasis on communications and promotion is being looked at as a signaling tool, which if effectively used, could potentially help in the case of promoting and protecting the optometry profession in Ghana whilst at the same time reducing the quack practice presence.

1.3 The state of Optometry in Ghana

Unlike in most other places with very good regulation of the practice of optometry profession, the unfortunate case of Ghana is that there is no specific law governing or protecting the practice of same. With the two (2) optometry training institutions in Ghana less than twenty (20) years old - the first being the Kwame Nkrumah University of Science and technology school of optometry, followed by the University of Cape Coast school of optometry - the profession is still battling the establishment, as has happened elsewhere, for a place of its own.

As late as April 2005, the then Deputy Minister of health Mr. Sam Owusu –Adjei was still talking of the ministry of health’s will to pursue the review and promulgation of a law (Note 1) to regulate the practice of optometry in Ghana, with the acknowledgement that “such a law was long overdue, to weed out quacks who operated with impunity and hurt the health of their innocent clients”. This assurance was given at the opening of the world council of optometry (W.C.O) delegate meeting in Ghana, the first such meeting in Africa. At the same conference Dr. Julius Darko, President of the Ghana Optometry Association appealed to the ministry of health to ensure the establishment of an optometry council in Ghana to regulate the practice, as part of the development agenda of the government.
Interestingly with a new government in Ghana since January 2009 and coming with it a new health minister, it is instructive to note that as recently as Monday the 11th of January 2010, the minister of health, Dr Benjamin Kumbuor, in an answer to a question from a caller, concerning the optometry bill in Ghana, said that the optometry bill was not part of the legal reforms being undertaken by his ministry (and by extension the government of Ghana). In fact he confessed that he was ignorant of that bill. This was during a Joy FM radio (Note 2 ) Super morning show programme hosted by Kojo Oppong Nkrumah.

The same minister of health, however, at the graduation ceremony for new Doctors of optometry at the Kwame Nkrumah University of Science and technology in March 2010 now talked about Government’s resolve to regulate the practice of optometry in Ghana by passing the draft optometry bill into law, whilst also noting that being primary eye care providers, the services of optometrists could not be underestimated (note 3).

But the big question still remains; for how long more can the profession wait? Especially when viewed against the background that way back in 2003 the optometry bill was already supposed to have been before government at the level of cabinet for consideration (note 4).

In fact such is the case that anyone with a modicum of knowledge about spectacles or prescriptions or anything eye care for that matter can, more or less set up shop anywhere and practice. There is little or no legislative support or legal backing to dissuade, scare, prevent these quacks and other potential offenders let alone hold them accountable.

This category of practitioners can be seen all over the place -from market places, lorry parks, government ministries and, churches, schools etc. in the towns, to as far as small local community settings in the hinterlands. Some operate at fixed locations whilst others operate in an itinerant manner. Sadly enough some of these personnel can be even be found in some state establishments like clinics and hospitals.

The situation worsened by the fact that in terms of hiring, some supposedly established practice owners - some of whom are not necessarily optometrists - either out of greed, ignorance (or both) of the dangers posed to the very existence of the profession itself, go out of their way to rent such unqualified persons to perpetrate this unacceptable deed, sometimes at the expense of the well trained, properly qualified ones.
The power to regulate by way of licensing, registration, continuous-education-monitoring etc. by a legally backed organization, like the proposed optometry council, a quality control organization or standards board, consumer protection agency, independent rating agency etc. is completely lacking, as correctly happens elsewhere. Licensing and regulation as well the optometry law are still missing as major planks to support the profession.

It must also be mentioned that in a news report concerning a serious condition caused a patient by one such quack, as a result of wrongful administration of a drug, some eye care experts interviewed, mostly ophthalmologists, arguably put the quack population at about twenty (20) percent of eye care professionals.

1.4 The dangers of eye care quakery and the case for social action in Ghana

The eye has a direct connection with the brain, via the optic nerve. The optic nerve is so complex that it makes eye transplantation impossible at least for now - unlike it is for some other organs. When we lose our eyes it is gone for good. The importance of the eye and vision in man’s scheme of things as it relates to quality-of-life generally cannot therefore be underestimated. It stands to reason then that the eyes must be given utmost care to maintain its health and functionality.

In the realm of eye and vision care one would expect such an onus responsibility to be in the hands of requisitely trained, qualified, up-to-date personnel who are abreast with current best practices to ensure safe, high quality, value-for-money services.

Problems relating to eye care could broadly be divided into two main groups.
(i) Those to deal mainly with pathologies - the health of the eyes- and needing the use of drugs and/or surgery for treatment; and
(ii) Those that deal purely vision or seeing. This relates to the refraction of the eyes, their accommodative powers, vergence relationships etc.
These conditions would end with the use of a visual aid of sorts e.g. spectacles or contact lenses. Even here diagnostic drugs are sometimes needed to help elicit right results. Corneal laser surgery is also done (eg. LASIK, PRK etc.) as a corrective measure in some refractive cases.
Basically visual aids, drugs, surgery and occasionally vision therapy, by way of exercises etc. are used to solve eye problems. Any acts or omissions gone amiss in respect of any of the above methods would lead to different kinds of difficulties. Fallout from such errors could be total or partial irreversible loss of vision - total loss of vision indicating complete blindness; or different kinds of asthenopic symptoms which would generally include pains, straining, burning sensation, headaches, itches, red eyes, watery eyes, fatigue, image distortion etc. The application of a wrong drug or even, a good drug wrongly; and likewise the use of wrong corrective lenses due to wrong eye exam results or wrong fixing of lenses could all lead to severe unpalatable yet avoidable consequencies.

The qualified optometrist is able to do a differential diagnosis and determine when a case warrants an immediate referral or not. The referral decision and its timing is very critical in optometry since there are lots of cases which if not dealt with promptly and appropriately could lead to permanent eye damage within a matter of hours e.g., the retina vascular occlusions. Besides a lot of more serious general systemic conditions previously unknown to a patient could be detected from the eyes by eye care professionals, e.g., diabetes, hypertension, herpes infections, sickle cell anemia, vitamin A deficiency and even AIDS etc. It takes a well trained eye and mind to do this work effectively.

The gravity of the dangers posed by eye quackery are way too costly for society to look on whilst charlatans are allowed to have a field day. It is the reason why professional primary eye care optometry has to be effectively and efficiently marketed. It is imperative for stakeholders therefore to attack this problem head on. To the extent that the situation on hand is not a helpless one, the belief is that the case for professional optometry, well articulated, should spur relevant action to achieve desired results.

Social marketing is advanced as one of the major strategic tools with the potential to affect the situation positively in a holistic and comprehensive manner. This is more so since the whole society is at risk here – everyone needs eye care, from the youngest child to the oldest adult.
1.5 Social marketing

Social Marketing is the practice of utilizing the philosophy, tools, and practices of commercial marketing for health and/or social programs. Lewis, James B. (2003).

Kotler and Zaltmann (1971). also defined social marketing as the design, implementation and control of programs calculated to influence the acceptability of social ideas and involving considerations of product planning, pricing, communications, distribution and marketing research- an explicit use of marketing skills to help translate present social action efforts into more effectively designed and communicated programs that elicit desired results.

Social marketing sells a behavior change to a targeted group of individuals to (a) accept a new behavior, (b) reject a potential behavior, (c) modify a current behavior and (d) abandon an old behaviour.

Such social and health causes advanced by social marketing include alcohol misuse, drug prevention, traffic safety, tobacco use, unhealthy diet, lack of exercise, smoking, unprotected sex, dangerous driving, condom use, family planning etc.

Increasing numbers of non-business institutions now are employing of social marketing to further their institutional goals and products, especially since the second half of the 20th century. At the heart of social marketing is its distinguishability from business marketing by virtue of the fact that social marketing emphasises non-tangible products, ideas, attitudes, lifestyle changes etc. as compared to the more tangible products and services that business, healthcare etc. focus on.

Sometimes business marketing and social marketing can be blurred in their distinction e.g. as when fast food service restaurants promote the nutritious value of their products and when condoms are manufacturers provide information on AIDS, beyond the profit motive, there is also a social benefit from the promotions. Lefebvre and Flora (1988). The rewards in buying a social product must be more relative to the cost or the cost reduced relative to the rewards.

Lefebvre and Flora (1988) citing experiences from a National High Blood Pressure Education Programme, the Stanford Three Community Study, and other Public Health Education efforts concluded that social marketing principles are useful in formulating and implementing broad
based behaviour change programmes; not without noting major problems with the limited reach and low penetration of individual and small group based programmes as well as the overwhelming nature of the task to develop programmes that will effect changes in populations in the face of limited resources and lack of appropriate technology development.

According to the UNAIDS (www.unaids.org), from its origins in family planning, social marketing has found expression in many more areas such as AIDS control, female and male condom awareness creation and distribution etc. - after having utilised the concept in many countries, from Haiti, Myanmar, Zambia to The Russian federation, Zimbabwe, South Africa etc. The United Nations (UN) body gave three (3) important lessons from the condom promotion efforts. That, (i) Seed money can effectively be used to leverage additional resources for major public health impact. (ii) Social marketing can be applied to new products and services.(iii) Social marketers can help create an enabling and supportive environment for behavioural change.

Recently, Harman and Murphy (2008) also applied social marketing to study its effectiveness at reducing traffic accidents among male drivers in Ireland and found it very useful.

Walsh et. Al. (1993) used social marketing programs variously to address issues of excessive drinking, unhealthy diet, lack of exercise, the use of tobacco etc. Likewise similar programs have been used to address issues concerning alcoholism and other drug problems on college campuses. Zimmermann (1997) and traffic safety among communities. Hastings and Elliot (1993).

Delhomme (1999) also indicated that road safety campaigns performed best when married with enforcement activities and undertaken in the presence of strong legislation. Delaney et al (2004) on their part found that legislation acting as the sole support for a media campaign is of little benefit. However, in its absence road safety campaigns have been found to be ineffective. Publicity campaigns in the U.S. were found to be of little benefit in promoting seatbelt use until legislation made seatbelt wearing legally compulsory.(Foss, 1989; Williams et al, 1987).

Switzerland’s Stop Aids, of one of the longest running and most carefully evaluated social marketing programs for AIDS prevention in the world, first targeted condom use, before anti-discrimination and later needle exchange. Quite remarkably Condom use among men between
the ages of 17-30 yrs old, for example increased from 8% to almost 50% between '87 and '90. (www.stopaids.ch)

The Indiana State Department of Health (ISDH), in a collaborative campaign with (Children's Special Health Care Services, Maternal and Child Health Services, and WIC) sponsored a Folic Acid Awareness Campaign with the goal of decreasing the incidence of neural tube defects. Using a statewide educational campaign promoting adequate folic acid consumption preconception and during the first trimester of pregnancy, the campaign targeted all women of child bearing age. With participants given a test prior to, and at the conclusion of the project, results of the matched tests indicated a significant increase in the participant's knowledge about neural tube defects, folic acid, and social marketing techniques. Van Meter, T. Friesen, C. (1999).

Diana chapman Walsh and colleagues (1993) in their paper described the field of social marketing as it is used to improve the health of the public. They however argued that the “technology” cannot simply be transferred without some translation to reconcile differences between commercial marketing and public health.

J. Michael McGinnis, Pamela Williams-Russo, and James R. Knickman (2002) explored some of the factors inhibiting policy attention and resource commitment to the nonmedical determinants of population health and suggested approaches for sharpening the public policy focus to encourage disease prevention and health promotion. On the question of why so few dollars are devoted to health promotion, the group argued there was clear evidence, then emerging about health-promoting interventions that worked and cited an IOM report, Promoting Health, which documented social, behavioral, and clinical interventions for which there was solid empirical evidence about the effectiveness in promoting and maintaining health. Talking solutions to the problem, McGinnis and his team proposed an expanded agenda which should include more attention to understanding how social factors and social environments affected health and well-being with such an agenda focussing on the relationships between social factors associated with poor health outcomes and the mechanisms that led to poor health. In behaviour, the highest research priority, they stressed on the need to better understand how social marketing and behavior-change interventions can be designed and implemented to work at the population level.
Chapter 2

2.0 What is Optometry

Salmans (1996) defined Optometry as an autonomous, primary eye care profession which deals with the testing and examination of the eyes for defects and the provision of appropriate remedies by way of visual aids, drugs, training etc. It basically involves examination, diagnosis, treatment, and management of diseases and disorders of the visual system (AOA 1997).

The world council of optometry defines optometry (Note 5) as a healthcare profession that is autonomous, educated and regulated (licensed and registered) involved in the service and care of the eye and visual system and the enhancement of visual performance. A typical comprehensive eye exam by an optometrist has four (4) main components, namely visual acuity, eye coordination focusing ability and eye health otherwise stated as involving 1. ocular and systemic history 2. assessment of neuromuscular control i.e. ocular motility and binocular vision 3. visual acuity and refraction and 4. Ocular health.

Based on results from the above battery of tests remedial action is taken which includes spectacles, contact lenses, laser surgery, exercises, therapy, referrals etc.

Being a primary eye care profession it must be stated that about seventy five (75) percent of all eye care cases end with the optometrist. Optometrists also work in the areas of diagnosing, managing, and referring some systemic disease cases which show up early in the eyes, such as arteriosclerosis, diabetes, and hypertension. They also provide pre and post surgical cataract care, refractive laser treatment, as well as handle retinal problems that require pre and post surgical care. They encourage preventive measures such as monitoring of infants and their visual development, evaluating job, school, hobby related tasks and promoting nutrition and hygiene education.
2.1 Scope of Optometry

Optometry is needed and applied in everyday life, from the very simple to complex cases. The smallest child, right down to the oldest adult, all need the services of the optometrist for various reasons. Societal and environmental demands on our visual system as a result of work at school, the office etc., the increase in mechanization and the use of the computer, improvements in healthcare leading to longevity of humans, as well as sports and hobbies all come with their own special, sometimes exacting, visual demands.

Professional licensing of motor vehicle drivers and aircraft pilots, insurance claims, military recruitment demands, school admission assessments etc., to mention a few, all have something to do with optometry and the optometrist. (Rosen and Rosen, 1997).

Basically optometrists do not perform surgery, such cases being referred to the ophthalmologists. In spite of this, the scope of work of the optometrists in the U.S. for e.g., continue to expand in scope and efficiency where in virtually all states optometrists are licensed to use pharmaceuticals to diagnose and sometimes treat eye diseases, especially those related to the eyes. Emphasis must be placed here on the fact that the level of freedom to use drugs by optometrists vary from country to country each jurisdiction doing things that will best suit their circumstances according to the level of training offered, among other considerations.

Diabetes and glaucoma care as well as corneal laser surgery are some of the new frontiers optometry is aggressively venturing into, of course with continual review and change of the relevant syllabi so as to properly empower the practitioner. Regular advances in the areas of laser treatment, contact lenses, medication and instrumentation impose an obligation on optometrists to engage in regular continuing education (Note 6).

Some specialty areas in the practice of optometry are pediatric care, infants care, geriatric care, cornea and contact lenses, low vision rehabilitation, vision therapy (behavioral and functional optometry), binocular vision, sports vision, learning disabilities, head and trauma, environmental and occupational vision, ocular disease and special testing, school consultancy, teaching and vision research. Others are neuro optometry, primary care optometry, glaucoma management and family practice.
2.2 Modes of Practice

Optometrists work in all facets of eye care (Note 6) such as private practice, vision clinics, optical stores, franchises, hospitals, as teachers and researchers, in government etc. Today they work closely with ophthalmologists, neurologists, psychologists and other health care practitioners to deliver service to the populations. As well they work either as soloists or in partnership (groups) health maintenance organizations, retail optical settings, optometry-ophthalmological settings, military and public health, interdisciplinary care or even as academics or researchers.

The line between optometry and ophthalmology has gradually been thinning due to the expanded and ever-expanding training of optometrists.

2.3 Qualifying to Practice Optometry

The optometrist is a doctor of optometry (O.D.) rather than a physician, medical doctor i.e. (D.O. or M.D.). Taking the United states of America - where optometry where optometry as a profession has been practiced for over a century- for example, one would have completed minimum three (3) years of college or university and four (4) years of optometry school (Note 7), after which a state board exam is taken, passing which enables one acquire a license that can include therapeutic treatment of certain eye diseases. This license lasts from one (1) to three (3) years- depending on the state involved. All states require continuing education credits to maintain an optometry license. The Doctor of optometry degree is also awarded in Canada and the Philippines.

One year post graduate programmes are available for specialization in specific areas of optometry like pedriatic care, geriatric care, ocular diseases, ocular therapeutics, vision therapy, contact lenses, primary care optometry, family care optometry, orthoptics, low vision care etc.

Masters and PhD degrees are also available in the areas of visual science, physiological optics, nuerophysiology, practice management etc.
In the U.K. and Australia, similarly, after completing the bachelor of science in optometry (Bsc. Optom) from the university followed by a masters degree and/or PhD as one so wishes there are professional licensing and regulatory bodies, like the general optical council, the statutory regulator of the optical professions in the United kingdom, which see to it that the ethics and ideals of the profession are adhered to and also function to ensure that non-qualified persons don’t dare venture into practicing.

Suffice it to say that depending on where one trains, it is possible to meet qualified optometrists with different titles and designations according to the level and type of study. These could range from the doctor of optometry (U.S., Canada, Philippines); the Bsc. Optom, Msc. Optom etc. (U.K., Australia and some commonwealth countries), to Dip. Optom, Adv Dip. Optom etc. from Singapore. Etc etc.

The emphasis here though, is on the fact that the practice of optometry in more advanced jurisdictions or those with relatively longer years of practice of the profession is backed by strong controlling bodies and governing legislation.

The progress of optometry has not been easy though, even in the most advanced countries; developments coming as a result of (sometimes decades) of struggles against discrimination, involving lots of politics and lobbying. This situation in most places is not least because of the influence of ophthalmologists who, having been initially the all-in—all in eye care practice tend to restrict the roles of optometrists (Note 8).
2.4 Income Potential and Attractive Features of Optometry

Optometrists generally enjoy the benefits of financial security, independence, and recognition in their communities. Results of surveys by Jobs Rated Almanac of 1999 (Note 5) which ranked the best jobs in the U.S. according to income, stress, physical demands, potential growth, job security and work environment put optometry at thirty nine (39) out of two hundred and fifty (250) top rated jobs.

Other similar surveys (Note 9) elsewhere, based on different combination of factors have placed the profession variously at twenty third (23 rd), thirteenth (13th), and even second (2nd) best profession.

Optometry is actually considered as one of the best jobs in the United States of America. The average income is very good and has almost always outpaced inflation in the U.S. Based on income potential alone it is rated among the top 10 professions in America.

Most optometrists through research are known to respond an overwhelming yes when asked if they are satisfied with their profession. The earnings range anywhere between forty thousand and two hundred thousand dollars per year $(40000- 200000), according to the 2001 AOA (American Optometrists Association) economic survey, depending on the type of practice one engages in, as well as the level of experience and business savvy of the practitioner. The same survey showed that total individual average (mean) net income for optometrists in 2000 was one hundred and thirty eight thousand dollars ($138000). It also showed that when managed care and other economic pressures were expected to squeeze the finances of healthcare practitioners, optometrists fared even better than the U.S. economy as a whole.

Indeed optometry is considered the third largest independent healthcare profession in the U.S. with over thirty five thousand (35000) practicing optometrists at work.

Considering the amount of regulation, marketability and visibility of optometry of optometry in the U.S., the U.K., and other places it could be argued that all things being equal if similar systems and mechanisms are put in place in Ghana the optometry profession and practitioners stand to be better protected and respected as well as be far better off economically than the case is presently.
This is possible because when the general population is armed with the right information about the profession and the dangers and disadvantages of patronizing the services of quacks, coupled with solid protective legislation with an optometry council in place to check on the registration, licensing and continuing education of practitioners, there will little room or incentive for any unqualified individual to venture into the profession. The reality of clearly spelt out prosecutorial consequences would also serve as a deterrent.

Profitability is even more assured in the face of the ageing population with their attendant special eye care needs, the ever expanding frontiers of optometry (all over the world) into earlier on forbidden areas, the retirement of older optometrists, the effect of technology especially in the use of personal computers (P.C.s) which place a heavy demand on our visual system as well as instrumentation, the development of which is making work easier and faster, improving diagnosis and patient management etc. This is without forgetting the fact that even in Ghana the optometrist-population ratio is woefully low in comparison with jurisdictions more advanced in the practice of the optometry profession.

### 2.5 Differences Between the Optometrist, Ophthalmologist and Optician

The world council of optometry (W.C.O.) defines optometrist as a primary health care practitioner of the eye and visual system who provides comprehensive eye and vision care which includes refraction and dispensing, the detection, diagnosis and management of diseases in the eyes and the rehabilitation of conditions of the visual system. They are also referred to as optician-optometrist in some parts of Europe, ophthalmic opticians in the United Kingdom or optometric physicians in the United States of America (Millodot, 2002).

An ophthalmologist is a medical specialist who practices ophthalmology. They are also referred to as oculists or ophthalmic surgeons. Ophthalmology is a part of medical science concerned with the medical and surgical care of the eye and its appendages.
The optician designs and makes optical instruments or lenses. We have dispensing opticians and manufacturing opticians. The manufacturing optician makes optical or ophthalmic instruments, lenses, prisms or spectacles whereas the dispensing optician fits and adapts spectacles and contact lenses on the basis of a prescription by an ophthalmologist or optometrist. In many countries dispensing opticians cut and edge lenses and fit them into a frame.

2.6 Doctor–Population Ratios

Beyond the lack of supportive legislation and other regulatory infrastructure is the poor optometrist-population ratio. In 2006, according to Dr. Alex Ilechie, a lecturer at the department of optometry, University of cape coast, and a “unite for site “ optometrist in Ghana, with a population of over twenty two (22) million Ghana has a total of only forty eight (48) qualified optometrists, this including those with University post graduate training from KNUST and Ghanaians trained in recognized programs in other countries (Note 10). This implies there is only one (1) optometrist to three hundred and ninety six thousand (396000) people in Ghana, whereas the “World Wide Vision 2020: The Right To Sight”, a global initiative of the world health organization (WHO) and international agency for the prevention of blindness (IAPB) for the elimination of avoidable blindness, recommends one (1) optometrist per fifty thousand (50000) people. Meanwhile according Dr. Ilechie there was no realistic plan to increase the number of optometrists by year 2008 when the two optometry training institutions would be graduating their first set of Doctors of optometry. Presently though the KNUST alone has produced over one hundred and fifty optometrists, overall.

The case of ophthalmologists is even worse. There were forty three (43) ophthalmologists in Ghana in 2002 (i.e. 1/442000). This number was expected to drop because of the brain-drain-syndrome, where for economic reasons large numbers of professionals left Ghana to seek greener pastures elsewhere. In effect there are over nine (9) million people in over a thousand (1000) Ghanaian communities without any proper eye care. Here again in 2010 , not unexpectedly the total number of ophthalmologists is only 50.
The issue of vast areas of the country not having the requisite professionals to take care of their visual needs (at least statistically) fosters the practice of quacks, since in the face of nothing, the quack could appear a saviour of sorts (warts- and –all) to fill in the gap, albeit dangerously so.

This is not helped by the fact that the relatively few professionals around are more or less concentrated in the major cities like Accra, Kumasi, Takoradi, Cape Coast, Tamale etc. Indeed by latest statistics over eighty percent (80%) are in Accra and Kumasi alone.

The implication also is that when properly regulated there is so much the qualified optometrist can make by way of returns for safe, high quality services professionally rendered to the society. In the United States for example, for the profession be established each state had to pass an optometry bill into law. The first law regulating optometry was enacted in 1901 in Minnesota and the last in 1924 in the District of Columbia (D.C.) (Goss, 2003) (Note 7).
Chapter 3

Literature Review

3.0 Theoretical framework - Assymetric Information and the Lemons Problem

Assymetric information is the situation in which one party to a transaction knows of a material fact that the other party does not, as would be in the case between a seller and a buyer. The more informed party may exploit the less informed one.

Such opportunistic behavior due to asymmetric information leads to market failures, destroying many desirable properties of competitive markets (Note 11). In competitive markets where all parties have full information, consumers can buy the quality goods they want or need at a fair price whereas in the situation where the information is with one side only e.g. the seller, the probability is that consumers will buy goods at more than they would if they had full information. Ordinarily if consumers know that a product is of poor quality they would not be prepared to pay so much for it.

As a result of asymmetric information high quality products are gradually driven out of the market place since the “average” price consumers are willing to pay in the absence of full information will tend to favour the shoddy sellers goods to the detriment of the higher quality goods sellers who also would not below a certain minimum value; this is in spite of the fact that “knowledgeable” consumers value the high quality product and are prepared to pay a good price for it.

Market failure in this case can be eliminated if consumers can inexpensively determine the quality of a product or learn the price that various outlets charge. This though could be very expensive in most markets.

The two main problems arising out of asymmetric information are adverse selection and moral hazard (Perloff, 2007) ; these leading variously to, ignorance, driving out high quality goods; price discrimination due to false beliefs about quality of identical products; firms gaining market power from price ignorance; and problems arising from ignorance when hiring (jobs).
Adverse selection is opportunism characterized by an informed party benefitting from trading or otherwise contracting with a less informed person who does not know about an unobserved characteristic of the informed person e.g. sick persons going for life insurance. This creates market failure by reducing the size of a market or eliminating it thereby preventing desirable transactions, e.g. exorbitant insurance rates or no insurance at all.

Moral hazard on the other hand is opportunism characterized by an informed party taking advantage of a less informed person through an unobserved action, e.g. an employee shirking job responsibilities because he or she is not being monitored by the employer. Similarly insured people tend to take unobserved actions- engage in risky behavior that increase the probability of large claims against insurance companies.

### 3.1 Response to Adverse Selection

Adverse selection could be checked essentially by restricting opportunism or equalizing information or both.

1. Restricting opportunism: Opportunistic behavior can be prevented if informed people have no choice. Eg. a government action through legislation can help check adverse selection by providing universal coverage or by mandating that every one buy insurance as is the case where many states/countries require that every driver carry auto insurance. This way adverse selection is reduced since not only a disproportionate number of bad drivers buy insurance but indeed every driver.

2. Equalizing information: Either informed or uninformed parties can eliminate information asymmetries by two main means, screening and signaling.

Screening is the action taken by an uninformed person to determine the information possessed by the informed one. E.g. test drive several cars to fish for hidden problems before deciding on a purchase.

Assuming both parties to a transaction have equally limited information, neither has an advantage over the other i.e. equal uncertainty.
Signaling is an action taken by an informed person to send information to a less informed person. A firm may send a signal such as widely distribute a favourable report of its products by an independent testing agency to try to convince buyers that its products are of high quality. In some markets government agencies or organizations such as consumer unions provide consumers with such information.

3.2 The lemons Problem

George Akerlof (Nov. 2003) in his paper “the market for lemons: quality uncertainty and the market mechanism” in 1970 dealt with adverse selection by relating the situation to a lemons market. He wrote that when buyers cannot judge a product’s quality before purchasing it, lower quality products- lemons- may drive high quality products out of the market. The situation he cited, is common in the used car market where owners of bad quality cars (lemons) are likely to sell their cars (lemons) leading to adverse selection- a situation where lemons drive out good quality cars from the second hand car market because buyers are not prepared to pay much more than what they would consider a fair lemon price, since the possibility of buying such a product on the second hand market is relatively very high. This arises because cars that appear to be identical on the outside often differ significantly in the number of repairs they would need-some are lemons. The problems surface only after the buyer purchases the car and starts using it. In contrast, the sellers of such used cars know from experience whether the car is a lemon, the assumption here being that the seller cannot (at least practically) alter the quality of the used car. “The market for lemons” is the single most important study in the literature on economics of information. It addresses a simpl yet profound and universal idea with numerous implications and widespread applications.

Akerlof shows that hypothetically the information problem can either cause an entire market to collapse or contract it into an adverse selection of low-quality products. This scenario is demonstrated mathematically in David Autor’s lecture note, Market signaling- Theory and evidence.Autor(2003)

George Akerlof pointed to the prevalence and importance of similar information asymmetries especially in developing economies. One of his illustrative examples of adverse selection is
drawn from the credit markets of India in the 1960s, where local lenders charged rates that were
twice as high as the rates in the large cities. However, a middleman who borrows money in
town and then lends in the countryside, but does not know the borrowers’ creditworthiness,
risks attracting borrowers with poor repayment prospects, thereby becoming liable to heavy losses.

Difficulties for the elderly in acquiring individual health insurance as well as discrimination of
minorities on the labour markets are other examples (Note 12).

Relatively more recently events in the IT sector point to the effects of asymmetric information
by way of adverse selection. At first firms in a new sector—such as the then IT sector—might
seem identical to an uninformed bystander while some “insiders” may have better information
about the future profitability of such firms. Firms with lower than average profitability will
therefore be overvalued and more inclined to finance new projects by issuing their own shares
than high-profitability firms which are undervalued by the market. As a result low profitability
firms tend to grow more rapidly and the stock market will initially be dominated by “lemons”.
When uninformed investors eventually discover their mistake, share prices fall—the IT bubble
bursts.

A key insight in Akerlof’s lemons essay is that economic agents may have strong incentives to
offset the adverse effects of information problems on market efficiency. He further argues that
many market institutions may be regarded as emerging from attempts to resolve problems due to
asymmetric information citing guarantees from car dealers as an example. Others include
brands, chain stores, franchising and different types of contracts.

Signaling takes diverse forms, from costly advertising (marketing); far reaching guarantees;
aggressive price cuts; financing by debt rather than by issuing new shares; to delaying tactics in
wage offers and the decision to pay dividends (in spite of higher taxes through double taxation)
instead of capital gains. All with the sole aim of signalling a certain postivity, good quality,
strength etc. about one’s product(s) offer.
3.3 Limiting Lemons

Problems arising out of consumer ignorance could be limited by, i. Laws that prevent opportunism e.g. product liability laws; ii. Consumer screening; iii. Third party comparison (of brands etc.); iv. Standards and certification and v. Signaling by firms – Marketing(promotion). Standards being defined as a metric or scale for evaluating the quality of a product; and certification, a report that a particular product meets or exceeds a given standard level.

3.4 Further empirical Works on Assymetric Information

In the absence of a platform for secure electronic commerce, a host of certification authorities (CAs) emerged to seize the opportunity for issuing digital certificates that constitute the public key infrastructure (PKI). Take-up of the technology was however disappointing since the critical world wide mass was not reached. A whole lot of legal, technical, policy ect. reasons were cited. James Backouse et al. (2003) however believed another contributory factor for the adverse turn of events is the quality uncertainty surrounding CAs and the certifications they issued. Adopting the "lemon’s” principle to analyse the situation, they reviewed three (3) counter measures that remedy the problem” - brand names, guarantees and licensing – and in conclusion, discussed how they may be used to signal quality of certificate and hence generate the trust missing between CAs and relying partners in electronic transactions.

To Boon chye Lee, Lawrence Ang and Chris Dubelear (2004), assymetric information typically relates to the difficulty that consumers have in distinguishing between trustworthy and untrustworthy web merchants when it comes to B2C internet commerce. They believed the use of signals by trustworthy merchants to differentiate themselves from untrustworthy ones would solve the problem. Making use of experimental designs in which subjects are exposed to a series of purchase choices, they investigated three (3) possible signals – an unconditional money-back guarantee, branding and privacy statement – to test their efficiencies. Empirical results confirmed the predictions suggested by the signaling theory.

Viem Kwok and Hayne Leyland (1982) demonsrated how assymetric information contributed (single handedly, they argued) to the brain drain, which affected a lot of least developed
countries (LDCs) especially - by taking away their best educated human resources to more economically advanced ones - and suggested ways of ameliorating the situation. One of these was by signalling, specifically, "pooling of information available on the nature and quality of foreign (educational) graduate programs and making it available to all home country employers to help narrow the information gap".

Diego Moreno and John wooders (Note 13) found that in markets with adverse selection only low quality units trade in the competitive equilibrium when the average quality of the good held by seller is low and that under decentralized trade however both high and low quality units trade although with delay. They also found that when frictions are small the surplus realized is greater than the (static) competitive surplus. Thus decentralized markets mitigate the lemons problem. Remarkably, payoffs are competitive as frictions vanish even though both high and low quality units continue to trade and there is trade at several prices.

Kyung Minkin (Nov. 2008) on their part found that, endogenous market segmentation alleviates information asymmetries improving market efficiency without employing costly signaling or screening devices. The incentives for sellers to sort themselves are endogenously generated by buyer’s behavior and vice versa. That endogenous segmentation is supported by a monotone arrangement: if a market is segmented into multiple sub-markets higher quality sub-markets entail more quality uncertainty and attract relatively fewer buyers.

In their two works, (a) the role of reputation in open and closed societies and (b) improving the lemons market with a reputation system: an experimental study of internet auctioning, Toshio Yamagishi and Masasumi Matsuda (Hokkaido Univ.) (May2002) came to the conclusion that, (1) information asymmetry drives the experimental market into a lemon market, (2) Reputation about other traders moderately alleviate the lemons problem, (3) the power of reputation as a solution to the problem of lemons is substantially reduced when traders can freely change their identities and cancel their reputations, and (4) The negative reputation system is particularly vulnerable to identity changes, the argument being made that the lack of a closed market among on-line traders which appear at first to be a formidable problem can actually be a blessing.

Amy Crews Cutts, Robert A. Van Order, Peter M. Zorn (July 2001) modelled the structure of a financial market that is composed of two types of institutions, banks and security markets. The model analyzed the development of securities market as a way of trading off its lower cost of securitization with adverse selection due to asymmetric information possessed by banks, using a
simple adverse selection model in the tradition of Akerlof (1970). In their finding successive modifications, including contracts similar to those of Lelend (1979) and Chan and Leland (1982) solve some of the adverse selection problems by “licensing” loan sellers in an effort to provide minimum quality standards.

Leroy D. Brooks and Tong Yu (Feb. 2003) also concluded that, a closed–form equilibrium solution to the issuance game jointly reflects the lemons problem and a quality screening effect. Low quality firms have a disincentive to issue new equity if their endowed investment opportunity has negative net present value (NPV). Consequently these low quality firms will find it economically less desirable to issue in “cold markets” where expected return on investment and/or assets in place are lower and/or issuance costs are higher, thus decreasing the lemons problem highlighted in Myers and Majluf (1984). According to the pair, consistent to their model, seasoned equity offerings (SEOs) two day announcement period abnormal returns in under-performing industries are about fifty (50) basis points higher than in out-performing industries and larger proportions of under- performing SEOs have a positive announcement return.

Mocan (2006) tested adverse selection in the market for child care. The hypothesis of strong rationality was rejected, indicating that parents did not utilize all available information in forming their assessment of quality. The results demonstrated the existence of information asymmetry and adverse selection in the market, which provided an explanation for low average quality in the U.S. child care market.

Ingemar Dierickx and Mitchell Koza (1991) made some helpful suggestions to avoid or reduce the information imbalance when negotiations take place on combining assets. Companies involved in merger and acquisition deals are up against a fundamental problem when they negotiate. Information is asymmetrical, i.e. unequally divided between buyer and seller. There are two, parallel outcomes. One in which the buyer is likely to make an adverse selection and two, the seller cannot reveal all his information and true value — he has a ‘credible signalling problem’. The suggestions included hints about who negotiates and over what period, degree of previous familiarity between the companies, and the use of joint ventures as a preferable alternative. Regrettably however, in their considered opinion, there is no absolute ‘cure’.
Ruby A. Ward and Lynn Hunnicutt on their part looked at the organic produce market and hypothesized that a moral hazard problem existed, because it is difficult for consumers to observe whether a product is organically or conventionally grown. They likened the situation to the “Lemons Problem” and cited various methods that can be used to solve this problem, including signaling, reputation, licensing and certification. They however believed there are problems related to using both signaling and reputation to solve the “Lemons Problem” and posited that combining aspects of both licensing and certification seems to be the method that is most applicable.

**Hypotheses**

**Null Hypotheses,** $H_0$: Social marketing has no role in making professional optometry the preferred primary eye care provider in Ghana.

**Alternative Hypothesis,** $H_1$: Social marketing has a role to play in making professional optometry the preferred primary eye care provider in Ghana.
Science principles should guide a well-defined research method during the execution of any kind of research (Eldabi et al. 2002). It’s been argued that methods should be regarded as systems of explicit rules and procedures against which assertions for knowledge are assessed and upon which research is based (Frankfort-Nachmias and Nachmias, 1996). On the contrary, there are others who hold the view that there is no such thing as a “perfect” research methodology (Lee, 1989). This is due to the fact that the debate about the meaning of science still rages on. There is so much dynamism in the procedures for research that scientists and researchers are constantly looking for new methods and techniques of observation, inference, generalization, and analysis. To this regard, there have been suggestions that researchers must resort to well-developed research methods that provide an understanding of its results and processes of scientific inquiry (Kaplan, 1973). Some of the techniques, instruments, and methods that are used in the conduct of research include but not limited to questionnaires, interviews or observations as well as sampling procedures and statistical techniques for organizing and interpreting unstructured data (Bryman & Bell, 2003). An academic research has the following basic purposes; to explore, describe, and explain (Robson, 1993; Cooper and Schindler, 2006; Yin 2003). Researchers and scholars as well as theorists seem to agree on the fact that these three separate research purposes can be combined in one study for effective findings or results. The main justification for the combination of these approaches is backed by the work of Marshall and Rossman (2006) who elucidated the interconnection between the categories of the research purpose.
4.1 Approach

A stratified sampling model was adopted, specifically focus group discussions. In this case the target group was the urban, educated adult eye care patron comprising the general public, students, non-students, professionals, non-professionals as well as the young and old etc. This group comprised people of 18 yrs and above. The idea was to deal with persons more likely to have come in contact with and appreciate the issues and concepts at play in the research. Most optometric settings, both professional and quack, are located in the urban areas, though with a lot more of the quack services in the rural settings than the urban.

In order to capture a fair cross section of eye care patrons these persons were selected from optometric practices, both big and established practices (Group A) as well as from small and emerging ones group B). This was to afford us the opportunity to capture all shades of opinion irrespective of economic or social background. Some practices are associated with the well to do, sophisticated and elite class and vice versa etc. Differences in the various practices arise from rates charged, services rendered and a certain quality that comes with it, products on offer etc. Fifty percent (50%) of respondents were taken from each of the two major groups. Ten (10) practices were involved in the study; five (5) from each group.

Both qualitative and quantitative methods were used in the collection, collation and analysis of data e.g., tallies, frequency distributions etc. The statistical t-test of one variable was used to test the hypothesis. This test is distributed with (N-1) degrees of freedom and approaches the normal distribution as the number of observations increases. The hypothesis question was tackled from the point of view of degree of "agreement" or "disagreement".

One hundred and fifty (150) respondents were dealt with in total, an average of fifteen (15) being taken from each practice.
4.2 Technique

In some instances respondents from each practice were gathered in groups as low as five or more as the situation allowed and are first briefed on the optometry situation in Ghana, with regard to who a professional optometrist is, the absence of an optometry law, the issue of professional and quack practitioners and the possible consequences. There is also a brief on social marketing and its uses elsewhere. Respondents were then made to answer the relatively short questionnaire whilst they waited their turns to see the eye Doctors.

It must be stressed that because of time constraints not all respondents were able to fill out their questionnaires immediately but in a lot of cases most respondents did. Respondents were carefully selected from the rear of queues at the eye clinics whereby they would ordinarily would have finished the whole process before it reached their turns to be attended by the clinic staff. This was arranged with the clinic administrators. The plan then was also to try to reach more than the average fifteen (15) at a time, for each practice, so that given all the pros and cons we returned with just about the right number of respondents sought.

4.3 Results Collation and Analysis

A tally was first taken of all the results from the questionnaire and various statistical methods used to express them graphically.

In relation to the hypothesis question, the degree of agreement or otherwise ranged from strongly agree, through neutral, to strongly disagree. Subsequently strongly agree and agree are taken together generally to mean AGREE whilst the rest are also taken together generally to mean DISAGREE. The t-test is then use to test the hypothesis.

The data and their diagrammatic representations as well as the hypothesis testing is shown under appendices.
Chapter 5

Discussion

5.0 Break down of data

This work dealt with 150 respondents of which 82 were male and 68 female representing 54.7% and 45.3% respectively. The ages of respondents ranged from 18 to 51 years and above. The age grouping of 26 to 40 years formed the majority whilst the grouping of 46 to 50 years formed the minority in the proportions of 39.3% and 9.3% respectively. The educational background of respondents cut across secondary education to post graduate education. Here too the tertiary group formed the majority with a proportion of 42% of the total whilst the secondary group formed the minority with 14.7%.

To the question as to whether one had engaged the services of a quack eye practitioner before 61.3% of respondents said no, 18% said yes whilst 20.7% were unsure. However in response to the question as to whether one could differentiate a quack eye Doctor from a professional, 48% said no, 36% yes and 16% unsure. Again when the same group of people are asked whether they can confidently differentiate between an ophthalmologist an optometrist and an optician, 66% said no, 23.3 % yes and 10.7% unsure.

When tasked to show the single most important factor that accounts for the thriving of the quack eye care practice in Ghana, out of four possible causes, 42% believed a lack of effective marketing of professional optometry was responsible, 24% cited the lack of an optometry law, another 24% lack of accessibility to professional optometrists and 10% the non existence a regulatory optometry council.

To the main thesis question as to whether agreed or not to the assertion that social marketing has a role to play in making professional optometry the preferred primary eye care provider in Ghana, overall a whopping 86% of respondents agreed whilst 14% either disagreed or were indifferent. Based on this the test statistic t, of one variable was used to test the hypothesis. This test is distributed with (N-1) degrees of freedom, where N represents the sample size. Once the sample size increased beyond 30, this test approaches the Normal distribution and so the
hypothesis was tested thus. The results led to a rejection of the Null hypothesis— that social marketing has no role to play in making professional optometry the preferred primary eye care provider in Ghana—and to an acceptance of the alternative hypothesis.

5.1 Data Analysis and Discussion

From the above picture, whilst such a large proportion of respondents (66%) could not differentiate eye care professionals from each other—as was originally thought from the outset of this work—as well as quite an equally significant proportion (48%) could not tell a quack practitioner from a true professional, it would appear quite strange when 61.3% of the same respondents are very sure they had never engaged the services of quacks.

The above information gives credence to the ignorance element which was feared initially as a major factor in the Ghanaian optometry situation. This lack of relevant knowledge concerning professional eye care could easily lead the general populace into confusing one eye care professional with the other and by inference not being able to also tell a quack from a professional. This is where the lemon problem begins.

The thinking here is that because quacks could be found in all manner of places including state hospitals and health centres and sometimes in the practices of some unscrupulous and selfish professionals it is likely one could deal with a quack without knowing at first instance. In order words people are likely to equate persons working in optometry set-ups in established institutions to professionals when indeed such is not always the case. The issue of this apparent misconception, could be researched further though.

Whilst social marketing is believed to be potentially able to fix the ignorance problem identified, it is posited that as the case may be in Ghana the issue of accessibility to optometrists is worth probing into further. This becomes imperative considering the fact that per the literature not less than 80% of all professional optometrists can be found clustered in about three major cities only, worse still within relatively narrow radii, leaving large portions of the country without services of qualified optometrists. It is obvious that in the face of no qualified
practitioners, people in need of eye care services are likely to fall on what is available, whether quack or not, and more or less damn the consequences. The issue of spread thus becomes imperative so as not to make accessibility too expensive and cumbersome. Much as this may be personal business decisions concerning where one wants to operate from especially when looked at from the point of view of profitability and the ability to pay for professional services by different segments of the society, theoretically, the number of professionals already in the system could be spread in such a way as to make accessibility relatively equal across the country in terms of proximity at least.

Beyond the issue of individual profitability by practitioners, the optometry association as a body corporate could ingeniously set up a pool of "cooperative eye centres" of sorts or engage in regular itinerant outreach programmes to act as strategic gates for attracting those who need their services whilst deliberately preventing quacks from taking advantage of the deep loops in the system.

Going by the 20% figure cited by some Ghanain eye care experts a few years ago as being averagely the proportion of fake eye care practitioners, there obviously is a problem on hand which merits serious attention. This proportion is too large and it is posited that if urgent action is not taken early there is a strong possibility of quacks driving the eye care market into one of poor quality, high risk and low value –for - money since the possibility of a brain drain on the part of professional optometrists is not unlikely.

In a business sense most of the country is virtually virgin to professional eye care and this is where the profession can offer a value proposition and strategically position themselves in various locations so as to take advantage of the large numbers of the population without this vital service.

Looking at the fact that the optometrist – patient ratio is way lower than the World Council of Optometry vision - 2020 targets, proper marketing of optometry with regard to the four P’s of marketing should bring more jobs to optometrists. This situation presents a ready market for the optometrists already in the system. It however imposes a responsibility on the state also to set up more eye care centres at strategically selected locations across the country to more or less bring such services to the doorsteps of the citizenry as much as possible; and on the Universities and
Regarding the hypothesis question of whether social marketing has a role to play, the overall response, much as it would largely be taken as perceptive, is considered as a strong indicator of what is likely to actually happen in the Ghana situation, especially when weighed against the large body of knowledge of what social marketing has done in different fields. Besides in battling lemons this body of knowledge contains the use of marketing (social marketing for that matter) and advertizing as signaling tools which have empirically been used - to signal quality, strength, and positivity about one’s product – to very succesful ends.

This perception that social marketing could be used to market optometry so well as to eventually reduce the quack presence in the absense of the optometry law is further strengthened by the specific response as to what constitutes the single most important factor that makes the quack practice thrive. The majority 42% cited a lack of effective marketing of professional optometry as that factor, which goes largely to give credence to our rejection of the null hypothesis. Considering the fact that this was chosen ahead of the lack of optometry law (24%) which when in place would legally have helped control the quack practice, and lack of accessibility to optometrists (24%) and non existence of optometry council (10%) it shows that professional optometry can somehow help itself under the circumstances- the absence of protective legislation - by signaling to the general public in need of eye care services, what primary care optometry is all about, and per the lemons theory, when people buy into this signaling, the eventual net result would be to make professional optometry the preferred primary eye care provider.

As a result of the process of social marketing process, the enlightenment gained by the public would rightly drive them to shun the services of the dangerous quacks.

This perceived positive value of social marketing in this research should not be underestimated as it is not inconsistent with the view of the UNAIDS, which states among other lessons that, social marketing can be applied or transferred to other products and services, beyond condom use and family planning and that it could help create an enabling and supportive environment for behavioral change. Of course as has also been espoused by Diana Chapman Walsh et. al. (1993) the use of social marketing "technology” in this scenario would have to be done with some translation to reconcile differences the profit motive of commercial marketing and the social benefits of public health. This is imperative in the face of the fact that the whole issue of
curbing quackery, beyond the public safety element has to do with the control of resources, and in this regard, the profit motive could easily and even inadvertently overshadow the public safety and medical risk reduction objective.

In the case of Lefebvre and Flora (1988) such social marketing campaigns if they have to succeed in the larger population would need a lot of resources and appropriate technology. As espoused by J. Michael McGinnis and co (2002), this would place an enormous responsibility on the stakeholder bodies in the Ghanaian equation for example, to in a concerted manner, design appropriate social marketing and behaviour change strategies based on a better understanding of the relationships of the variables involved, as well as leverage resources to address the problem on hand.

How real this strong perception - of the role of social marketing to promote Ghanaian optometry - could be, would be an interesting research topic in future.

The twin issues of an Optometry legislation and optometry council meanwhile ought to be pursued vigorously. Arguably such legislation would ideally and possibly, single handedly put a check on the quack threat; yet without the necessary enforcement efforts, even the strongest legislation would hardly achieve the best of results in such campaigns, as shown by Delhomme (1999) and Delaney et al (2004) in their works on road safety and seat belt wearing respectively.

Much as the issue of the rates of optometrists against that of quacks could be studied in another forum, it did not show up here, since it is the considered opinion of the author that ideally, in the case of the quack versus professional practice of such a serious and potentially dangerous and life threatening professional practice, the presence of quacks is untenable and should not be countenanced in the first place let alone become a competition. Medical risk prevention and social safety is the most important determinant here and there should really be no basis for comparison.

In any case, as pointed out by Kotler and Zaltman (1971) with the citation of the case of Caracas, Venezuela, many patients preferred to patronize unlicensed practitioners and pay a fee rather than go to the free hospital. This arose because of the energy and psychological costs one expended at the free clinics, having to do with the patient being made to feel inferior and a nuisance, intrusive questionnairing, time wasting, etc. According to the writers surprisingly free medical care actually presents a marketing problem and even suggest maybe the dissonance
theory be applied and introduce such medical care at high cost to make it more desirable. People would generally want to pay for the service once they identify the right value with it. Professional optometry, well packaged should easily appeal to patients and attract them appropriately.
Chapter 6

Conclusion

Deriving from the data gathered and the discussions above, ignorance is obviously a big part of the optometry problem on hand. Most people are not very aware who the optometrist really is via a vis his relationship with other eye care professionals. This same lack of awareness translates directly into most people not being able to tell a charlatan or quack eye care practitioner from a true professional optometrist in Ghana.

Optometrists know the stuff they are made of and some segments of the population know same, but larger segments of the population do not have this information about optometry and optometrists. Information asymmetry is the resultant. The ignorance resulting from information asymmetry if not checked could easily draw the eye care situation in Ghana into a lemons market.

There is a very strong perception that social marketing has a positive role to play in helping make professional optometry the preferred primary eye care provider in Ghana.

This perception could and should be translated into reality with a comprehensive well focused and coordinated social marketing approach by the relevant stakeholders. In the present situation of an optometry law being absent, signaling by way of social marketing would appear one of the best ways of selling optometry, putting a check on the potential lemons problem on hand, protecting and projecting the optometry profession to bring in the right jobs and revenue whilst at the same time reducing any seeming effectivity of the quack practice.

When channeled properly it is expected that the overall primary eye care environment would improve by way of there being a safe, high quality, value – for -money service delivery that would lead to a win-win situation for both professional optometrists and the general public in need of these services at large.

For this to be effective though, it is suggested that such marketing effort must be comprehensively pursued with all stakeholders playing their part.
Considering the social side to the issue with special regard to the dangers inherent in eye care quackery, it is envisaged such stake holder bodies as the optometric association, the optometry training institutions, consumer protection agencies, the Government, through the ministry of health, standards enforcing agencies like the standards board, as well as eye- interest- Non Govermental Organizations (NGOs) like Vision Aid Overseas and Sight savers International etc. would all have roles to play in protecting the Profession and by extension the population.

The issues of optometry legislation and an optometry council have to be still pursued vigorously as those will ultimately be the best security for ensuring professional optometry gets its true place as the obvious and preferred primary eye care provider, reduce or totally quell the presence of quacks as well as bring in the well deserved revenue to professional practitioners. With the legislation in place, marketing becomes but a complement and in this regard government ought to be lobbied and pressurized by the relevant bodies for more tangible result oriented action. In its absence though, it will appear that a good, efficient and effective social marketing campaign would help a lot.

Considering the fact that most places in the country lack quality eye care services professional practitioners could still leverage resources to ingeniously make optimum use of the opportunities available in this regard by creating a good spread of their services such that it virtually reaches the door steps of the people.

On the side of the optometric association it is also possible to evolve a publicly known validation system which by way of a quick electronic check - via ones mobile phone for example - could identify one by various means as either being a professional optometrist belonging to the Ghana optometry association or not. Yet special identification symbols on the persons of practitioners or displayed in their practices, and made known to the public, could as well help solve the identification and differentiation problem since it is obvious from this work that ignorance is a major player.


Lewis, James B. (June, 2003). Social marketing, empowering communities with access to information and tools.


Ruby A. Ward and Lynn Hunnicutt."If you can't trust the farmer, who can you trust? The role of certifying organizations in consumer willingness to pay for organic products”.


Link to this page:


Notes

Note 2. Joy Fm 99.7 MHz is a popular and influential radio station in the Capital city of Ghana, Accra.
www.sunyopt.edu
Note 7. www.umsl.edu/~optometry/programs/opt-profession.html
Note 8. www.optometrists.asn.au/optometry/history
Note 9. www.allthingspolitical.com/optometrists_earnings.html
Note 12 www.nobel.org/popularinformation
Note 13 www.u.arizona.edu/~wooders/companir
Appendices

Appendix A (Questionnaire)

Blekinge Institute of Technology

Questionnaire for Master’s Thesis Project

This questionnaire is for purely academic work, but with the potential to impact positively on the eye care system in Ghana as regards public safety, value – for- money services as well regulatory controls etc.

Please kindly answer all the following questions by underlining or circling as appropriate. It is pledged all information given here would be treated with utmost confidentiality. Thank you.

1. Name (Optional)………………………………………………………………………………

2. Sex: (a) Male (b) Female

3. Age: (a) 18 – 25 (b) 26 – 40 (c) 41-45 (d) 46- 50 (e) 51 and above

4. Level of education: (a) secondary (b) tertiary (c) graduate (d) post Graduate
To what extent do you agree with the following……

5. Social marketing has a role to play in making optometry the preferred primary eye care provider in Ghana
   (a) Strongly agree (b) Agree (c) Neutral (d) Disagree (e) Strongly disagree

6. Have you ever engaged the services of an untrained /unlicensed eye care practitioner?
   (a) Yes       (b) no       (c) Unsure

7. Can you tell an untrained/unlicensed quack practitioner from a qualified professional optometrist in Ghana?
   (a) Yes  (b) No

8. What is the single most important factor below that accounts for the thriving of quack eye care practice in Ghana?
   (a) Lack of optometry law (b) non existence of optometry Council (c) Lack of effective marketing (d) lack of qualified optometrists.

9. Can you confidently differentiate between the ophthalmologist, the optometrist and the optician?
   (a) Yes (b) No (c) Unsure
Appendix B

Table 1

Number of respondents by sex

<table>
<thead>
<tr>
<th>Sex</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total 150 (100%)</td>
<td>82 (54.7%)</td>
<td>68 (45.3%)</td>
</tr>
</tbody>
</table>

Fig. 4.1
Appendix C

Table 2

Distribution of respondents by age.

<table>
<thead>
<tr>
<th>Age/years</th>
<th>18 - 25</th>
<th>26 - 40</th>
<th>41 - 45</th>
<th>46 – 50+</th>
<th>51+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>25</td>
<td>59</td>
<td>30</td>
<td>14</td>
<td>22</td>
</tr>
</tbody>
</table>

Fig. 4.2
Appendix D

Table 3

Number of respondents by education level

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Number of Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary</td>
<td>22 (14.7%)</td>
<td></td>
</tr>
<tr>
<td>Tertiary</td>
<td>63 (42%)</td>
<td></td>
</tr>
<tr>
<td>Graduate</td>
<td>39 (26%)</td>
<td></td>
</tr>
<tr>
<td>Post Graduate</td>
<td>26 (17.3%)</td>
<td></td>
</tr>
</tbody>
</table>

Fig 4.3
**Appendix E**

**Table 4**

Have you ever engaged the services of a quack eye care practitioner?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>27 (18%)</td>
<td>92 (61.3%)</td>
<td>31 (20.7%)</td>
</tr>
</tbody>
</table>

**Fig 4.4**
Appendix F

Table 5

Can you tell a quack from a professional optometrist?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>54 (36%)</td>
<td>72 (48%)</td>
<td>24 (16%)</td>
</tr>
</tbody>
</table>

Fig. 4.5
Appendix G

Table 6

Can you differentiate between an ophthalmologist, an optometrist and an optician?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>NO</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>35 (23.3%)</td>
<td>99 (66%)</td>
<td>16 (10.7%)</td>
</tr>
</tbody>
</table>

Fig 4.6
Table 7

What is the single most important factor that accounts for the thriving of the quack eye care practice?

<table>
<thead>
<tr>
<th>Lack of optometry law</th>
<th>Non existence of optometry council</th>
<th>Lack of effective marketing of professional optometry</th>
<th>Lack of accessibility to qualified optometrists</th>
</tr>
</thead>
<tbody>
<tr>
<td>36 (24%)</td>
<td>15 (10%)</td>
<td>63 (42%)</td>
<td>36 (24%)</td>
</tr>
</tbody>
</table>

Fig 4.7
Appendix I

Table 8

How do you agree with the following statement?

Social marketing has a role to play in making professional optometry the preferred primary eye care provider in Ghana.

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>55 (36.7%)</td>
<td>74 (49.3%)</td>
<td>11 (7.3%)</td>
<td>7 (4.7%)</td>
<td>3 (2.0%)</td>
</tr>
</tbody>
</table>

Fig 4.8
Appendix J

Hypothesis Testing

H₀: Social marketing has no role to play in making professional optometry the preferred eye care provider in Ghana.
H₁: Social marketing has a role to play in making professional optometry the preferred primary eye care provider in Ghana.

For the purposes of the hypothesis testing we group “Strongly agree” and “Agree” to generally indicate Agreement and “Neutral”, “Disagree” and “Strongly disagree” to generally indicate Disagreement.

At this point we have,

55 + 74 = 129 in agreement and 11 + 7 + 3 = 21 in Disagreement

<table>
<thead>
<tr>
<th>Agree</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>129 (86%)</td>
<td>21 (14%)</td>
</tr>
</tbody>
</table>

The statistical t-test of one variable is used.

A Value of 60% \( (p_0 = 0.60) \) is set as the theoretical bench mark or value to signal agreement to the hypothesis.

A significance value of \( \alpha = 0.05 \) is chosen.

Sample size is 150

Since the sample size, N, is greater than 30, the t-test approaches the normal distribution.
Where \( t = Z = p - p_0 / \sqrt{p (1-p)/N} \)

From the collated results above \( p = 86\% \) (0.86)

\[
Z = 0.86 - 0.60 / \sqrt{0.86 (1- 0.86)/150} = 0.26 / \sqrt{0.86 (0.14)/150} = 0.26 / \sqrt{0.1204/150}
\]

\[
Z = 0.26 / \sqrt{0.0008} = 0.26 / 0.0283 = 9.187
\]

In the two tailed normal distribution, at a 0.05 significance level i.e. (5%), the critical region for rejection of the null hypothesis is the region above +1.96 and below -1.96. In order words the acceptance region 0.95 (95%) is the region between -1.96 and +1.96.

In this case our probability value, \( P = Z = 9.18 \) which is greater than +1.96 and therefore the null hypothesis is rejected in favour of the alternative.

This will mean that in the perception majority of eye care patrons, social marketing would indeed have a role to play in making optometry the preferred primary eye care provider in Ghana.