Enhancing Health Policymakers' Information Literacy Knowledge and Skill for
Policymaking on Control of Infectious Diseases of Poverty in Nigeria

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Enhancing Health Policymakers' Information Literacy Knowledge and Skill for Policymaking on Control of Infectious Diseases of Poverty in Nigeria

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Abstract

Background: In Nigeria, one of the major challenges associated with evidence-to-policy link in the control of infectious diseases of poverty (IDP), is deficient information literacy knowledge and skill among policymakers. There is need for policymakers to acquire the skill to discover relevant information, accurately evaluate retrieved information and to apply it correctly.

Objectives: To use information literacy tool of International Network for Availability of Scientific Publications (INASP) to enhance policymakers' knowledge and skill for policymaking on control of IDP in Nigeria.

Methods: Modified "before and after" intervention study design was used in which outcomes were measured on target participants both before the intervention is implemented and after. This study was conducted in Ebonyi State, south-eastern Nigeria and participants were career health policy makers. A two-day health-policy information literacy training workshop was organized to enhance participants' information literacy capacity. Topics covered included: introduction to information literacy; defining information problem; searching for information online; evaluating information; science information; knowledge sharing interviews; and training skills.

Results: A total of 52 policymakers attended the workshop. The pre-workshop mean rating (MNR) of knowledge and capacity for information literacy ranged from 2.15-2.97, while the post-workshop MNR ranged from 3.34-3.64 on 4-point scale. The percentage increase in MNR of knowledge and capacity at the end of the workshop ranged from 22.6%-55.3%.

Conclusion: The results of this study suggest that through information literacy training workshop policy makers can acquire the knowledge and skill to identify, capture and share the right kind of information in the right contexts to influence relevant action or a policy decision.

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Introduction

In many parts of the world, there is an increasing attention on the use of evidence from scientific research for the formulation of health policy. A number of recent reports have indicated that focus on the use of research evidence is not limited to high or middle-income countries, but evidence-informed policy is growing in importance among policy makers in low-income countries [1-4]. An earlier report quoted the Director of the Tanzanian Council for Science and Technology as saying, "if you are poor, actually you need more evidence before you invest, rather than if you are rich" [5]. However, Newman and colleagues [6], noted that this demand for research evidence is not only influenced by policy makers' incentives or motivations to use research but more importantly by their capacity to access, understand and use research.

The internet, online databases, digital publications and other technologies have made the search for scientific information more accessible and simultaneously, more complex [7]. There are however, some initiatives which have been designed to help professionals and practitioners to develop their capacities to navigate the world of scientific information more competently and effectively [8-10]. This has given rise to the concept of information literacy. The term 'information literacy' describes a set of skills and knowledge employed to discover relevant information, to accurately evaluate retrieved information and to apply it correctly [9].

Information literate individuals are 'those who know when they need information and are then able to identify, locate, evaluate, organize and effectively use the information to address and help resolve personal, job related, or broader social issues and problems' [11]. These attributes are recognized as being essential for the successful practice of health professionals, and other critical stakeholders in the health sector [12]. Ford and Hibberd [12] have noted that the pace of discovery relating to the biological basis of health and disease and the development of new therapies, techniques and materials have been increasing at an exponential rate over past decades. Consequently, more than ever, it has been argued that evidence-based practice, critical appraisal skills and the ability to access, evaluate and apply new knowledge appropriately are required if health professionals are to keep abreast of current best practice [13].

It is pertinent to state that information literacy is not a new concept among healthcare practitioners as there are numerous studies reporting its use in the training of doctors, nurses, and pharmacists [13-17]. Unfortunately, till date studies reporting the use of information literacy to enhance policymakers' capacity for evidence-to-policy link are very scarce. The lack of knowledge and skill enhancement programmes for policymakers on information literacy might be one of the factors responsible for the challenges associated with uptake of research evidence into policymaking process. Court and Young [18] observed in their study that one of the most important obstacles to research and evidence being used to influence policy is that policymakers have limited capacity to use and adapt evidence in policy processes.

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In Nigeria, one of the major with evidence-to-policy link in the control of infectious diseases of poverty, is the grossly deficient skill among policymakers to access and use research evidence [19]. In Ebonyi State south-eastern Nigeria, the lack of adequate capacity for information literacy among health policy makers hampers the formulation of evidenced-based policies on the control of malaria, schistosomiasis and lymphatic filariasis. These three diseases constitute major public health concern in Ebonyi State and severely affect the poor especially in the rural areas [20-22]. Since information literacy training programmes among healthcare practitioners have resulted in significant capacity improvement in evidence-based best practice [15,16,23], there is little doubt that similar outcome might be obtained among policymakers. Our objective in this study is to use information literacy tool of the International Network for the Availability of Scientific Publications (INASP) to enhance policymakers' knowledge and skill for policymaking on control of infectious diseases of poverty (IDP) in Nigeria.

Methods

Study design

A modified "before and after" intervention study design was used in this investigation as described by Purdon and colleagues [24]. The outcomes were measured on the eligible population (target participants) both before the intervention is implemented and after. The difference between the before and after measurements was taken to be the impact of the intervention. (In this instance, the 'before' – or 'baseline' – measurements served as the control measurements.) [24].

Ethical consideration

Approval for this study was obtained from the Directorate of Research, Innovation & Commercialization (DRIC), Ebonyi State University, Abakaliki Nigeria. The approval was based on the agreement that participation in the research was voluntary following informed consent; that participants' anonymity would be maintained; and that every finding would be treated with utmost confidentiality and for the purpose of this research. These were adhered to in this study.

Study area and participants

This study was conducted at sub-national level and participants were drawn from Ebonyi State in south-eastern Nigeria. The target participants were career health policy makers, as described by Bammer and colleagues [25] and these included:

- health professionals in charge of the health systems;

- regional, state and local government directors of the health ministry;

- directors of primary health care at the local government level;

- health professionals working with specific programmes in the health ministry;

- staff and consultants involved in public health issues within the health ministry;

- programme/project managers under the health ministry;

- chief executive officers of civil society groups, including non-governmental organizations;

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•leaders of national health-based associations (for example, Nigeria Medical Association; National Association of Nigeria Nurses and Midwives; and Pharmaceutical Association of Nigeria);

Information Literacy capacity enhancement workshop

A total of 70 policymakers were mapped out for this study. The mapped out participants were divided into two batches of 35 persons each. We organized a two-day intensive health-policy information literacy training workshop for the policymakers at Ebonyi State University, E-Library Centre Abakaliki Nigeria. The focus of the information literacy workshop was to enhance the participants' information literacy knowledge and skill so that they can develop evidence-informed policy on the control of IDP in Nigeria. All the policymakers were invited to the workshop by invitation letters which were sent 2 weeks before the event and was followed-up with a text message reminder to their mobile phones a day before the programme. The first batch of policymakers had their workshop in April 2014, while the second batch had theirs in May 2014. The duration of the workshop each day was five hours from 10am-3pm (with a break between 12:30pm-1pm).

The training modules and tools used for the information literacy workshop were downloaded from the INASP website: (http://www.inasp.info/file/4f89119275ee9289abfd95636ebd0e14/information-literacy-for-policy-makers-and-influencers.html). The workshop covered the following modules with emphasis on IDP (malaria, schistosomiasis and lymphatic filariasis):

Module 1: Introduction to information literacy

Module 2: Defining and information problem relevant to IDP

Module 3: Searching for information online relevant to IDP

Module 4a: Evaluating information relevant to IDP (part 1)

Module 4b: Evaluating information relevant to IDP (part 2)

Module 5: Science information relevant to IDP

Module 6: Knowledge sharing interviews relevant to IDP

Module 7: Training skills relevant to IDP

The objectives of the information literacy training workshop were to enable policymakers to:

• recognize information problems related to IDP

• be able to identify the language associated with a problem (specifically when identifying appropriate online search terms) related to IDP

• feel more confident handling science/research information related to IDP

• know of at least three reliable sources of information on science topics relevant to IDP

• critically evaluate sources of information for quality, credibility, relevance and bias relevant to IDP

• have enhanced skills in how to make use of science information related to IDP

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• have enhanced skills in small group training methods relevant to IDP

We developed a pre-workshop and a post-workshop measurement instruments (assessment questionnaires) to assess the level of participants' knowledge and skill of information literacy. The measurement instruments were adapted from the outcome evaluation questionnaire developed in McMaster University Canada by Johnson & Lavis [26]. However, unlike the Johnson and Lavis outcome evaluation questionnaire which was a 7-point likert scale [26], we modified the measurement instruments in this present study into a 4-point likert scale. We had validated and used this type of measuring instrument in our previous study involving a training workshop for policymakers' capacity enhancement on evidence-to-policy link and it proved very reliable [27].

The pre-workshop assessment questionnaire (developed in a 4-point likert scale according to the degree of adequacy; from 1 = grossly inadequate, to 4 = very adequate), was administered prior to the training session to assess the level of knowledge and capacity of the participants on the specific topics covered during the workshop. After the administration of the pre-workshop questionnaire, the training commenced and was facilitated by four resource persons (three senior researchers from Ebonyi State University and one senior director from the health ministry). All teaching sessions lasted 35-60 minutes and were done using power-point presentation and handouts on each topic were produced and distributed to all participants. Questions/answers/discussions immediately followed each teaching session. It was made mandatory for all lectures to be delivered in simplified, practical and easily comprehensible patterns, with little or no emphasis on complex mathematical or scientific computations/models for the benefit of non-specialists who constituted the majority of the participants. Up to 120minutes practical session was held during the workshop in which each participant was able to use an internet connected computer to practice the acquisition of research evidence from relevant electronic databases relevant to malaria, schistosomiasis and lymphatic filariasis. At the end of the workshop, a post-workshop assessment questionnaire (also developed in a likert scale format) was administered to the participants to evaluate the impact of the workshop.

Data analysis

The data collected via the questionnaire was analyzed using the methods developed at McMaster University Canada by Johnson and Lavis [26]. The analysis was based on mean rating (MNR), median rating (MDR) and range. For instance the figures represent Likert rating scale of 1-4 points, where 1point=grossly inadequate; 2 points=inadequate; 3 points=fairly adequate; and 4 points=very adequate. In terms of analysis, values ranging from 1.00-2.49 points are considered low, whereas values ranging from 2.50-4.00 points considered high. The Pre-Workshop Means were compared to the Post- Workshop Means. The EPi-info software was used for the performance of the data analysis.

Result

A total of 52 policymakers out of the 70 individuals invited attended the workshop. The profile of the participants is presented in Table 1 and included the following: Programme Officer/Project Secretaries (27.9%); Managers/Heads of Departments (30.2%); Directors/Presidents/Chairpersons (39.5%). A total of 27.9% of the participants have direct influence on the policymaking process, with 46.5% and 32.6% possessing Bachelors and Masters Degrees as highest academic qualifications respectively. The outcome of PRE-Workshop

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knowledge and skill assessment is presented in Table 2, while the POST-Workshop knowledge and skill assessment is presented in Table 3. The outcome of the assessment of impact of the training workshop with comparison of the PRE-Workshop Mean Ratings (MNRs) and POST-Workshop MNRs is presented in Table 4. Result showed progressive increase in the POST-Workshop MNRs over the PRE-Workshop MNRs.

In terms of the *"introduction to information literacy"*, the PRE-Workshop MNR ranged from 2.46-2.77, while the POST-Workshop MNR ranged from 3.60-3.63, with the percentage increase ranging from 30%-46.3%. In terms of *"defining information problem"*, the PRE-Workshop MNR ranged from 2.46-2.63, while the POST-Workshop MNR ranged from 3.41-3.51, with the percentage increase ranging from 33.5%-42.3%. In terms of *"searching for information online"*, the PRE-Workshop MNR ranged from 2.35-2.48, while the POST-Workshop MNR ranged from 3.34-3.43, with the percentage increase ranging from 38.3%-42.1%.

Concerning *"evaluating information"*, the PRE-Workshop MNR was 2.29, while the POST-Workshop MNR was 3.47, with the percentage increase as 51.5%. With regard to *"scientific information"*, the PRE-Workshop MNR ranged from 2.15-2.35, while the POST-Workshop MNR ranged from 3.34-3.41, with percentage increase ranging from 43.4%-55.3%. In terms of *"knowledge sharing"*, the PRE-Workshop MNR was 2.55, while the POST-Workshop MNR was 3.53, with the percentage increase at 38.4%. With regard to *"training skills"*, the PRE-Workshop MNR ranged from 2.79-2.97, while the POST-Workshop MNR ranged from 3.56-3.64, with the percentage increase ranging from 22.6%-27.6% (Table 4).

Discussion

In this study, we have defined policy makers as the stakeholders from government, civil society or the private sector who occupy a leadership or decision-making role in relation to policies and programmes relevant to the improvement of the health sector. Bammer and colleagues [25] identified three categories of policymakers at a national level to include the elected, appointed and career officials. We targeted the third category (career policymakers) i.e., directors, managers, and departmental heads in the health ministry; hospital administrators; health-based CSOs/NGOs; local government/development centres and health directors/heads of health departments. We focused the information literacy knowledge and skill enhancement on this category of policymakers because of the strategic role they play in the policymaking process as principal policy managers, policy administrators and policy implementers.

In our previous studies we identified these individuals as the "engine room" of policymaking process in Nigeria [28-31]. Many of the target policymakers prior to this study lacked information literacy skill, even though they have several years of experience in the control of IDP and have worked in the health sector under up to two different government regimes. Consequently some of them are deeply knowledgeable about their areas of responsibility in IDP control, but only required information literacy capacity on current globally acceptable evidence-to-policy process. Others had more generic and less contextualized policy-making skills requiring some development via training in information literacy. Therefore we targeted these individuals because information enlightened policy administrators, managers and implementers are crucial for the effective delivery of public health and disease control programmes [32].

This study highlighted the importance of information literacy knowledge and skill enhancement training among health policymakers. The results of this study showed notable improvement in the knowledge and the capacity of the participants to access and synthesize relevant evidence

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necessary for policymaking on IDP. The mean percentage increase in the knowledge and the capacity of the participants recorded in this study ranged from 22.6% to 55.3%, which can be considered very notable (Table 4). To the best of our knowledge there is scarcely any previous published work were this strategy was employed for policymakers in low income setting. Most of the available reports on information literacy knowledge and skill enhancement focused on the training of either researchers or health care professionals particularly doctors, nurses and pharmacists [13-17]. Furthermore there are numerous reports which showed that most knowledge and skill enhancement activities related to policymaking such as knowledge translation/ management and health policy research have focused on health researchers with little emphasis on policymakers [33-35].

Dawad and Veenstra [36] observed that without adequate capacity, in knowledge translation/management (including information literacy) and health policy research, policymakers will not have the capacity to access and synthesize sound information on which to base decisions and the potential for shared learning will be lost. They further noted that as researchers strive to develop the means to obtain timely information on health system impacts, policymakers need to become skilled at translating this information into appropriate action, to avoid forfeiting any progress made in developing and reforming the health system. The WHO added that strengthening capacity for evidence-informed policymaking should involve both policymakers and researchers since capacity strengthening is needed for both researchers to generate better evidence and for policymakers and health-care professionals to better use available evidence [37].

It is interesting to note that the areas of greatest percentage improvement in the knowledge and skill of the policymakers in this study were those principally related to access of evidence from various sources and competency in making use of the evidence appropriately (Table 4). These include: knowledge on the different pillars of Information Literacy (46.3%); knowledge on the different reference resources, databases & internet resources (42.3%); knowledge about evaluating information from the internet (51.5%); knowledge about scientific methods & scientific consensus (55.3%); knowledge on the different scientific publications and academic journals relevant to policymaking (43.4%) and knowledge about systematic reviews and policy briefings (45.7%). Knowledge and skill constraints associated with accessing evidence from various sources and competency in making use of the evidence appropriately are among the most important capacity needs of policymakers [38]. Campbell and colleagues [39] noted in their study that the most common reasons for not using research in policy were: the absence of appropriate and/or relevant research (29%); a lack of skills to access or acquire relevant research (24%).

The notable improvement observed in these areas in the present study, suggests that the knowledge and skill enhancement acquired by the policymakers could facilitate their demand for evidence for policymaking process. Green and Bennett [37] had argued that to achieve evidence informed policy making in any area of the health improvement, policy-makers and their advisers, need a set of skills to enable them to use research in their decision-making. They noted that in particular, policy-makers need to be able to: identify situations where research can help; articulate research questions for topics of policy-relevant research; and access and assess research findings and incorporate them in decision making.

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Limitation of Study

We acknowledge that the self assessment technique used to assess knowledge and skill improvement in this study is known to have its shortcomings. According to Deans and Ademokun [40], being able to critically recognize and understand one's own gap in skills and knowledge is a difficult process which takes guided thought. Furthermore Haahr and colleagues [41] critiqued the "survey-based self-assessment" that is "frequently used to measure skills" and noted that "self-assessments are subject to self-esteem bias, may be unreliable, and are difficult to validate". Future studies incorporating more rigorous evaluation mechanisms are advocated. Another limitation to this study was the short duration (two days) of the information literacy training workshop. To properly enhance the knowledge and skill of the policymakers on information literacy surely requires more than a two-day workshop. A certificate course of not less than four weeks could have produced a better knowledge and skill enhancement outcome. Another limitation with the present study was that no mechanism was been put in place to monitor the post-workshop application of the skill acquired by the policymakers. Such monitoring mechanism would have aided proper impact evaluation of the workshop. We advocate for the inclusion of post-workshop monitoring mechanism in future studies.

Conclusion

This is the first study done in Nigeria that targeted the policymakers for this kind of capacity enhancement. The enhancement of policymakers' knowledge and skill in specialized fields such as information literacy is very vital in low income settings. Globally, it is well established that policymaking is becoming increasingly challenging, consequently equipping policymakers with the right kind of skill becomes very imperative. The outcome of this study suggests that a training workshop on information literacy can be used to enhance the knowledge and skill of policy makers to access and use evidence from various reliable sources for policymaking. The training administered to the policymakers in this study helped to build the confidence of the participants to know what to do when they need information for policymaking. This is because they can to a reasonable extent be able to identify, locate, evaluate, organize and effectively use relevant scientific evidence and other policy-relevant information to address policy issues. Our take is that if through the information literacy training programme we are able to enhance the capacity of the career policymakers to identify, capture and share the right kind of information in the right contexts of place and time to influence relevant action or a decision, then we can expect more effective policies on the control of IDP in the State. The procedure we adopted in this study is recommended for developing countries that want to achieve effective evidence-to-policy process. This is because the procedure can easily and with minimal cost be replicated in other low income settings and similar outcomes can be expected.

Acknowledgement

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Table 1. Attributes of the participants during the information literacy training workshop for the Research Capacity Strengthening and Knowledge Management for policymakers in Ebonyi State Nigeria

Participant (Respondents) Attributes	Number (%) of Participants (Respondents) N=43
(1) Gender	
Female	29 (70.7)
Male	12 (29.3)
(2) Age (Years)	
25 - 34	2 (4.7)
35 - 44	13 (30.2)
☐ 45	28 (65.1)
(3) Institutional Affiliation	
Federal Teaching Hospital	8 (18.6)
State Ministry of Health	13 (30.2)
Local Government Service Commission	17 (39.5)
Non-Governmental Organization	2 (4.7)
State House of Assembly	1 (2.3)
Educational Institution	1 (2.3)
(Missing)	1 (2.3)
(4) Official Designation	
Programme Officer/Project Secretaries	12 (27.9)
Managers/Heads of Departments	13 (30.2)
Directors/Presidents/Chairpersons	17 (39,5)
(Missing)	1 (2.3)
(5) Years of Experience in Current Designation	
< 3	8 (18.6)
3 – 5	18 (41.9)
6 – 10	10 (23.3)
> 10	3 (6.9)
(Missing)	4 (9.3)
(6) Influence on Policy Making	
Direct (DIPP)	12 (27.9)
Indirect (IIPP)	30 (69.8)
(Missing)	1 (2.3)
(7) Highest Academic Qualification	
SSCE/Diploma	3 (7.0)
Bachelor	20 (46.5)
Masters	14 (32.6)

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Doctorate	1 (2.3)
(Missing)	5 (11.6)

Table 2. The Pre-Workshop knowledge/skill assessment of participants at the information literacy training workshop for the Research Capacity Strengthening and Knowledge Management for policymakers in Ebonyi State Nigeria

Parameter Assessed	Mean	Median	Mode	Range
Knowledge about Information Literacy	2.77	3.00	3	2-4
Level of knowledge on the different pillars of Information Literacy	2.46	2.00	2[a]	1-4
Knowledge of the competencies of an information literate person	2.51	2.00	2	1-4
Rate your ability to recognize information need, searching, evaluating information relevant to policy making	2.71	3.00	3	2-4
How would you describe your knowledge about defining information problem?	2.63	3.00	3	2-4
What is your level of knowledge on the different reference resources, databases & internet resources?	2.46	2.00	2	2-3
How would you describe your knowledge about assessing information need & formulating search strategy?	2.46	2.00	2	2-3
How would you describe your knowledge about the internet & world wide web?	2.48	3.00	3	1-3
What is your level of knowledge on the different search tools, live search engines, & reference resources, databases & internet resources?	2.38	2.00	2	1-4
How would you describe your knowledge about assessing information need & formulating search strategy?	2.35	2.00	2	1-3
How would you describe your knowledge about evaluating information from the internet?	2.29	2.00	2	14
How would you describe your knowledge about scientific methods & scientific consensus?	2.15	2.00	2	1-3
What is your level of knowledge on the different scientific publications and academic journals relevant to policymaking?	2.35	2.00	2	2-3
How would you describe your knowledge about systematic reviews and policy briefings?	2.34	2.00	2	1-4

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How would you describe your knowledge about "knowledge sharing strategies" and the relevance to the policymaking process?	2.55	3.00	3	1-4
How would you describe your knowledge about learning styles?	2.85	3.00	3	1-4
What is your level of knowledge on the different adult learning strategies?	2.79	3.00	3	1-4
How would you describe your knowledge about participatory training?	2.97	3.00	3	1-4

Table 3. The Post-Workshop knowledge/skill assessment of participants at the information literacy training workshop for the Research Capacity Strengthening and Knowledge Management for policymakers in Ebonyi State Nigeria

Parameter Assessed	Mean	Median	Mode	Range
Present knowledge about Information Literacy	3.60	4.00	4	3-4
Present Level of knowledge on the different pillars of Information Literacy	3.60	4.00	4	3-4
Present knowledge of the competencies of an information literate person	3.63	4.00	4	3-4
Rate your **Present** ability to recognize information need, searching, evaluating information relevant to policy making	3.63	4.00	4	3-4
How would you describe your **Present** knowledge about defining information problem?	3.51	4.00	4	3-4
What is your **Present** level of knowledge on the different reference resources, databases & internet resources?	3.50	4.00	4	2-4
How would you describe your **Present** knowledge about assessing information need & formulating search strategy?	3.41	3.00	3	2-4
How would you describe your **Present** knowledge about the internet & world wide web?	3.43	3.00	4	2-4
What is your **Present** level of knowledge on the different search tools, live search engines, & reference resources, databases & internet resources?	3.34	3.00	3	2-4
How would you describe your **Present** knowledge about assessing information need & formulating search strategy?	3.34	3.00	3	2-4
How would you describe your **Present** knowledge about evaluating information from the internet?	3.47	3.50	4	2-4

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How would you describe your **Present** knowledge about scientific methods & scientific consensus?	3.34	3.00	4	2-4
What is your **Present** level of knowledge on the different scientific publications and academic journals relevant to policymaking?	3.37	3.00	3	2-4
How would you describe your **Present** knowledge about systematic reviews and policy briefings?	3.41	3.00	3	2-4
How would you describe your **Present** knowledge about "knowledge sharing strategies" and the relevance to the policymaking process?	3.53	4.00	4	2-4
How would you describe your **Present** knowledge about learning styles?	3.56	4.00	4	2-4
What is your **Present** level of knowledge on the different adult learning strategies?	3.56	4.00	4	2-4
How would you describe your **Present** knowledge about participatory training?	3.64	4.00	4	3-4

Table 4. Comparison of the Pre-Workshop and Post-Workshop knowledge/skill assessment of participants at the information literacy training workshop for the Research Capacity Strengthening and Knowledge Management for policymakers in Ebonyi State Nigeria

Parameter Assessed	PRE* Mean	POST** Mean	Mean Increase	Percentage Mean Increase
Introduction to information literacy				
Knowledge about Information Literacy	2.77	3.60	0.83	30.0
Level of knowledge on the different pillars of Information Literacy	2.46	3.60	1.14	46.3
Knowledge of the competencies of an information literate person	2.51	3.63	1.12	44.6
Rate your ability to recognize information need, searching, evaluating information relevant to policy making	2.71	3.63	0.92	33.9
Defining information problem on IDP				
How would you describe your knowledge about defining information problem?	2.63	3.51	0.88	33.5
What is your level of knowledge on the different reference resources, databases & internet resources?	2.46	3.50	1.04	42.3
How would you describe your knowledge about assessing information need & formulating search strategy?	2.46	3.41	0.95	38.6
Searching for information online on IDP				
How would you describe your knowledge about the internet & world wide web?	2.48	3.43	0.95	38.3

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What is your level of knowledge on the different search tools, live search engines, & reference resources, databases & internet resources?	2.38	3.34	0.96	40.3
How would you describe your knowledge about assessing information need & formulating search strategy?	2.35	3.34	0.99	42.1
Evaluating information on IDP				
How would you describe your knowledge about evaluating information from the internet?	2.29	3.47	1.18	51.5
Scientific information on IDP				
How would you describe your knowledge about scientific methods & scientific consensus?	2.15	3.34	1.19	55.3
What is your level of knowledge on the different scientific publications and academic journals relevant to policymaking?	2.35	3.37	1.02	43.4
How would you describe your knowledge about systematic reviews and policy briefings?	2.34	3.41	1.07	45.7
Knowledge sharing on IDP				
How would you describe your knowledge about "knowledge sharing strategies" and the relevance to the policymaking process?	2.55	3.53	0.98	38.4
Training skills on IDP				
How would you describe your knowledge about learning styles?	2.85	3.56	0.71	24.9
What is your level of knowledge on the different adult learning strategies?	2.79	3.56	0.77	27.6
How would you describe your knowledge about participatory training?	2.97	3.64	0.67	22.6

*PRE- Workshop Mean

**POST- Workshop Mean

IDP-Infectious diseases of poverty