

# ATTITUDE AND BELIEFS OF NIGERIAN UNDERGRADUATES TO SPECTACLE WEAR

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## SUMMARY

**Background:** Uncorrected refractive error is a common cause of preventable visual impairment. Glasses are the cheapest and commonest form of correction of refractive errors. To achieve this, patients must exhibit good compliance to spectacle wear. Patients' attitude and perception of glasses and eye health could affect compliance to spectacle wear.

**Objective:** To determine the attitude and beliefs of Nigerian undergraduates to spectacle wear.

**Method:** A cross sectional study of 500 undergraduates of the University of Benin, Nigeria. Age range was from 18 to 30 years, mean age  $23 \pm 2.7$  years. There were 269 males and 231 females. Semi structured questionnaires were distributed to the participants and collected same day after completion.

**Results:** Two-thirds (68%) of the total population studied had not heard of refractive error. About a third (38%) believed wearing eyeglasses was one of the methods used to correct refractive error. Half (50%) believed they would wear spectacles if prescribed with one by their doctor. Sixty-four percent believed eyeglasses are harmful to the eyes; and 65% did not know that eyeglasses could be used to relieve other forms of ocular discomfort like headache and tearing. Fifty-seven per cent of respondents saw people who wore eyeglasses as visually handicapped, while 60% believed that eyeglasses were meant for old people. Majority of the respondents (56%) believed that they would be teased if they wore glasses.

**Conclusion:** Knowledge of refractive errors and acceptance of glasses for the correction of refractive errors among Nigerian undergraduates is not encouraging. Public enlightenment programs to promote benefits of wearing prescribed spectacles are needed.

**Keywords:** Refractive error, glasses, spectacle, students, blindness

## INTRODUCTION

An estimated 80% of blindness worldwide is avoidable.<sup>1</sup> Avoidable blindness may be defined as blindness which could either be treated or prevented by known, cost-effective means.<sup>2</sup> In order to reduce this, the United Nations created the VISION 2020: The Right to Sight program. One of the aims of this initiative is to obtain information about the epidemiology of eye health care globally in order to analyze the

causes. This will allow health care practitioners to effectively approach the problem and have the greatest impact in resolving this issue.<sup>2,3</sup>

Uncorrected refractive error is one of the major causes of avoidable visual impairment.<sup>1</sup> In 2006, 153 million people were living with uncorrected refractive error, as reported by the World Health Organization. Of these, 13 million are children and 45 million are adults.<sup>2-5</sup> Furthermore, 90% of people with uncorrected refractive error live in low income countries.<sup>6</sup> Due to their impaired vision, people may not be able to complete their education, find it difficult to obtain employment, and may not be able to live a full life. However, this can easily be corrected by wearing glasses. This is a major reason why uncorrected refractive error is a priority of the VISION 2020: The Right to Sight program.<sup>8,9</sup>

Despite the increasing popularity of contact lenses and refractive surgery, the use of eye glasses still remains the most popular method of correcting refractive errors.<sup>10</sup> However, in order to correct refractive errors, patients need to have their eyes examined by eye care professionals who will prescribe lenses for them. These lenses should be worn appropriately. Patients' understanding of refractive errors and their attitude toward spectacles and eye health would be expected to influence compliance with wearing.<sup>11</sup>

A study<sup>7</sup> of prevalence and determinants of spectacle non-wear among rural Chinese secondary school children reports that 62.3% of the children were not wearing correction, despite the fact that they would benefit from doing so. Liping et al<sup>12</sup> studied the attitude of students, parents and teachers toward glasses use in rural china and reported that 'inconvenience' was ranked as an important reason for not wearing glasses among all students groups, while parents reported 'too busy with work' as the major reason for not making children comply with glasses wear. Another study<sup>13</sup> reported that a significant percentage (38.38%) of the respondents will not use glasses if prescribed, while 51.0% of parent participants in another study<sup>14</sup> will not allow their children to use prescribed glasses.

In Nigeria, it is widely believed that children or young people should not have eye problems and as such should have no need to wear glasses. This therefore imposes some kind of stigma on anyone who wears glasses.<sup>5</sup> A lot of young person's grow up with this mindset and would not seek help when they have problems with their eyes for fear they would be told they wear glasses.

Others believe that glasses damage and weaken the eyes and they only wear them when it was absolutely necessary or on special occasion.<sup>15,16</sup> This is the common practice with undergraduates visiting the eye clinic situated on the University of Benin campus. Most times refraction does not yield good visual acuity in these patients, because the students have an aversion to wearing glasses and have not been compliant to a previous prescription or had simply shied away from seeking eye care for fear of being given glasses.

Previous studies<sup>17-20</sup> have documented that in many settings only a small proportion of children with significant refractive errors are actually wearing corrective spectacle. A few studies<sup>8-10</sup> have examined risk factors for noncompliance. These studies have all focused on children, parents attitude and teachers involvement. The present study focused on young undergraduates; because they are more mature and better informed to make educated decisions for themselves. They are also expected to have independent opinions, separate from those of their parents, as had been the case in previous studies.<sup>10-12</sup>

With this background, this study seeks to find out the attitude and perception of young Nigerian undergraduates to spectacle wear. This is in order to improve acceptance of glasses when prescribed thus reducing blindness and visual impairment due to uncorrected refractive errors.

## METHOD

This was a cross sectional study. Seven faculties in the University of Benin were selected by simple random sampling. Undergraduates from the different faculties were selected by stratified random sampling to participate in the study after the purpose of the study was explained to them and informed consent obtained. A total of 500 subjects were used in this study of which 269 were males (54%) and 231 (46%) were females with age ranging from 18-30 years, (mean 23±2.4SD). The Department of Optometry Board of Studies approved the study.

Questionnaires were distributed to the participants and they were required to tick the appropriate answers in the questionnaire which best represented their perception or attitude. The questionnaires were retrieved the same day they were given out upon

completion. The results are calculated in percentages and presented in tables.

## RESULTS

Table 1 show the age and sex distribution of respondents. Out of the 500 people who participated in this study, fifty four percent were male while forty six percent were female.

**Table 1** Age and sex distribution of respondents

Age (years)	Males (%)	Females (%)	Total (%)
18-21	9.6	11.4	21.0
22-25	31.0	21.4	52.4
26-30	13.2	13.4	26.6
Total	53.8	46.2	100.0

Table 2 show respondents' knowledge of methods of correction of refractive errors. Thirty eight percent of the total population felt that eye glasses could be used to correct refractive errors, twenty three percent felt drugs could be used while another twenty three percent felt contact lenses are used for correcting refractive errors.

**Table 2** Knowledge of methods of correction of refractive errors

Treatment option	Males (%)	Females (%)	Total (%)
Drugs	9.6	13.6	23.2
Contact lenses	13.4	9.4	22.8
Eyeglasses	22.0	16.0	38.0
Surgery	6.8	7.2	14.0
Visual aids	2.0	0.0	2.0
Total	53.8	46.2	100.0

Table 3 gives a summary of the questions asked and the responses given by participants. Among the total population, fifty percent agreed that they would not mind wearing glasses if prescribed with one by their doctor. Sixty four percent of respondents felt glasses were harmful to the eyes. Sixty eight percent of the total population studied had not heard of refractive error and sixty percent had never gone for an eye examination.

Sixty five percent of the total population did not know that eyeglasses could be used to relieve some form of discomfort such as headache and tearing, the population of males who knew was more than that of the females. Fifty seven percent of the study population saw people who wore glasses as visually handicapped. Sixty percent of the subjects agreed that glasses were meant for old people. Majority of the respondents believed that they will be teased for wearing glasses.

**Table 3** Responses of participants by sex

Statements	Males (%)	Females (%)	Total
Subjects who don't mind wearing glasses	29.8	20.0	49.8
Subjects who thought glasses were harmful to the eyes	24.0	40.0	64.0
Subjects who had heard of refractive errors	18.0	14.0	32.0
Subjects who thought they would be mocked/teased for wearing glasses	22.0	34.0	56.0
Subjects who thought glasses are meant for old people	28.0	32.0	60.0
Subjects who saw people wearing glasses as visually handicapped	22.0	35.4	57.4
Subjects who knew glasses could relieve different forms of discomfort like headache, tearing etc	19.0	16.0	35.0
Subjects who had never gone for an eye test	38.0	30.0	68.0

## DISCUSSION

A large proportion (68%) of the total population had not heard of refractive error, or gone for an eye examination, even though they have had some kind of problem or the other with their eye. This figure is discouraging, considering the fact that participants are undergraduates, who are expected to have a good knowledge of information.

Visual impairment is a public health problem and constitutes an important socioeconomic burden not only on Nigeria as a developing country, but also on Sub-Saharan Africa.<sup>12</sup> Refractive error is a major cause of visual impairment, hence its prominent part in VISION 2020- the right to sight campaign.<sup>14</sup> In the present study participants who said they would mind wearing glasses if told they needed one, said they would prefer a more 'natural looking' remedy like 'contact lenses'.

One common reason given by people for not wearing glasses is the belief that glasses could cause the eyes to be sunken /pushed in. This makes them abhor the use of spectacle lenses even when prescribed for by a doctor.<sup>13,21</sup>

A vast majority of persons responded that glasses could be used to correct refractive error. This is in agreement with a previous study<sup>15</sup>, where 50% of the participants responded that glasses could be used to

correct refractive error. Half of the present study population believed they would wear glasses if it was prescribed for them. This is also in agreement with previous studies<sup>10,22</sup> where significant percentages of 38.4% and 45.0% respectively have been reported of participants who would not mind wearing glasses if prescribed for them.

A significant number of the total population studied, (64%) thought that glasses were harmful to the eyes. This response compares with findings from the investigation of Yasmin<sup>12</sup> in a study which was conducted in Pakistan, where 69% of the people thought that using spectacles would cause their vision to deteriorate. It also agrees with the work of Ayanniyi et al<sup>6</sup>, who reported that in Nigeria the fear of spectacles damaging the eyes was also a significant hindrance to spectacle use.

In assessing gender differences among the total population, more females than males felt that glasses were harmful to the eyes and that glasses were meant for old people. Most respondents, especially females believed that they will be mocked/ teased for wearing glasses. This is in agreement with a previous study in Dakshina<sup>16</sup> where it was reported that a large percentage of respondents (35%) were teased for wearing eyeglasses. Generally youths who had negative attitude to glasses wear, victimize other youths who wear glasses.

A good number of respondents were aware of the different methods of correcting refractive errors. Among the methods reported, eye glasses were top, followed by drugs and contact lenses. Although most respondents (38%) reported that eye glasses could correct refractive errors, they were not aware that glasses could also be used to relieve other forms of ocular discomfort like ache, tearing and photophobia. Eye screening enlightenment programs would help in this regard, to educate people, especially those in school about the different signs and symptoms of the different types of refractive errors.

Most of the respondents (57%) regarded people who wore glasses as visually handicapped. This erroneous view most times is passed from parents to the children, since it is one of the reasons given by parents for not allowing their children to wear prescribed glasses.<sup>23,24</sup> While the males said wearing glasses made them look like bookworms, the females responded that wearing glasses made them look 'too serious' and uninteresting.

Eye care practitioners should thoroughly educate and counsel their patients especially when they are diagnosed of refractive errors. Enlightenment of patients about the benefits of wearing prescribed glasses and the dangers of not using them when needed especially when the patient is myopic should be given.

Initiation of support groups, mass media and the provision of information about refractive errors in school health curriculum would go a long way in dispelling the misconceptions and the distorted facts about spectacle wear.

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