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Table of content

Title.....	
Copy write	
Editorial team	
Table	Page

PART A

EXERCISE SCIENCE AND ALLIED DISPLINES

ASSESSMENT OF SECONDARY SCHOOL STUDENTS' BODY COMPOSITION IN SOKOTO METROPOLIS, SOKOTO STATE

2

¹Attahiru Zubairu, ² Abdulsalam, A, ³ Prof. C. E. Dikki

INADEQUATE PROVISION OF SPORTING FACILITIES IN PUBLIC SECONDARY SCHOOLS IN ILORIN EAST LOCAL GOVERNMENT AREA OF KWARA STATE.

14

¹ Bakinde Surajudeen Tosho, Ph.D. ² Obiyemi Olawale – Olatunbosun, Ph.D. ³ Oyerinde Oyesegun Olufemi, Ph.D.

⁴ Oyetunji Bashir Adebare, M.Ed.

⁵ Bakinde Ismail Jayeola, M.Ed.

NUTRITIONAL NEEDS AND ATHLETIC PERFORMANCE OF STUDENT ATHLETES DURING TRAINING AND COMPETITION

30

¹Kabir Musa lawal

Effects of Exercise on Cardiac Output (A Review)

49

¹ Dr. A. S. Na'Allah, ² Mr. Sani Yusuf

EFFECTS OF 8 WEEKS CYCLE ERGOMETER EXERCISE TRAINING ON BLOOD SUGAR AND CHOLESTEROL IN MALE DIABETIC PATIENTS IN KANO METROPOLIS, KANO, NIGERIA

64

¹ Dr. Ibrahim S. Yar'zever, ² Ismaila Sadiq Ph.D

EFFECT OF 8-WEEK KETTLE-BELL WINDMILL CALESTHEMIC EXERCISE ON WORK RELATED MUSCULOSKELETAL PAIN (WRMSP) AMONG SECONDARY SCHOOL TEACHERS IN KANO METROPOLIS

74

¹ Musa Jibrin Yakasai Ph.D ² Hajarar Sadiq Abdullahi

¹Usman Mohammed M.Sc ² M. M Sa'ad PhD

THE ROLE OF PHYSICAL EDUCATION IN TEACHING OF BRAILLE TO THE CHILDREN WITH VISUAL IMPAIRMENT

90

¹Ya'u Musa Dantata Ph.D.²A'isha B.M. Gwarzo

INFLUENCE OF YOUTH'S PARTICIPATION IN SPORTS TERTIARY INSTITUTIONS IN NORTH WEST NIGERIA ON NATIONAL DEVELOPMENT

98

¹ John Shehu Mahuta, ² Musa Njidda Ph.D

**PART B
HEALTH EDUCATION**

ATTITUDE OF BAKERY WORKERS TOWARDS UTILIZATION OF STANDARD SANITARY PRACTICES IN TARABA STATE, NIGERIA

112

¹Usman Mohammed M.Sc. ² M. M Sa'ad PhD

KNOWLEDGE OF TETANUS IMMUNIZATION AMONG FEMALE STUDENTS OF CHILD BEARING AGE IN TERTIARY INSTITUTIONS OF KANO STATE, NIGERIA

121

¹ M. I. Dakata M.Sc. ² A. M. Getso Ph.D

ASSESSMENT OF THE PERCEIVED INFLUENCE OF SCHOOL HEALTH SERVICE ON THE ACADEMIC ACHIEVEMENT OF SECONDARY SCHOOL STUDENTS IN BWARI AREA COUNCIL, FCT, ABUJA

134

¹ Kolawole, A. A. Ph.D

WASTE MANAGERS' PERCEPTION ON BEHAVIOURAL CHALLENGES AND FACTORS INFLUENCING INDISCRIMINATE DISPOSAL OF WASTE BY RESIDENTS OF ILORIN METROPOLIS, KWARA STATE

153

¹ Abdulrasaq, Qazeem Onaolapo

INFLUENCE OF COMMUNITY ACTIVATION MODEL CONSTRUCTS ON THE RURAL HEALTH SERVICES OF THE PEOPLE OF OVIA SOUTH WEST LGA, EDO STATE

167

¹Aideyan, Osarenmwanta Daniel, ² Osayande, Iyobo Eric, Ph.D

WASTE MANAGERS' PERCEPTION ON BEHAVIOURAL CHALLENGES AND FACTORS INFLUENCING INDISCRIMINATE DISPOSAL OF WASTE BY RESIDENTS OF ILORIN METROPOLIS, KWARA STATE

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Abstract

The study investigated waste managers' perception on behavioural challenges and factors influencing indiscriminate disposal of waste by residents of Ilorin metropolis, Kwara state. Specifically, the study investigated the forms of behaviour of residents of Kwara State that contributes to indiscriminate disposal of waste and factors that influence the choice of waste disposal system they adopt. Two research questions were raised to guide the study. The population of the study comprises of all the waste managers in Kwara State. Two hundred respondents were selected using systematic sampling technique. An adopted questionnaire which sought for information based on the variables of the study was used in gathering information from the respondents. The reliability of the instrument was ascertained by administering twenty copies of the questionnaire to twenty respondents within the population and spilt-half method was adopted using PPMC to analyze the data obtained, a correlation coefficient of 0.68 was obtained. The questionnaires were administered by the researcher and two trained research assistants. The data collected was analyzed using frequency counts and simple percentages. The result revealed that some residents of Ilorin Metropolis in Kwara State exhibit poor behaviour towards waste disposal and they prefer to adopt methods that are convenient in disposing their waste without paying. Based on the findings of the study, It was concluded that behavioral challenges contributing to indiscriminate disposal of waste includes the unwillingness to walk long distances to dispose of waste;

addition of faecal waste alongside household waste; improper packaging of waste by residents; careless disposal of waste at waste collection or disposal points; refusal to pay for the collection of household waste; and the intentional disposal of waste in drainages. Based on the conclusions of the study, it was recommended that residents of Ilorin Metropolis, Kwara State should be health educated on the health and aesthetic implications of indiscriminate disposal of waste in the State.

Key words: Behavioural challenges, disposal, indiscriminate, Ilorin, waste, residents, Kwara.

Introduction

Waste according to United Nations Children Education Fund [UNICEF] (2006) is defined as organic and inorganic material produced by households, commercial and industrial establishments, which have no economic value to the owner. This was corroborated by Chukwuemeka, Ugwu and Igwegbe (2012) who stated that wastes are useless, unwanted and discarded materials. For an individual to be willing to get rid of something, such a thing must have no value or he/she no longer want to be in possession of the item.

Waste generation can be said to be as old as mankind itself because the daily activities of human beings generate waste in one way or the other. Waste could be from different sources which include domestic, industrial and hospitals. Disposal of waste has not been a significant problem in the past due to the vast area of land available, a relatively low population size and low level of industrialization. People could afford to dump their waste in nearby piece of land or adopt any other means of waste disposal with little or no significant effect on health or the environment (Yoada, Chirawurah & Adongo, 2014).

As population began to increase, humans explore and develop more areas of land to meet up their basic needs such as food and shelter. This increase in population and the rise in industrialization in turn increased the amount of waste generated which has to be disposed of through whatever means necessary. Waste management today is a

pressing challenge as it can be observed that heaps of waste lay in residential areas uncollected and this is not restricted to residential areas but can also be seen on road verges, roadside or in drainages and at waste collection points causing inconvenience, environmental pollution, and posing a public health risk in the environment. The more the population grows, the more goods that are consumed, and packaging, whether paper or plastic, becomes an important part of the waste stream usually referred to as garbage or trash (Vaughn, 2008).

Most of the times, domestic wastes consist of rotten food and garbage which produces foul stench in the environment and on some occasions, domestic waste is not just about food materials alone but some residents dump feces alongside with the household waste. When this waste lay down for a while uncollected, it begins to decompose and most likely attracts and breeds vermin such as rats and mosquitoes that are responsible for diseases such as lassa fever and malaria respectively (Tadesse, 2004). The burden of waste management is left to social workers who are meant to collect waste from various points of collection and dispose such waste in designated areas. When waste are not collected in time at various points, they are disposed continually at the spot in heaps and the onus of packing such waste is shifted onto social workers who now have to pack and collect the waste from such points. This is done at a period when the odour being emitted from such points are becoming unbearable (Solomon, 2011).

Timely collection of waste is a serious challenge which social workers face and which may be due to a number of reasons. When this is the case, the behaviour of the residents has its role in further worsening the situation (Fei-Baffoe, Nyankson & Gorkeh-Miah, (2014); McAllister, (2015) and Owusu, (2010)). Some people carry their waste to designated point and just turn their waste baskets upside down to dispose the waste on the ground when the dumpster in such location is filled to the brim. A commendable attitude would have been to pack the waste in nylon and tie it properly so that the waste won't be scattered all over the place.

Another major behavioral challenge could be the unwillingness to seek for other waste disposal points. Most of the time, residents who dispose their waste by using their vehicles to transport the waste to the nearest dumpster just drop the waste on the ground beside the dumpster if such a dumpster is filled with little regard for proper disposal. Afangideh, Joseph and Atu (2012) reported that most residents are ignorant of the dangers associated with indiscriminate disposal of waste to the extent that when dump sites are provided, they still neglect it and litter their refuse on the environment.

Municipal waste management problems in Nigeria cut across concerns for human health, air, water, and land pollution among others. The continuous indiscriminate disposal of municipal solid waste is accelerating and is linked to poverty, poor governance, urbanization, population growth, poor standards of living, and low level of environmental awareness and inadequate management of environmental knowledge (Abila & Kantola, 2013). Mamady (2016) affirmed that the major causes of improper management of solid waste are related to the lack of financial management and logistics and deficient municipal infrastructure.

In spite of all the efforts of the Government of Kwara State on waste control and management especially in Ilorin Metropolis, there appears to be a losing battle against the harmful consequences of unguided waste and the attainment of a clean healthy environment in the State. The researcher has observed that heaps of waste lying on road verges, roadsides and waste designated points is a common sight in Ilorin. With the efforts of the Government ranging from the declaration of every last Saturdays of the month for environmental sanitation to the enactment of sanitation laws (Local and National) to guide waste disposal and the creation of the Kwara State Environment Protection Agency (KWEPA) which oversees the activities of waste management, one will think that the problems of waste disposal and management should be solved but that is not the case. It is against the background that the researcher

seeks to study Waste Managers' Perception on Behavioural Challenges and Factors Influencing Indiscriminate Disposal of Waste by Residents of Ilorin Metropolis, Kwara State

Research Questions

In view of the foregoing, the following questions were raised to guide the study:

1. What are the behavioural challenges contributing to the indiscriminate disposal of waste in Ilorin Metropolis, Kwara State?
2. What are the factors that influence the behaviour of the residents of in Ilorin Metropolis, Kwara State in the adoption of a specific form of waste disposal?

Objectives of the Study

The objectives of this study are:

1. To find out the behavioural challenges that contribute to indiscriminate disposal of waste in Ilorin Metropolis, Kwara State
2. To find out the factors that influences the behaviour of residents of in Ilorin Metropolis, Kwara State in the adoption of a specific form of waste disposal.

Methodology

Descriptive survey research method was adopted for this study. According to Koul (2009), a descriptive research design provides a means through which opinions, attitudes, suggestions for improvement of educational practices and instructions can be obtained. The population of the study comprised of all waste managers (social workers) in Ilorin Metropolis. According to the Kwara State Environmental Protection Agency (KWEPA), waste managers in Kwara State are referred to as social workers and according to their record, there are two thousand (2, 000) social workers in Ilorin Metropolis (KWEPA, 2016).

A systematic sampling technique was used in selecting ten percent (10%) of the total population; therefore, 200 waste managers formed the sample for this study. This will be done by requesting for the register

containing the names of the waste managers and randomly selecting a name to start with and subsequently selecting every 10th name after the first name that was randomly selected until the desired number of sample is selected.

The instrument used for data collection was an adopted questionnaire which is meant to obtain the views of waste managers on the variables of the study. It is assumed that since the research instrument was adopted, the instrument is adjudged to be valid. To determine the reliability of the instrument, split-half reliability method was adopted. Twenty (20) questionnaires were administered to waste managers in Kwara State using a systematic sampling technique in the selection of the respondents. After the respondents completed the questionnaires, the questionnaires were collected, coded 1-20 and divided into even and odd numbers. A correlation coefficient of 0.68 was obtained which confirmed the instrument reliable for usage. Moreover, the instrument was administered by the researcher with the aid of two (2) trained research assistants. The data collected was sorted, coded and analyzed using descriptive statistics of frequency counts and percentages.

Results

RQ1: What are the behavioral challenges contributing to the indiscriminate disposal of waste in Ilorin Metropolis, Kwara State?

Table 1: Behavioral challenges contributing to indiscriminate disposal of waste in Ilorin Metropolis, Kwara State

S/N	ITEMS	SA	A	PR	D	SD	NR
	Behavioural challenges contributing to indiscriminate disposal of waste						
1.	Residents may not want to go to a relatively long distance before they are able to dispose their waste	127	36	163 (81.5%)	28	9	37 (18.5%)
2.	Residents do not just dump only domestic waste most times, they dump feecal waste as well.	56	108	164 (54%)	31	5	36 (46%)
3.	Sometimes the waste are poorly packaged	38	110	158 (74%)	41	1	42 (26%)
4.	Some people just scatter their waste on the ground when they get to public disposal points	73	96	169 (82.5%)	28	3	31 (17.5%)
5.	In some areas where door to door collection of waste is adopted, some residents do refuse to pay for the services.	123	67	190 (95%)	8	2	10 (5%)
6.	Some people portray a nonchalant attitude to waste disposal.	93	75	168 (84%)	18	14	32 (16%)
7.	Some people just throw their waste in nearby drainages	63	103	166 (83%)	25	9	34 (17%)

Research question 1 which investigated the behavioural challenges contributing to the indiscriminate disposal of waste in Ilorin Metropolis, Kwara State was answered using the table above. Table 1 revealed that residents may not want to go to a relatively long distance before they are able to dispose their waste (PR = 81.5% and NR = 18.5%). A critical analysis of the table revealed that residents do not just dump only domestic waste most times, they dump feecal waste as well (PR = 54%

and NR = 46%). The table also revealed that residents do not package their waste properly (PR = 74% and NR = 26%). A close look at the table also revealed that some people just scatter their waste on the ground when they get to public disposal point (PR = 82.5% and NR = 17.5%). The table further revealed that in some areas where door to door collection of waste is adopted, some residents do refuse to pay for the services (PR = 95% and NR = 5%). It can be observed from the table that some people portray a nonchalant attitude to waste disposal (PR = 84% and NR = 16%). Finally, it can be observed from table 1 that some people throw their waste in nearby drainages (PR = 83% and NR = 17%).

RQ2: What are the factors that influence the behaviour of the residents of Ilorin Metropolis, Kwara State in the adoption of a specific form of waste disposal?

Table 2: Factors influencing the behavior of residents of Ilorin Metropolis, Kwara State in the adoption of a specific form of waste disposal

	Factors that influence the behaviour of Resident towards the adoption of a specific form of waste disposal technique	SA	A	PR	D	SD	NR
8.	Change in weather condition will make people dump their waste in drainages	17	99	116 (58%)	83	1	84 (42%)
9.	Premonition of rainfall encourages people to dump their waste on the road and in drainages and water ways	49	68	117 (58.5%)	79	4	83 (41.5%)
10.	Distance to public dumpster can make people dump their waste illegally	100	35	135 (67.5%)	35	30	65 (32.5%)
11.	A dumpster that is filled with waste determines how well people will dispose their waste at such point	101	66	167 (83.5%)	20	10	33 (16.5%)
12.	People who drive by a dumpster are mostly lazy to come out of their cars thereby making them fling the waste at such points	51	74	125 (62.5%)	57	20	75 (37.5%)
13.	Some people do not want to be reprimanded for dropping their waste at a dumpster that is filled that is why they practice drive by dumping	72	83	155 (76.5%)	31	14	45 (23.5%)
14	Easy access to a bare parcel of long encourages people to dump their waste in such a place	82	57	139 (69.5%)	41	20	61 (30.5%)
15	When people observe that there are no visible activities going on in a particular site, they may make use of such opportunities to dump their waste	115	20	135 (67.5%)	39	26	65 (32.5%)
16	Open dumping is easy and stress free so many residents practice this form of waste disposal	126	37	163 (81.5%)	32	5	37 (18.5%)
17	People are not charged for open dumping therefore they are encouraged to dump their waste openly than to seek for public dumpsters	116	55	171 (85.5%)	16	13	29 (14.5%)

NOTE: SA- Strongly Agree, A- Agree, PR- Positive Response, D- Disagree, SD- Strongly Disagree, NR- Negative Response

From table 2 above, it can be observed that change in weather condition and the premonition of rainfall influence that behavior of residents in the adoption of drainage and waterways dumping (PR = 58%, NR = 42% and 58.5%, 41.5% respectively). The table also revealed that distance to public dumpster and filled dumpsters make people dump their waste illegally or determines how residents will their wastes at such point (PR = 67.5%, NR = 32.5% and 83.5%, 16.5% respectively). Table 2 above revealed that laziness of residents to come out of their vehicles at waste disposal points and the fear of being rebuked for dumping waste at overfilled dumpster points encourages them to fling their waste from their vehicles at such point (PR = 62.5%, NR = 37.5% and 76.5%, 23.5% respectively). The table further revealed that easy access to bare parcel of land and the absence of physical activities on land prompt residents to dispose their waste on such land (PR = 69.5%, NR = 30.5% and 67.5%, 32.5% respectively). Finally, table 2 revealed that the ease and absence of charges associated to the practice of open dumping is the reason why some residents practice this form of waste disposal (PR = 81.5%, NR = 18.5% and 85.5%, 14.5% respectively).

Discussion

Findings of research question one revealed that the behavioral challenges contributing to indiscriminate disposal of waste in Ilorin Metropolis, Kwara State includes the unwillingness to walk long distances to dispose of waste; addition of feacal waste alongside household waste; improper packaging of waste by residents; careless disposal of waste at waste collection or disposal points; refusal to pay for the collection of household waste; and the intentional disposal of waste in drainages. This finding is corroborated by that of Ngene (2015) who reported that residents of some streets walk long distances to where dumpsters are located while some lazy ones dump their waste indiscriminately in gutters and roads. The finding is also in line with the

finding of Ayanshola, Aremu, Jacob, Bilewu and Salami (2015) who reported that some residents do not package their waste properly before disposing it. This finding is also in line with Afangideh, Joseph and Atu (2012) who reported that most residents are ignorant of the dangers associated with indiscriminate disposal of waste to the extent that when dump sites are provided, they still neglect it and litter their refuse on the environment. The various behavior portrayed by residents which contradicts the ethics of waste disposal have made the collection and management of waste difficult in Ilorin Metropolis, Kwara State.

From the findings of research question 2, it can be observed that the factors that influence the behavior of residents in the adoption of different forms of waste disposal methods in Ilorin Metropolis, Kwara State includes weather condition; state of public dumpster; proximity to public dumpster, easy access to bare or uncompleted houses; and avoidance of payment for collection of waste from households. The finding is in line with that of Abila and Kantola (2013) who found out that continuous indiscriminate disposal of solid waste is linked to poverty, poor governance, urbanization, population growth, poor standards of living, and low level of environmental awareness and inadequate management of environmental knowledge. This was also corroborated by the findings of Mamady (2016) which affirmed that the major causes of improper management of solid waste are related to the lack of financial management and logistics and deficient municipal infrastructure. This finding contradicts the finding of Ezebilo (2011) who reported that urban residents pay for private waste management services thereby they do not contribute to indiscriminate disposal of waste.

Conclusion

Based on the findings of the study, it was concluded that:

1. Behavioral challenges contributing to indiscriminate disposal of waste in Ilorin Metropolis, Kwara State includes the unwillingness to walk long distances to dispose of waste; addition of feecal waste

alongside household waste; improper packaging of waste by residents; careless disposal of waste at waste collection or disposal points; refusal to pay for the collection of household waste; and the intentional disposal of waste in drainages.

2. Factors that influence the behavior of residents in the adoption of different forms of waste disposal methods in Ilorin Metropolis, Kwara State includes weather condition; state of public dumpster; proximity to public dumpster, easy access to bare or uncompleted houses; and avoidance of payment for collection of waste from households.

Recommendations

Based on the conclusion of the study, it was recommended that:

1. Residents of Ilorin Metropolis, Kwara State should be health educated on the health and aesthetic implications of indiscriminate disposal of waste.
2. Residents of Ilorin Metropolis, Kwara State should be educated on the necessity of adopting the provided forms of waste disposal and relevant stakeholders should endeavor to improve on the current state of waste management in the State.
3. Residents should be encouraged to shun the factors that influence their behaviour in the adoption of poor waste disposal practices such as weather condition, state of public dumpster, proximity to public dumpster and they should be admonished to adopt acceptable disposal practices.

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