



Reported Occupational Hazards and Illnesses among Hairdressers in Ibadan, South West Nigeria

Signalé les risques professionnels et des maladies professionnelles chez les coiffeurs à Ibadan, au sud-ouest du Nigeria

F. O. Omokhodion, M. O. Balogun, F. M. Ola-Olorun

ABSTRACT

BACKGROUND: Hairdressers work in small scale enterprises with little or no health supervision in the workplace.

OBJECTIVE: To identify workplace hazards and health problems of workers in this trade.

METHODS: A cross sectional study was conducted in hairdressing salons in Ibadan, Southwest Nigeria. Questionnaires were administered to a total of 355 hairdressers by trained interviewers. Information on work conditions, workplace hazards, accidents and current illnesses was obtained.

RESULTS: All respondents were females comprising 295 qualified hairdressers and 60 apprentices. They were aged 15–49 years, mean 29±6.9 years. With respect to work conditions, hairdressers complained of long working hours, poor earnings and prolonged standing. Occupational hazards identified included needles used for fixing hair attachments, 157 (44%), hair relaxing creams, 114 (32%), blades, 38 (11%), handling hot water, 16 (4%) and electrical equipment, 8 (2%). Types of accidents reported were needle pricks, cuts, accidents involving hot water and electric shock. Joint pains (21%) and low back pain (19%) were the most frequently reported illnesses among hairdressers. Hand dermatitis was reported by 5% of hairdressers.

CONCLUSION: The hairdressers' work environment has predominantly mechanical and chemical hazards. Long working hours and poor earnings in a physically demanding job, as highlighted in this study are characteristic of small scale enterprises. The regulation of work conditions in this sector continues to pose a challenge to occupational health authorities in developing countries. WAJM 2009; 28(1): 310–313.

Keywords: Hairdressers, occupational hazards, accidents, self-reported illness.

RÉSUMÉ

CONTEXTE: Coiffeurs travail dans les petites entreprises avec peu ou pas de contrôle de santé sur le lieu de travail.

OBJECTIF: identifier les risques et les problèmes de santé des travailleurs de ce commerce.

MÉTHODES: Une étude transversale a été menée dans les salons de coiffure à Ibadan, au sud-ouest du Nigeria. Des questionnaires ont été administrés à un total de 355 coiffeurs formés par les enquêteurs. Informations sur les conditions de travail, risques professionnels, les accidents et les maladies ont été obtenues.

RÉSULTATS: Tous les répondants étaient des femmes composé de 295 coiffeurs qualifiés et 60 apprentis. Ils étaient âgés de 15-49 ans, moyenne 29 ± 6,9 ans. En ce qui concerne les conditions de travail, les salons de coiffure se plaignent des longues heures de travail, les salaires et pauvres debout prolongée. Les risques professionnels identifiés figurent les aiguilles utilisées pour fixer les cheveux des pièces jointes, 157 (44%), les cheveux des crèmes de détente, 114 (32%), les lames, 38 (11%), de la manipulation d'eau chaude, 16 (4%) et les équipements électriques, 8 (2%). Types d'accidents ont été signalés piqûres d'aiguilles, les coupures, les accidents liés à l'eau chaude et de choc électrique. Douleurs articulaires (21%) et les lombalgies (19%) sont les maladies les plus fréquemment rapportés chez les coiffeurs. Dermatite des mains a été signalée par 5% des coiffeurs.

CONCLUSION: Le coiffeur de travail a essentiellement mécanique et les risques chimiques. Les longues heures de travail et les pauvres gains dans un travail physiquement pénible, comme l'a souligné dans cette étude sont caractéristiques des petites entreprises. La réglementation des conditions de travail dans ce secteur continue de poser un défi pour les autorités de santé dans les pays en développement. WAJM 2009; 28(1): 310–313.

Mots-clés: coiffeurs, les risques professionnels, conditions de travail, les accidents, l'auto-évaluation de la maladie, les petites entreprises.

INTRODUCTION

Hairdressers operate as small scale enterprises engaging between 1–10 workers. They engage apprentices who are predominantly female adolescents or out of school youths. Like several enterprises of this nature, work exposures are unregulated and work conditions are below standard.¹ Occupational exposures to chemicals in the salon from hair sprays, dyes, hair relaxing creams and shampoos are well recognized.²⁻⁴ Various health problems can occur as a result of these exposures. Studies from developed countries have focused on hand dermatitis^{5,6} and respiratory disorders.⁷⁻⁹ Other occupational hazards in the salon appear to have received less attention and very little data is available on hairdressers in Africa. A study in Benin city, Nigeria¹⁰ reported that among illnesses experienced by hairdressers, back pain and joint pains were the most frequent. In this study, we sought to identify the occupational hazards, workplace accidents and self reported symptoms of ill health among hairdressers and their apprentices in order to appraise the influence of the work environment on their health.

SUBJECTS, MATERIALS AND METHODS

A cross sectional study was conducted among hairdressers in Ibadan, Southwest Nigeria. Ibadan is one of the largest cities in Nigeria and the former capital of the defunct Western region. The major occupations of residents in Ibadan are trading and artisanry in small scale trades. There are several small scale enterprises in the city and these are mainly in the informal sector of the economy. Hairdressers form a sizable proportion of workers in artisan trades and the profession is dominated by females. Permission to carry out the study was obtained from the Nigerian Beauticians and Hairdressers' Association, the hairdressers' trade union, within Ibadan. The association has 42 zones in Ibadan municipality. Seven zones were randomly selected and surveyed. The chairperson for each zone provided a list of salons within her area. Salons were visited by trained interviewers. All hairdressers seen at the salon at the time of their visit were

requested to participate in the study. No non-response was recorded. Questionnaires were administered to hairdressers and apprentices after obtaining verbal informed consent from each one. The questionnaire sought information about their socioeconomic background, number of years engaged in the trade, work conditions, occupational hazards in their workplaces and self reported illnesses. Data entry and analysis was done with Statistical package for Social Sciences version 11.¹¹ Frequencies were generated and χ^2 test was used to test association between variables.

RESULTS

Three hundred and fifty-five hairdressers were interviewed comprising 60 apprentices and 295 qualified hairdressers. They were all females aged 15–49 years of age with a mean age of 29 ± 6.9 years. Majority, 237(67%) were Christians and 117(33%) were Muslims. One hundred and eleven (31%) were single, 240(67%) were married and five (2%) were separated or divorced. Two (0.5%) had no education, 63(18%) had primary education. 265(74.5%) had secondary education and 25(7%) had post secondary education. Sixteen respondents (4%) were still in school. Table 1. For hairdressers who had not gone on to post secondary education, reasons for not continuing their education were lack of money 199(60%), loss of interest in school work 81(24%) and poor academic performance 17 (5%).

About half, 180(51%) respondents had chosen hairdressing as a life time career. Others were in the trade for various reasons; as a second job, 60(17%) and as a short term measure, 86(24%). Majority 292(82%) had chosen the trade on their own; 59(16.5%) indicated that their parents or guardians had asked them to learn the trade.

Work Conditions

Two hundred and twenty four (63%) had been on the job for 10 years or less and only 20(6%) had been on the job for more than 20 years. Majority, 279(80%) worked more than 8 hours a day. The mean length of their working day was 11 ± 1.5 hours. Two hundred and fifty-four (72%) respondents worked seven days a week.

Table 1: Socio-demographic Characteristics of 355 Respondents

Hairdressers' characteristic	No (%)
Age	
15–19	23(6.5)
20–29	177(50.0)
30–39	123(34.0)
40–49	31(9.0)
No response	1(0.5)
Education	
No education	2(0.5)
Primary education	63(18.0)
Secondary Education	265(74.5)
Post-Secondary	25(7.0)
Marital Status	
Single	111(31.0)
Married	240(67.0)
Separated	3(1.0)
Divorced	2(1.0)
Job grade	
Apprentice	60(17.0)
Qualified hairdresser	295(83.0)
No of years engaged in the trade	
<10 years	224(63.0)
11–20 years	108(30.0)
>20 years	20(6.0)
No response	2(1.0)

The mean number of days worked per week was 6.6 ± 0.6 . Two hundred and thirty respondents (65%) indicated that hairdressing was the only job they did. Others had additional jobs such as trading 107(30%) and domestic service 10(3%).

Most salons were supplied with well water, 228(78%) while 72(20%) used water from boreholes and 46(13%) had pipe borne water. When asked what they disliked most about their work, 89(25%) mentioned prolonged standing, 51(14%) poor pay, 31 (9%) long working hours. However, majority of the hairdressers, 306 (86%) were very satisfied with their work, 43(12%) were indifferent and only 5(1.5%) were dissatisfied. On a general note, 275(77%) were satisfied with their lives, 68(19%) were indifferent and 9(2.5%) were dissatisfied with their lives.

Occupational Hazards and Self-reported Illnesses

Two hundred and fifty five (72%) reported that their jobs exposed them to

health risks. Illnesses associated with work were burns from hot water 66(19%) and hair relaxing creams 58(16%), generalized aches and pains, 64(18%), cuts and bruises, 51(14%), skin rashes, 45(13%), back pain, 41(12%) and leg pain 25(7%).

Items in the workplace which constitute hazards were needles 157 (44%), hair relaxing creams, 114(32%), blades, 38(11%), handling hot water, 16(4%), scissors, 12(3%) and electrical equipment, eight (2%). One hundred and forty-three (40%) reported having had an accident in the preceding year. Types of accidents reported were needle pricks, 168(47%), accidents involving hot water, 64(18%), cuts, 93(26%), electrical shocks, 29(8%) and falls or slipping on wet floors 18(5%), Table 2. Occurrence of accidents was not associated with age or number of years on the job $p > 0.05$. There was no statistically significant difference in the occurrence of accidents between apprentices and qualified hairdressers $p > 0.05$, Table 2. Only 25 hairdressers took time off work as a result of the accident

suffered. They took a mean of 6 ± 7.7 days off work.

Current illnesses at the time of the survey were muscular and joint pain, 76(21%), low back pain, 67(19%), fever, 45(13%), eye irritation, 27(8%), respiratory symptoms, 27(8%), skin rashes, 18(5%), cuts, 16 (5%) and nail problems, 14 (4%). Cuts and bruises, nail problems and respiratory symptoms were more prevalent among apprentices while low back pain and skin rashes was more prevalent among qualified hairdressers. These differences were however not statistically significant $p > 0.05$ Table 3.

With regard to the use of protective clothing, only 142 (40%) always use aprons when applying hair relaxing cream and 68(19%) reported never using aprons. Only 174 (49%) always use gloves and 44 (12%) reported never using gloves when applying hair relaxing cream. There was no difference between apprentices and qualified hairdressers in the use of aprons. However, more apprentices, 55% always used gloves compared to 47% among qualified hairdressers $p = 0.01$.

Table 2: Accidents Reported by Hairdressing Apprentices and Qualified Hairdressers

Type of Accident	Number (%)			P value
	Apprentices	Qualified Hairdressers	Total	
Needle pricks	28 (46)	140 (47)	168 (47)	0.49
Cuts	21 (35)	72 (24)	93 (26)	0.38
Scalds	10 (16)	54 (18)	64 (18)	0.66
Electrical shock	7 (12)	22 (7)	29 (8)	0.56
Falls	7 (12)	13 (4)	20 (6)	0.06
Slipped on wet floor	5 (8)	13 (4)	18 (5)	0.24

Table 3: Self Reported Illnesses of Hairdressing Apprentices and Qualified Hairdressers

Illness	Number (%)			P value
	Apprentices	Qualified Hairdressers	Total	
Joint pains	13 (21)	63 (14)	76 (21)	0.93
Low back pain	8 (13)	59 (20)	67 (19)	0.30
Fever	11 (18)	34 (12)	45 (13)	0.92
Respiratory symptoms	6 (10)	21 (7)	27 (8)	0.46
Eye irritation	4 (7)	23 (8)	27 (8)	0.89
Cuts and bruises	4 (7)	12 (4)	16 (5)	0.63
Skin rashes	2 (3)	16 (5)	18 (5)	0.70
Nail infection	4 (7)	10 (3)	14 (4)	0.28

DISCUSSION

The work environment of hairdressers exposes them to physical, chemical, mechanical and psychosocial hazards. In this study, the most frequently mentioned hazard was the needle used for fixing hair attachments. Needle pricks were also the most frequent accidents reported. This hazard is peculiar to salons styling African hair and has not been reported elsewhere. Other tools like blades and scissors constitute mechanical hazards in salons. Another mechanical hazard highlighted in this study was wet floors. The lack of pipe borne water in the majority of salons necessitates the carrying of water from wells or other water facilities. Spillage of water on floors caused accidents in 14% of respondents. The prevalence of hand dermatitis of 5% in this study is less than that reported in other studies. A prevalence of 38.6% was observed among U.K. hairdressers⁵ and 12.5% among hairdressers in Italy.¹² Contact dermatitis among hairdressers has multiple aetiological agents which include hair dyes,^{3,12,13} gloves,^{12,14} perming chemicals^{12,13} and wet work.⁴ The lower prevalence of hand dermatitis in this study may be due to the narrower range of hair chemicals available in Nigeria. Nail problems were prevalent in this study as in the Benin study.¹⁰ However, in this study we found that more apprentices than qualified hairdressers were affected. This is probably related to the amount of wet work done by the apprentices.

Hairdressers in this study worked for a mean of 11 hours a day. In Ibadan, hairdressing salons open from 8:00 h to 20:00h and most do not run shifts. Prolonged standing and long working hours in a physically demanding job are associated with low back pain^{15,16} which was one of the most prevalent health problems in this study occurring in 19% of hairdressers. The study in Benin found a prevalence of 31%.¹⁰ Low back pain and other musculoskeletal disorders such as neck-shoulder pain among hairdressers have been reported in other studies.^{17,18}

The use of protective equipment in this occupational group is inadequate and this underscores the need for health education and health supervision of workers in this trade.

It may be concluded that needles and chemicals are the most prevalent hazards in hairdressing salons. Needle pricks are the most frequent accidents and musculoskeletal disorders appear to be the most prevalent illness followed by eye and respiratory symptoms. The long hours of work, the lack of pipe borne water (hot and cold) and the inadequate use of protective equipment are examples of economic and development problems prevalent in small scale enterprises in the informal sector. The regulation of work conditions in this sector remains a challenge to occupational health authorities in Nigeria and other developing countries.

REFERENCES

1. El Batawi M.A. Health hazards in small scale industries – the forgotten masses. *World Health* 1974, July–August 4–8
2. Iorizzo M, Parente G, Vincenzi C, Pazzaglia M, Tosti A. Allergic contact dermatitis in hairdressers: frequency and source of sensitization. *Eur J Dermatol* 2002; **12**: 179–182.
3. Lind ML, Woman A, Sollenberg J, Johnsson S, Hagelthorn G, Meding B. Occupational dermal exposure to permanent hair dyes among hairdressers. *Ann Occup Hyg* 2005; **49**: 473–480.
4. Lee A, Nixon R. Occupational skin disease in hairdressers. *Australas J Dermatol* 2001; **42**: 1–6.
5. Perkins JB, Farrow A. Prevalence of occupational hand dermatitis in UK hairdressers. *Int. J. Occup Environ Health* 2005; **11**: 289–293.
6. Skoet R, Olsen J, Mathiesen B, Iversen L, Johansen JD, Agner T. A survey of occupational hand eczema in Denmark. *Contact Dermatitis* 2004; **51**: 159–166.
7. Leino T, Tammilehto L, Paakkulainen H, Orjala H, Nordman H. Occurrence of asthma and chronic bronchitis among female hairdressers: A questionnaire study. *J Occup Environ Med* 1997; **39**: 534–539.
8. Akpinar-Elci M, Cimrin AH, Elci OC. Prevalence and risk factors of occupational asthma among hairdressers in Turkey. *J Occup Environ Med* 2002; **44**: 585–590.
9. Moscato G, Pignatti P, Yacoub MR, Romano C, Spezia S, Perfetti L. Occupational asthma and occupational rhinitis in hairdressers. *Chest* 2005; **128**: 3590–3598.
10. Okojie OH, Isah EC. Assessment of occupational hazards among hairdressers in Benin City. *Nig. J Clin Practice* 2001; **4**: 25–27.
11. SPSS for Windows, Rel. 11.0.1 2001. Chicago: SPSS Inc.
12. Guerra L, Tosti A, Bardazzi F, Pigatto P, Lisi P, Santucci B. *et al.* Contact dermatitis in hairdressers: the Italian experience. *Contact Dermatitis* 1992; **26**: 101–107.
13. van der Walle HB, Brunsveld VM. Dermatitis in hairdressers (1). The experience of the past 4 years. *Contact Dermatitis* 1994; **30**: 217–221.
14. Leino T, Tammilehto L, Hytonen M, Sala E, Paakkulainen H, Kanerva L. Occupational skin and respiratory diseases among hairdressers. *Scand J Work Environ Health* 1998; **24**: 398–406.
15. Xu Y, Bach E, Orched E. Work environment and low back pain: the influence of occupational activities. *Occup and Environ Med* 1997; **54**: 741–745.
16. Kerr MS, Frank JW, Shannos HS, Norman RW, Wells R.P, Neuman WP, Bombardier C. Biomedical and psychosocial risk factors for low back pain at work. *Ann J Public Health* 2001; **91**: 1069–1075.
17. Guo HR, Tanaka S, Cameron LL, Sehman PJ, Behrens VJ, Ger J, Wild DK, Putz-Anderson V. Back pain among workers in the United States: National estimates and workers at risk. *Am J. Ind Med* 1995; **28**: 591–602.
18. Arokoski JP, Neval-Puranen N, Danner R, Halonen M, Tikkanen R. Occupationally oriented medical rehabilitation and hairdressers' work techniques – a one-and-a-half-year follow up. *Int J Occup Saf Ergon* 1998; **4**: 43–56.