

# Perceived competence in adolescent medicine practice and paediatrics subspecialty preferences of Nigerian medical practitioners

Moses Temidayo Abiodun<sup>1</sup>, Austin Omoigberale<sup>2</sup>, Micheal Ibadin<sup>3</sup>

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## Abstract

**Background:** Adolescent medicine (AM) is a field in paediatrics that provides comprehensive healthcare to adolescents, considering their transitional stage in development.

**Objectives:** We examined perception of AM among medical officers and house officers in paediatrics, their perceived competence in AM practice, and their paediatrics subspecialty preferences.

**Method:** It is a descriptive cross-sectional study. Participants' views, perceived competence in AM and subspecialty preferences were determined using a five-item Likert scale on a self-administered questionnaire. Pearson's Chi-square was used to assess any association between perceived competence and gender/ duration of clinical practice.

**Results:** Of the 42 clinicians enrolled, 57% were males, 46% were practising in Teaching Hospitals, and nearly 67% were from South-South geopolitical zones. About 60% participants reported that they were 'more competent' in managing adolescents while 19% perceived they were 'less competent' with this age group. However, 8 out of every 10 study participants expressed need for further training in AM. Clinicians' gender, duration of clinical practice and practice setting did not influence their perceived competence in AM ( $p > 0.05$ ). Emergency paediatrics (68%), respiratory unit (63%) and AM (49%) were the 'more preferred' subspecialties.

**Conclusion:** There is an apparently high level of AM competence and preference among the clinicians.

(Key words: Adolescent medicine; perceived competence; medical practitioners)

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<sup>1</sup>Consultant Paediatrician, <sup>2</sup>Professor of Neonatology, <sup>3</sup>Chief Medical Director, Department of Child Health, University of Benin Teaching Hospital, Benin City, Nigeria

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## Introduction

Adolescent medicine (AM) is a field in paediatrics providing comprehensive healthcare to adolescents, considering their transitional stage in development<sup>1</sup>. Physical and sexual maturity often exceeds psychosocial development of adolescents, predisposing them to psychosocial disequilibrium and youth risk behaviour<sup>2</sup>. This is one of the main factors underlying the high level of teenage morbidities and deaths around the world. Hence, adolescent physicians, as well as youth-friendly services and facilities, are necessary in our societies. There are about 30 million adolescents in Nigeria at risk of various behavioural, reproductive and general health issues<sup>3</sup>. They resent being treated as young children and seldom seek help willingly from adult physicians. Hence, paediatricians with interest in AM and every healthcare provider should possess skills pertinent to provision of AM services at every facility especially in our setting<sup>1</sup>.

However, current undergraduate medical education in Nigeria under-emphasizes AM. Limited specific training is provided on the wide spectrum of health problems of adolescents. Also, until recently, AM was not prominent in paediatrics residency training in Nigeria<sup>4,5</sup>. Moreover, coverage of curriculum content related to AM, physical infrastructures, and numbers of faculty available for AM training are rated as suboptimal in Nigerian post-graduate medical education<sup>5</sup>. Hence, the open questions are: 'What is the current level of competence of Nigerian medical practitioners in AM?' 'How many young clinicians are willing to pursue a career in AM?' There are no research works answering the above questions in Nigeria at present.

## Objectives

To determine the perceived competence in AM practice among medical officers (MOs) with interest in paediatrics, and house officers (HOs) in paediatrics posting at the University of Benin Teaching Hospital (UBTH), Nigeria, the factors influencing it and their preferred areas of sub-specialization in paediatrics.

## Method

*Design:* This is a cross-sectional descriptive survey.

*Setting and participants:* Study was carried out from 19<sup>th</sup> February to 4<sup>th</sup> March 2013 at the Multipurpose Hall of Oba Akenzua Complex at the UBTH, Benin City, Nigeria. Participants were MOs preparing for the Primary Examination of the National Postgraduate Medical College of Nigeria, attending the Intensive Course in Paediatrics of the College. Also HOs in paediatrics posting in the hospital at this time were recruited. Permission was sought from the Local Organizing Committee of the revision course and the Head of Department of Child Health, UBTH. Informed consent was obtained from every study participant. In all, 42 HOs and MOs were selected by simple random sampling.

*Data collection:* The main instrument designed for the study was a self-administered questionnaire on clinicians' perception of AM and subspecialty preference. Questionnaire contained 4 sections: (a) clinicians' socio-demographic and practice characteristics (b) perception of AM and AM training in undergraduate medical education (c) perceived competence in AM and (d) clinicians' subspecialty preference. Using a five-item Likert scale, options ranged from most competent/preferred to least competent/preferred. Similarly, clinicians' views ranged from strongly agree to strongly disagree.

*Statistical analysis:* Data was analysed using the software package for social science (SPSS) version 20.0 (Windows Inc; Chicago, IL, USA). Categorized data was presented as proportions. Clinicians' perceived competence, preference and views were reclassified on a three-item scale. Fisher's exact test or Pearson's Chi-square was used to assess for any significant association between perceived competence and gender/ duration of clinical practice. A 2-sided p-value < 0.05 was considered significant.

## Results

General participants' characteristics are outlined on Table 1.

**Table 1: Socio-demographic and practice characteristics of the respondents (n = 42)**

Characteristics	Frequency (%)
<i>Sex</i>	
Male	24 (57)
Female	18 (43)
<i>Duration of clinical practice</i>	
12 months or >	06 (14)
<12 months	36 (86)
<i>Current status</i>	
Medical officers	06 (14)
House officers	36 (86)
<i>Current institution of practice</i>	
Federal teaching hospital	20 (47.6)
State teaching hospital	17 (40.5)
Others	05 (11.9)
<i>Geopolitical zone</i>	
North East	05 (11.9)
North West	02 (04.8)
North Central	02 (04.8)
South East	04 (09.5)
South West	03 (07.1)
South-South	26 (61.9)

Forty two clinicians were enrolled of whom 57% were males, 45.7% were practising in Teaching Hospitals, and nearly two-thirds were from the South-South geopolitical zones.

### Adequacy of undergraduate medical education

Clinician's views of the adequacy of undergraduate medical education (UME) relevant to AM practice are shown in Table 2.

**Table 2: Clinicians' view of statements on adequacy of UME relevant to AM practice (n = 42)**

Statements	Clinicians' view					
	Agree		Indifferent		Disagree	
	n	%	n	%	n	%
UME adequately prepare doctors to manage adolescents n=39	14	35.9	8	20.5	17	43.6
There is no specific teaching on the management of adolescents in UME n=36	21	58.3	4	11.1	11	30.6
The medical graduate is not prepared to manage health risk behaviour in adolescents n = 42	17	40.5	13	31.0	12	28.6
All GP's need further training in order to competently manage adolescents n = 42	34	81.0	8	19.0	0	0.0

UME= Undergraduate medical education; GP= general practitioners

Only 36% of the participants agreed that UME adequately prepare medical practitioners to manage adolescents. However, 40.5% expressed this same view on the management of health risk behaviour in adolescents. Eight out of every 10 study participants expressed the need for further training in order to competently manage adolescents.

### Clinicians' perceived competence

Nearly 60% of the participants reported that they were 'more competent' in managing adolescents while 19% perceived they were 'less competent' with this age group. The highest perception of low competence (33.3%) was in newborn care (Table 3).

**Table 3: Clinicians' perceived competence in health care delivery in different patients' age groups (n = 42)**

Patients' age group	Perceived competence					
	More competent		Competent		Less competent	
	n	%	n	%	n	%
Neonates	15	35.7	13	31.0	14	33.3
Infants	19	45.2	14	33.3	9	21.4
Pre-school	23	54.8	17	40.5	2	4.8
School age	25	59.5	12	28.6	5	11.9
Adolescents	25	59.5	9	21.4	8	19.0

Excluding infants and neonates, clinicians were more likely to describe themselves as more competent in 'pre-adolescent care' than in 'adolescent healthcare' (69.4% vs 30.6%), but this did not attain statistical significance ( $p = 0.08$ , OR = 2.588, 95% CI= 0.9 - 7.7). There was no significant difference in perceived competence in AM between southern and northern as well as federal and state clinicians ( $p > 0.05$ ).

Moreover, study participants' views on the adequacy of undergraduate training related to AM did not influence their perceived competence in adolescent health care delivery ( $p > 0.05$ ). Similarly, clinicians' gender and duration of clinical practice did not influence perceived competence in AM in this survey ( $p > 0.05$ ).

### Clinicians' view of Adolescent Medicine practice

Approximately three-quarters of the study participants agreed that adolescents should be managed by paediatricians (76.2%) and that screening adolescents for health risk behaviour can be incorporated into routine medical practice (75.6%). At least seven out of every ten clinicians in this survey identified the scope of AM to include management of behavioural disorders, reproductive health issues and counselling of parents/guardians. Further details of the participants' view are shown in Table 4.

**Table 4: Clinicians' views of statements on adolescent medicine practice (n = 42)**

Statements	Clinicians' views					
	Agree		Indifferent		Disagree	
	n	%	n	%	n	%
Adolescents should be managed by adult physicians	19	45.2	8	19.0	15	35.7
Adolescents should be managed by paediatricians	32	76.2	3	7.1	7	16.7
Adolescents require special attention	39	92.9	3	7.1	0	0.0
Adolescent health problems are often preventable	34	81.0	8	19.0	0	0.0
Screening of adolescents for health risk behavior can be done in routine medical practice	31	75.6	6	14.6	4	9.8
AM can manage behavioural disorders	34	81.0	5	11.9	3	7.1
AM can manage reproductive health issues	29	69.0	7	16.7	6	14.3
Counseling of parents/guardians is major aspect of adolescent health care delivery	41	97.6	1	2.4	0	0.0

### Paediatrics sub-specialty preferences

The 'more preferred' subspecialties were Emergency Paediatrics (68.3%) and Respiratory Unit (63.4%). Also, almost half of the respondents (48.8%) rated

AM as more preferred. Less preferred subspecialties were Haemato-oncology (41.5%) and Neurology (38.5%). Less than 10% of the participants expressed their perception of neonatology. Details of the clinicians' preferences are shown in Table 5.

**Table 5: Paediatrics sub-specialty preferences of the study participants**

Paediatrics subspecialty	Clinicians' preference					
	More preferred		Preferred		Less preferred	
	n	%	n	%	n	%
Adolescent Medicine n=41	20	48.8	10	24.4	11	26.8
Emergency Paediatrics n=41	28	68.3	5	12.2	8	19.5
Gastroenterology n=40	18	45.0	13	32.5	9	22.5
Nephrology n = 40	12	30.0	17	42.5	11	27.5
Neurology n = 39	10	25.6	14	35.9	15	38.5
Haemato-oncology n=41	12	29.3	12	29.3	17	41.5
Respiratology n = 41	26	63.4	9	22.0	6	14.6
Neonatology n=3	3	100.0	-	-	-	-

## Discussion

Clinical competence is pertinent to optimal health care delivery in all age groups, especially among adolescents who are at a sensitive stage of development and often report important unmet health care needs as well as unwillingness to seek perceived needed care from their physicians<sup>6-8</sup>. A majority of our respondents perceived themselves as competent in the management of adolescents irrespective of their practice setting. This could be a reflection of the aspects of adolescent healthcare being provided by these clinicians. A larger proportion (85.7%) of our participants are house officers whose job descriptions often include basic clinical evaluation and minor invasive procedures, like venepuncture. The foregoing is relatively simpler among adolescents than in the younger age group, after adequate counseling. The fact that newborn care was their main area of low competence supports the above view. Also, this survey did not elicit specific AM services being provided by the respondents.

Nonetheless, the relatively high competence in adolescent healthcare expressed by these medical practitioners did not correlate with their prior exposure to some aspects of AM during undergraduate training. Doctors who received 'specific teaching in AM' and are 'well prepared to manage health risk behaviour' did not rate themselves as 'more competent' than others in adolescent care. In contrast, Mark et al<sup>6</sup> found that having at least some training in AM correlates positively with the provision of anticipatory guidance and perceived competence in managing problems related to sexuality and sexual abuse. Socio-demographic and practice characteristics did not consistently influence perceived AM competence in this survey, comparable to the findings among Nigerian paediatric residents<sup>9</sup>.

Almost all of our respondents (81%) confirmed that there is a need for further training of all general medical practitioners in order to competently manage adolescents. This highlights the increasing need for AM experts in the country. Considering the high adolescent population and prevalent morbidities in our sub-region, availability of sub-specialists in adolescent health care is a necessity rather than luxury<sup>2,10</sup>. Hence, there is a dire need in various training institutions to strengthen their AM clinical rotations at both undergraduate and post-graduate levels so that all clinicians can be proficient in adolescent health care delivery<sup>5</sup>.

Interestingly, nearly half of our respondents agreed that adolescents should likewise be managed by adult physicians. This is similar to the initial reactions among clinicians when American Academy of Paediatrics redefined the scope of paediatricians to extend to the 21<sup>st</sup> birthday<sup>6-11</sup>. Unhealthy self-image and lack of knowledge are potential obstacles to healthcare delivery to adolescents. In a USA survey among paediatricians, being perceived as 'baby doctor' was cited by 62% of the respondents as obstacles to optimal adolescent care<sup>6</sup>. However, paediatrician's developmental perspective appears to be uniquely suited to the task of providing care to adolescents<sup>6</sup>. Individual paediatricians must develop mechanisms to boost AM services delivery. This would include: provision of adolescent-friendly services, enhanced proficiency and expanding one's referral network to accommodate the complex needs of adolescents<sup>12</sup>. In this study, at least seven out of ten participants correctly identified the scope of AM services, similar to the findings in another Nigerian physician survey<sup>9</sup>.

Modest interest was shown in AM as the subspecialty of choice in this survey. More preferred subspecialties include emergency paediatrics and respiratory unit. This could be partly due to the awfully low level of professionals and facilities

devoted to AM in Nigeria at present<sup>5</sup>. Hence, medical graduates are relatively ignorant of the prospects in this novel field of paediatrics. There is need to extend the on-going activation of AM training (especially adolescent preventive service) to undergraduate level, considering that curative care alone cannot improve our health indices<sup>13,14</sup>.

### Conclusions and recommendations

This survey found an apparently high level of AM competence among the clinicians, independent of their personal and practice characteristics, as well as undergraduate AM experience. It is also one of their preferred subspecialties. There is a need to describe the current practice of specific AM components among Nigerian non-expert medical professionals.

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