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An exploratory study of mentoring in residency training at a Ghanaian teaching hospital

Edeghonghon Olayemi^{1, 5, *}, Eugenia Quartey², Eugene Tettey²,
Michael Acquah², Amma Benneh², Yaw Osafo³, Osa Olayemi⁴

¹Department of Haematology, College of Health Sciences, University of Ghana, Korle Bu Campus

²Department of Haematology, Korle Bu Teaching Hospital, Accra, Ghana

³Department of Chemical Pathology, Korle Bu Teaching Hospital, Accra, Ghana

⁴Polyclinic, Korle Bu Teaching Hospital, Accra, Ghana

⁵Ghana Institute of Clinical Genetics, Accra, Ghana

Email address

yemiede@gmail.com (E. Olayemi)

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Abstract

Mentoring is considered a core component of academic medicine; the mentor is usually highly regarded and guides the mentee in developing his or her own ideas leading to personal and professional development. Formal mentoring in postgraduate medical education is relatively new in most parts of Africa including Ghana. This study was designed to estimate the need for mentoring, its prevalence and impact among resident doctors at a Ghanaian Teaching Hospital. A cross sectional descriptive study using a piloted structured questionnaire of mentoring was carried out at the premier teaching hospital in Ghana. Resident doctors from the five departments with largest resident doctor populations were invited to participate in the study. The response rate was 61.1% with a mentoring prevalence of 39.7%. There was a largely unmet need for mentoring among resident doctors with majority of respondents preferring a formal mentoring relationship. Female doctors were more likely to have mentors and no mentee reported any conflict with their mentor. A large proportion of doctors without mentors had other forms of support. Mentees felt they had benefitted from mentoring leading to satisfaction with the training programme. Most mentors encouraged the independent career choices of their mentees. But influence of mentors on mentees' research activities was less appreciable. We recommend larger studies preferably multi-centred, focusing on mentors and their role in the mentoring relationship. Similarly it would be interesting to investigate the part played by training institutions as far as mentoring is concerned.

1. Introduction

Traditionally, a mentor is a trusted and faithful guide to a person on a journey of personal and professional development [1]. Mentoring is now considered a core component of academic medicine [2].

The term mentor means different things to different researchers, for the purpose of this study, a 'mentor' was defined as (an experienced individual) who takes interest in a (resident doctor's) career development and professional growth and

does so in a non-judgmental manner, which is free of power and authority [3]. Mentoring is a non-competitive and dynamic process that evolves over time as participants define and redefine their roles [4].

There are two types of mentoring based on the way in which the relationship was established. A formal mentoring programme involves assignment of mentees to an organisation [5]. In the informal type, the relationship between the mentor and mentee is not part of any formal policy but develops freely and naturally [6, 7].

Formal mentoring in postgraduate medical education is relatively new in most parts of Africa. In Ghana, although it is a policy of the Ghana College of Physician's and Surgeon's which is responsible for co-ordinating residency training in Ghana that every resident doctor in Ghana be allocated a mentor at the beginning of their training. This policy is yet to be uniformly accepted and implemented.

From the foregoing, a case can be made for providing mentoring to all resident doctors in Ghana who want it; before this is possible however, local analysis of the need for mentoring support should precede establishment of formal arrangements [1, 8]. This study was designed to estimate the need for mentoring, its prevalence and impact among resident doctors in a Ghanaian teaching hospital.

2. Methodology

A cross sectional descriptive study was carried out using a piloted structured questionnaire distributed to resident doctors in selected departments between April and May 2011. Korle Bu Teaching Hospital (KBTH) is the largest teaching hospital in Ghana; with about two thousand beds and a resident doctor population of two hundred. In KBTH, the departments of medicine, paediatrics, surgery, obstetrics and gynaecology and family medicine have about 75% of resident doctors and medical officers in the hospital. The proposed sample size was 100 (50% of the target population of 200). These departments were chosen to enable intra and inter –departmental comparison of the responses given by respondents.

All resident doctors in the five departments with the largest resident doctor population in KBTH (i.e. medicine, paediatrics, surgery, obstetrics and gynaecology and family medicine) were invited to participate in the study. House officers, medical officers and resident doctors from other hospitals who were in KBTH for rotations were excluded.

Purposive sampling was used to select the five departments from which resident doctors were invited to take part in the study; based on the assumption that resident doctors in the selected departments represented a 'typical sample' of the defined target population [9].

2.1. Ethical Issues

The main ethical dilemma that participants in this project were exposed to was the fear of repercussions following

any negative comment they may make about their mentors since some of these mentors were heads of department and examiners at various examinations. To eliminate this, the questionnaire did not contain the name of the residents but had unique identification numbers. Similarly the residents did not identify their mentors by name.

Approval was obtained from the ethical and protocol review committee of the university of Ghana medical school. All participants gave a written informed consent.

2.2. Data Analysis

Data were entered into a spreadsheet created in Microsoft Excel, 2007 and analysed with StatView for windows version 5.0.1. Descriptive statistics such as frequency tables, mean and standard deviation are used to present data; t- test was used to compare means between subgroups, p values less than 0.05 were considered significant. Odds ratio and confidence intervals were also calculated.

3. Results

Only ninety-five residents doctors across the five chosen departments agreed to participate in the study, thus, 95 questionnaires were distributed, 58 were filled and returned giving a response rate of 61.1%. Out of this number 35 (60.3%) were males. The mean age of respondents was 32.8 +/- 3.5 years (females 33.5 +/- 5.0 years and males 32.3 +/- 1.8 years; $p = 0.210$).

Family medicine and surgery had the largest number of respondents with 15 respondents each while paediatrics was least with just two respondents as shown in table 1.

Twenty three respondents had mentors, giving a prevalence of 39.7 %. Gender prevalence of mentoring was 47.8% among females and 34.3% for males, Odds ratio: 1.76, (95% CI 0.60 to 5.15). Nineteen (82.6%) of the 23 respondents with mentors were in formal mentoring relationship. Almost all the respondents from surgery had mentors 14(93.3%) while none of those in obstetrics and gynaecology had mentors as shown in table 1.

Table 1. Number of Respondents with Mentors According to Specialty.

Department	Number of respondents	Number of Respondents with Mentors
Family Medicine	15	6 (40.0) **
Internal Medicine	13	1(7.7)
Obstetrics and Gynaecology	13	0
Paediatrics	2	2(100.0)
Surgery	15	14 (93.3)
Total	58	23 (39.7)

** Percentages are shown in brackets.

Out of the 35 resident doctors without mentors, 29 (82.8%) felt they needed mentors. Fifteen (42.9%) of the respondents without mentors had someone who performed some aspect of mentoring to them but this person did not meet the study definition of mentoring.

Seventeen (73.9%) doctors with mentors thought the relationship between them and their mentor was good or better (Table 2). Eighteen (78.3%) of respondents with mentors had never had a conflict with their mentor. Twenty (87%) respondents thought their mentor had a positive influence on their career while 15 (65.2%) resident doctors had mentors who supported their independent career goals.

Table 2. How will you describe the relationship between you and your mentor?

Response	Number of Respondents	Percentage
Excellent	3	13.0
Very Good	9	39.1
Good	5	21.7
Fair	2	8.7
No Response	4	17.4
Total	23	100.0

Table 3 shows the significance of career guidance given by mentors; five (21.7%) resident doctors felt it was very significant.

Table 3. How will you rate the significance of career guidance or support you receive from your mentor?

Response	Number of Respondents with Mentors	Percentage
Very significant	5	21.7
Significant	6	26.1
Fairly Significant	6	26.1
No Response	6	26.1
Total	23	100.0

Table 4 outlines the influence of having a mentor on specialty choice; three (13.0%) respondents felt their mentors were very influential in their choice of specialty or subspecialty, only 1(4.3%) respondent felt the mentor had no influence. The duration of mentoring ranged from 1 month to 60 months, median of 12 months.

Table 4. How will you rate the influence of your mentor on your specialty or subspecialty choice ?

Response	Number of Respondents with Mentors	Percentage
Very Influential	3	13.0
Influential	5	21.7
Some Influence	7	30.4
Minimal Influence	1	4.3
No Influence	1	4.3
No Response	6	26.1
Total	23	100.0

Only 2 (8.7%) respondents collaborated often with their mentors for research (Table 5). However, eleven (47.8%) resident doctors felt their mentor was a motivation for research as shown in table 6.

Table 5. How often do you collaborate with your mentor for research?

Response	Number of Respondents	Percentage
Often	2	8.7
Not Often	3	13.0
Rarely	2	8.7
Never	8	34.8
No Response	8	34.8
Total	23	100.0

Table 6. Do you consider your mentor a motivating factor for research?

Response	Number of Respondents with Mentors	Percentage
Yes	11	47.8
No	3	13.0
No Response	9	39.1
Total	23	100.0

4. Discussion

The prevalence of mentoring in this study was 39.7%; this was lower than reports of between 50-77% in more developed countries [10-12]. This may be because the concept of mentoring during residency training is relatively new in Ghana.

About half of the female doctors studied had mentors and they were almost twice as likely as male doctors to have mentors. This was unexpected; other studies from the United States (US) had reported that women were less likely to have mentors [6,13,14]. However, the prevalence among females in this study was lower than the prevalence of 84% earlier reported from the United States [15].

It is possible that male doctors saw entering into a mentoring relationship as a sign of weakness and so would soldier on trying to find their way rather than seek for assistance to avoid this perceived stigma [16]. Again the pervasive medical culture which is male dominated does not favour seeking for help, this culture is authoritative so physicians do not like being directed and are unwilling to admit they need help [17]. On the other hand, female doctors in Ghana may find it more culturally acceptable to accept support offered by mentors.

Though it is a policy of the Ghana college of physicians and surgeons that every resident doctor in Ghana should have a mentor, it is surprising to find out that while almost all the respondents in surgery had mentors none of those in obstetrics and gynaecology were in a mentoring relationship and only one doctor in internal medicine had a mentor.

It is clear that there is a largely unmet need for mentoring among resident doctors in KBTH since over 80% of doctors surveyed who did not have mentors said they needed mentors. Again, those without mentors felt they were disadvantaged because they did not have access to this support. This finding was similar to the report by Flint *et al.* (2009) and Curtis *et al.* (1995) where the majority of respondents (96% and 80% respectively) felt mentors were necessary in residency training [11,18].

In fact only 17.4% of respondents with mentors were in informal relationships compared to 48% of residents in the United States in a study by Flint *et al.* (2009)[11].

On the other hand, over 80% of resident doctors with mentors in KBTH were in a formal mentoring relationship. This is similar to the findings of Levy *et al.* (2004)[19] that 90% of internal medicine residents felt it was important to be assigned mentors.

It has been argued that compared to formal mentoring; informal mentoring allows a more effective and comfortable relationship to develop [20,21] ; while assignment of mentors may ignore the interpersonal aspect of the relationship [7,20], though it is possible to derive benefits from a formal mentoring relationship [22] Unfortunately, since informal mentoring occurs spontaneously and is not planned, it is open only to a few fortunate mentees [23] .

It was also interesting to note that 15 (42.9%) of doctors who did not have mentors that satisfied the study definition, had people who performed some aspect of mentoring to them. It is not clear if these relationships would satisfy other definitions of a mentor. It would be valuable to find out the nature of support offered by these relationships; since it may imply that there are other forms of support available to resident doctors in Ghana that may play a role similar to but different from mentoring. According to Sambunjak and Marusic (2009) [24], mentoring is dyadic relationship, which excludes other forms of peer learning and support, though it does not stop residents from benefitting from these forms of support or from participating in more than one dyad since different mentors may be able to address different developmental needs of mentees in order to facilitate career growth [5].

There was a high level of satisfaction by mentees in the mentoring relationship with more than 70% of respondents rating the state of their relationship as good or better. The percentage of mentors who supported the independent career goals of their mentees in this study is higher than the value reported by Coleman *et al.* (2005) [10] among obstetrics and gynaecology residents 65% versus 45%. The fact that two-thirds of the mentees said their mentors supported their independent career goals showed that most mentors in KBTH were not 'bullies' who insist their mentees do their bidding but allowed them to grow and explore new possibilities under their guidance. Mentoring should be learner centred and developmental with the primary aim of guiding the mentee to achieve his or her goals. In doing this mentors are free to outline their expectations of the mentee while the mentee should be able

to discuss their goals and what they expect to gain from the relationship. Mentors should remember that their primary duty is to guide the mentee; any benefit that accrues to the mentor from the relationship should be secondary.

Eighteen (78.3%) respondents with mentors had never had a conflict with their mentor. Whether this reflected the true situation or was further evidence of the culture of not being able to disagree with an older person in a position of authority is debatable. In their study from Turkey, Ozkalp *et al.* in 2008 reported that 38% of respondents had no interaction difficulties with their mentors [25].

Several studies have reported the positive impacts of mentoring on the mentee; for example they help mentees with making decisions on career and specialty choice, this is said to be one of the most important influences [11,26,27] . In this study, mentees said mentors positively influenced them (65%), their careers (87%) and choice of specialty (65%). Also 74% of mentees rated the career guidance given by their mentors as significant. It is important to note that the proportion of resident doctors who said their choice of specialty was influenced by having a mentor in this study is higher than the proportion reported by Ko *et al.* (1998) [28] 56% and 49 % reported by Lukish and Cruess in 2005 [29]. This means that the hospital may be able to get more resident doctors into less popular specialties such as anaesthesia, psychiatry and laboratory medicine if they got more mentors from those areas.

Also, it is known that there is a relationship between having a mentor and research skills [15]. Generally the research output from most tertiary institutions in sub-Saharan Africa is low, thus it is not surprising that only about a third of respondents with mentors had collaborated with their mentors in the past and less than 1 in 2 thought their mentor motivated them to carry out research.

4.1. Limitations

This study approached the issue of mentoring only from the mentees perspective, the views of the mentors and the management of the hospital were not sought. Again, claims made by respondents in the study such as research activities could not be validated.

This study investigated mentoring at a single residency training centre as a result the findings may not apply to other centres though KBTH is the largest training centre in Ghana. Also, only 58 doctors participated in the survey. Due to the rather low response rate it was not possible to analyse the results with respect to influence of specialty on prevalence of mentoring in KBTH

5. Conclusion

This study showed a low prevalence of mentoring among resident doctors in KBTH with a correspondingly high need for mentors; female resident doctors were more likely than their male counterparts to have mentors. Most doctors with mentors were in formal relationships and there was no

significant difference between the proportion of male and female doctors in formal mentoring relationships, a significant proportion of those without mentors had other forms of support.

There was a high level of satisfaction by mentees with their mentoring relationships. Mentors influenced both the personal and professional lives of mentees; most mentors encouraged the independent career choices of their mentees. But influence of mentors on mentees research activities was less appreciable. Finally, no mentee reported any conflict with their mentor.

We recommend larger studies preferably multi-centred, focusing on mentors and their role in the mentoring relationship. Similarly it would be interesting to investigate the part played by training institutions as far as mentoring is concerned.

More consultants in underserved specialties should be encouraged to volunteer as mentors to increase resident doctors' interest in such specialties.

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