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Critical Drivers and Consequences of Poor Facility Management in the Kumasi Metropolis of Ghana

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Abstract
Facilities require massive sums of financial resources to construct and maintain. Available statistics shows that facilities constitute about 80% of the financial resources of established organizations. It also provides an enclosed atmosphere within which organizations operate. However, despite the financial composition and the inextricable link between facilities and achievement of the goals of every organization, it is very unwelcomed that they are poorly managed in many institutions in Ghana. This paper sought to fill the knowledge gap by identifying and ranking the critical drivers and consequences of poor facility management in the Kumasi Metropolis. The study employed case study as a research design within quantitative research methodological paradigm and gathered primary data from 102 respondents comprising of hostel caretakers, facility managers and maintenance teams using questionnaires. It was established the all the 11 drivers and 9 consequences of poor facility management in the study were considered critical because they scored mean values above the conventional mean of 3.5. The study contributed to existing literature by ranking the drivers and consequences of poor facility management. It was consequently recommended among others that rent escalator clauses should be used to regulate indisciplinary conduct of facility users and that facility management should be made one of the top priorities of institutional management.
Keywords: Consequences, drivers, facilities, organizations, poor facility management

1. Introduction

Facilities comprising of buildings and services constitute a major financial composition of most organizations. It has been established that buildings and related services translate into about 80% of the fixed assets of most institutions (Kamarazaly, Mbachu & Phipps, 2013). Building and associated amenities provide the enclosed environment within which organizational activities are undertaken and represent the fixed landmark of the associated institution. The management of facilities in every organization is therefore essential for ensuring that buildings and services meet their performance requirement relating to technical adequacy, public safety, longer economic life, amenity and sustainability. Facilities management consequently is a critical component of overall organizational management needed to maximize profitability of associated investments and for sustaining the required performance of buildings and facilities (Kurdi, Jaffar, Azli, & Shuib, 2011). Facilities management also has the potential of increasing the expected economic lives of buildings (Kamarazaly, 2014), ensuring the safety of facility occupiers and users (Jusoff, Mustapa Syed, & Adnan, 2008) and also for sustaining the habitability of buildings in order to create a congenial atmosphere for successful organizational operations (Yusof et al, 2007).
The failure to manage facilities to the best of management practices has the tendency to allow buildings and facilities to fall into a state of disrepair. It should also be stressed that poorly managed facilities could lead to collapse of buildings constituting a major loss of financial commitments to organizations (Mavalankar, Ramani, Patel, & Sankar, 2005). Even when facilities fall into a state of disrepair or dilapidation, colossal sums of financial resources will have to be expended to renovate or rehabilitate the concerned buildings and services to a state for human habitation. The worst consequence of poorly managed facilities is loss of human lives due to collapse or other disasters (Yusof et al, 2007). It has been noted that poorly managed facilities generate 'death traps' and recipes for disasters in the form of fire outbreaks, financial loss and abandonment of expensive buildings and facilities. Also, there appear to be abandoned properties or buildings due for renovation or in a state of dilapidation in every institution established for more than 5 years in Ghana by observation. The drivers of such undesirable state of facilities management deserve the attention of researchers. This is because when these drivers are identified and dealt with appropriately, properties will be in safe conditions to support the achievement of organizational objectives and priorities. This has the highest potential of ensuring sustainable facilities economic life span. Again, the effects of poor facilities management are far too serious to be ignored.

Whiles previous studies like Yusof et al (2007) and Jusoff et al (2008) contended that poor facilities management could be traced to poor maintenance culture among facilities managers, this study contends that there are far many drivers of poor facilities management than just poor maintenance culture. There is therefore paucity and dearth of information regarding the causes and effects of poor facilities management in Ghana. One can be tempted to conclude that the causes and effects of facilities management are easily identified but even so,

it is far impossible to guess the critical causes and effects of poor facilities management. The purpose of this study is to identify and rank the critical drivers and consequences of poor facilities management in the Kumasi Metropolis of Ghana. The rest of the paper is organized as follows: section two constitutes the review of relevant literature relating to drivers and consequences of poor facilities management and the development of conceptual framework. Section three details the research methods and materials for the study; section four presents the results and discussions of the data and finally, followed by conclusion and recommendations.

2. Poor Facilities Management and Conceptual Framework

This section of the paper presents the review of relevant literature relating to poor facilities management and the development of conceptual framework. The literature review is to justify the relevance of the study and to be able to situate the study within the wider body of knowledge or literature in the facilities management spectrum. The development of the conceptual framework for the study is to summarize the existing findings into a structure to orientate the direction of the study.

2.1 Drivers and Consequences of Poor Facilities Management

Facilities consisting of buildings and services are said to be poorly managed if they lack sufficient care to function at a standard considered comfortable or normal, and is mostly characterized by defaced walls, gross maintenance defects, defective building services and poor condition of buildings and services (Wuni, 2016). The poor standard of facilities performance requirements are driven by a number of factors and results in myriads of undesirable consequences.

It has been contended that poor facility management is likely to occur when general organizational management places little priority on facility management (Jusoff et al, 2008). The study revealed that most institutions do not find facility management as an integral part of their organizations and do not take enough proactive measures to anticipate and to address facility management needs before they compound into major maintenance defects (Wuni, 2016). Similarly, Yusof et al (2007) established that low prioritization of facility management by institutions is a driver of poor facility management and such attitude exist because of the inability of management to appreciate the importance of facility management to the overall organizational performance. Also, Waziri (2016) identified that poor facility management could be traced to the low prioritization of facility management in the capital budgeting and financial planning of institutions and uncovered that many institutions do not have funds earmarked for facility maintenance. Blair (2004) described this attitude as poor facility management planning and budgeting. It was earlier established by Hinks (2004) that most organizations have their emphasis on the management of the human resources (workers and staff) to the neglect of the buildings and services and thus, view facility management as responsive, discretionary and deferrable (Tammo & Nelson, 2012). Therefore, no proactive facility management planning precedes maintenance of the facilities.

It has been reported by Hamid, Alexander, & Baldry (2007) that lack of professional facility managers in many organizations results in the tendency of facilities being poorly managed. Facility managers who are trained to undertake proactive approaches in the management of facilities are indispensable for every organization since facilities require technical expertise to properly manage them; the absence of the professional facility managers translates into the poor management of facilities in most organizations. Jusoff et al (2008) opined that the insufficiency or lack of facility managers in many organizations is largely because facility management is a new discipline in most developing countries. In the contrary, this is not completely logical because there are disciplines in many developing countries including Ghana which are well developed and have become established and yet people do not patronize their services. It is therefore a matter of priorities and the technical expertise of facility managers or the maintenance teams and not necessarily the newness of the discipline. Similarly, Wuni (2016) re-echoed that lack of individuals with the requisite technical knowledge and expertise in facility management accounts for poor facility management in Ghana.

Also, Yusof et al (2008) indicated that poor facility management is driven by the unavailability of sufficient funds and human resources to undertake proper and timely facility management. The researchers established that most institutions do not have enough financial resources to hire facility managers to oversee maintenance and facility management. This is only true to an extent but can be misleading because when buildings are properly designed and constructed, it takes a collection of several minor maintenance defects to generate a bigger maintenance requirement, which might then be beyond the financial capability of most institutions (Hamid et al., 2007). It should also be noted that institutions that do not have enough funds to hire an in-house facility manager can opt for outsourcing of the facility manager; who can be commissioned to undertake routine checks and preventative maintenance schedules to avoid potential major defects. Yet, the outsourcings have been argued to be expensive and sometimes unattainable by less established institutions (Adejimi, 2005). Wuni (2016) also reported similar findings in Ghana to that of Yusof et al (2008) that budgetary restrictions on maintenance as a result of insufficient financial resources among public institutions also accounts for poor facility management.

Poor building design and construction of facilities has also been reported to be a recipe for poor facility management (Waziri, 2016). His study claimed that poor design exposes buildings and services to unwarranted needs for maintenance and the failure to timely respond to such defects could translates into poor building and service performance requirement. The effect of this is particularly pervasive in very arid and cold climatic regions in the world (Worsworth, 2000). This has been confirmed by Wuni (2016) when his study in the northern part of Ghana found that poor design of buildings as against the harsh weather conditions was responsible for the excessive demand for maintenance of buildings and services. Alike, an earlier study by Adejimi (2005) in Nigeria reported that poor design and constructions of buildings without prior anticipation of maintenance requirements exposes facilities to frequent faults and damages. Therefore, when these faults and damages persist without timely corrections, facilities fall into a state of disrepair, as a sign of poor facility management. Similarly, a post-occupancy facilities survey by (Hamid et al., 2007) revealed that poor facility management could be traced to the failure of management to incorporate maintenance and facility management into the design and construction of facilities.

It was reported by Wuni (2016) that the non-involvement of facility managers or maintenance teams at the building design and construction stages is also a recipe for poor facility management. The researcher noticed that some organizations will construct their facilities before hiring a facility manager to oversee the management of the associated facilities and sometimes without accompanying maintenance and facility management guides. The product of this attitude is that individual manages facilities they barely know and this translates into ineffective facility management. Similarly, Waziri (2016) established that when facility managers are commissioned to oversee the management of facilities with complex services without prior involvement in their design and constructions, they might find it very difficult to manage such facilities. Also, Jusoff et al (2008) that the non-involvement of facility managers at the design stage would also cause poor facility management, if the concerned facility manager has no specialized knowledge and skills in building design and construction. This is also applicable in Ghana because it is a conventional practice to complete the construction of facilities before contracting facility managers to oversee building performance requirements. It was however rather contended by Yusof et al (2007) that the poor facility management is a product of poor supervision of facility manager during and after the construction of buildings and services.

A study by Hamid et al (2007) in the United Kingdom revealed that one major cause of poor facility management is poor maintenance culture characterized by the attitude of deferred maintenance. The researchers found that most higher educational institutions have the attitude of postponing maintenance defects especially when such needs appears little and in no time, the smaller maintenance needs develop into major repair and renovation requirements. The inability to respond timely to the maintenance requirement of the buildings and services translates into the poor state of facilities. This has been corroborated and validated by Kaiser (2007) and Waziri (2016) who all found the attitude of deferred maintenance to be a driver of poor facility management. It has also been reported by Mavalankar et al (2005) and Kurdi et al. (2011) that gross indisciplinary conduct of facility users is a driver of poor facility management in public institutions. The researchers found that some facility users by virtue of their non-ownership of the concerned buildings and facilities show apathy to the facilities in their utilization. Consequently, they do not exercise proper care in the usage of services provided in the buildings and gradually cause a deterioration of some sections of the facilities. When these are not identified and corrected timely by the facility managers, poor facility performance requirements is to be expected (Kamarazaly et al., 2013; Wuni, 2016).

A number of consequences are generated when facilities are poorly managed. There is the existence of previous studies which did not directly examine effects of poor facility management but focused on some facets of facility management like maintenance and brought to fore a plethora of penalties that organizations pay for the attitude of poor facility management. It was reported that poor facility management leads to loss of financial resources (Jusoff et al, 2008). The researchers recounted that the constructions of buildings require huge sums of money and when such buildings are poorly managed, it engenders a negative financial effect on the concerned institutions (Hamid et al., 2007). Besides, when facilities are poorly managed and they fall into a state of disrepair and dilapidation, massive sums of financial resources will have to be used to rehabilitate the buildings into an acceptable standard for habitation (Yusof et al, 2007; Waziri, 2016). Similarly, Kamarazaly et al (2013) established that poor facility management has a negative financial effect on organizations. Alike, Kamarazaly (2014) noted that poor facility management generates financial erosion because there are some buildings; the money that is required to renovate them is capable of putting up a new similar improvement.

It was also identified that poor facility management accounts for the malfunctioning and abandonment of buildings in most developing countries (Waziri, 2016). The researcher opined that when services are not given routine checks and refurbishment, they can easily become malfunctioned and when the deterioration of buildings goes beyond rehabilitation, such buildings are abandoned. Equally, Wuni (2016) corroborated that poor facility management is a recipe for the abandonment of buildings in nearly all public institutions in Ghana. Moreover, it has been established that the derelict state of poorly managed facilities present threats to the safety and health of

the facility users or occupiers (Hamid et al., 2007). Similarly, it has been testified that poor facility management could lead to the collapse of buildings with the attendant penalties of loss of lives of the inhabitants (Kamarazaly, 2014). Concrete examples of collapse of buildings due to poor facility management leading to loss of lives include 'the collapse of the Melcom building on 7th November, 2012 (also known as the Melcom Disaster) and the collapse of a dormitory in Yaa Asantewaa Girls Senior High School inter alia in Ghana, which led to the loss of several precious lives' (Wuni, 2016).

Studies by Blair (2004) and Waziri (2016) indicated that poor facility management is a recipe for nearly all building disasters and also result in the reduction of the economic lives of buildings. The researchers established that when facilities are poorly managed, it provides chances for disasters like fire outbreaks, collapse of buildings and disease outbreak to take place. They also established that the economic lives of buildings depends on the quality of building design, construction materials, weather elements and the quality of facility management, of which the latter is more peculiar because it dominates the post-construction stage of buildings and services. Similarly, Hamid et al (2007)) reported that poor facility management breeds building deficiencies, an eventual reduction in the economic lives of buildings. Jusoff et al (2008) and Kamarazaly et al (2013) also established that aside reduction of economic lives of buildings, poor facility management leads to poor building outlook. Therefore, the poor appearances and exteriors of buildings in many organizations is mostly a manifestation of poor facility management (Wuni, 2016).

2.2 Conceptual Framework of Poor Facilities Management

This section presents the conceptual framework of the study. The review of the literature on the drivers and consequences of poor facility management unravelled a number of variables worthy of consideration in the study. This study theorizes that the major drivers of poor facility management in Ghana includes poor maintenance culture and the attitude of deferred maintenance; low prioritization of facility management in the financial planning and capital budgeting of institutions; poor designs of buildings as against the physical conditions of the area; gross indiscipline of facility users; lack of qualified and professional facility managers; budgetary restrictions on maintenance expenditure and the non-involvement of facility managers at the building design and construction stages. It should be reiterated that these might not be the only major causes of poor facility management in Ghana; nonetheless, they contribute to the poor state of facility management in Ghana (Wuni, 2016). **Figure 2.1** below is the conceptual framework of poor facility management in Ghana. From the conceptual framework below, it can be seen that seven factors accounts for poor facility management in Ghana and the consequences of the poor facility management manifest in the form of recipe for building disasters such as fire outbreak, collapse of buildings and spread of communicable diseases; poor appearances and exterior outlook of facilities; malfunctioning and abandonment of facilities; reduction of the economic lives of buildings; loss of financial resources; and threats to health and safety of building users and occupiers. It should be asseverated that these might not constitute the only effects of poor facility management but they are certainly some of the consequences of poor facility management in Ghana. The conceptual framework above shall guide the data collection in the proceeding section of the study.

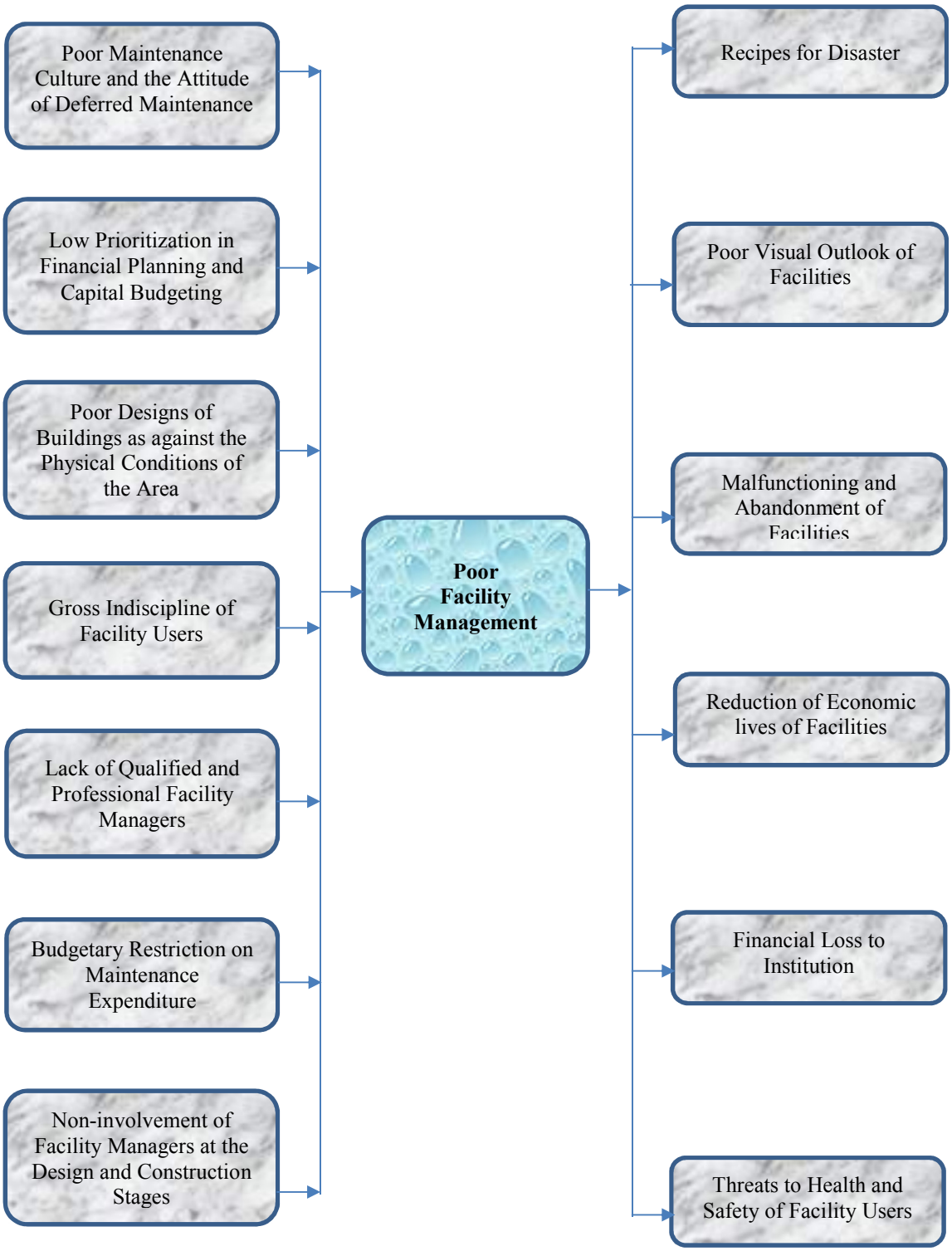

Figure 2.1: Conceptual Framework of Poor Facility Management
Source: Authors' Construct 2017

3. Research Methods and Materials

This section of the paper presents the research methods and materials that were employed to investigate the critical drivers and consequences of poor facilities management in the Kumasi Metropolis of Ghana. The study employed a case study research design within a quantitative research methodological paradigm to scrutinize the research problem. Since facility management is a real life activity, it is instructive to examine critical questions from a real life social continuum and substantiated by empirical evidence (Creswell, 2009). Consequently, this made the case study research design very appropriate for the study. The study relied on both primary data and

secondary information for the entire research process. The primary data consisted of the responses that were gathered from the respondents in this study. The secondary information for the study consisted of the literature from the scholarly journal articles, research papers, thesis, and policy documents reviewed for the study. The secondary information was largely used to ascertain the existing findings on the drivers and consequences of poor facilities management. The drivers and consequences of poor facility management from the literature were ranked by respondents comprising of hostel caretakers, facility managers and maintenance teams from private and public institutions in the Kumasi Metropolis of Ghana. These categories of respondents were the targeted for the study because they were deemed appropriate to respond to the questions due to their experience and knowledge of facilities management; situating them in the appropriate position to be able to rank the drivers and consequences of poor facilities management and to suggest ways of improving the situation. Whiles it was difficult to get the total number of all the targeted respondents in the Kumasi Metropolis, the researchers targeted 150 respondents from different locations in the Metropolis. The sample size was regarded sufficient for the study and accordingly, the respondents were selected for the study based on suitability, proximity and easy access. The study employed the purposive sampling technique in selecting the sample size. However, prior questions confirming their involvement in the facilities management was undertaken to be sure that the right respondents were being contacted. Drawing on the established drivers and consequences of poor facilities management in the literature, an exploratory survey using informal interviews was undertaken prior to the actual data collection to confirm the practical applicability of the drivers and consequences of the poor facilities management. A total of 5 facilities managers were taken through the exploratory study. The final data collection was undertaken using questionnaires. By convention, those who were selected for the exploratory survey (Pilot Survey) were not included in the actual data collection. The data was collected between March, 2017 and May, 2017. The two months period was considered long enough for the respondents to carefully rank the variables.

The total of 150 questionnaires which included both close and open ended questions was grouped into four sections (Section A to D). The Section A solicited demographic data of the respondents using objective test. Section B solicited information on the causes of poor facilities management and required the respondents to rank the variables on a five point Likert scale of 5-very critical, 4-critical, 3-normal, 2-not critical and 1-not very critical. In section C, information was solicited on the effects of poor facilities management which required the respondents to rank the variables on five point scale of 5-very critical, 4-critical, 3-normal, 2-not critical and 1-not very critical. Lastly, section D which comprised of open ended questions solicited information on ways of addressing poor facilities management. Spaces were provided for them to make suggestions they deemed fit to respond to the causes of the poor facilities management. The questionnaires were personally given to the respondents and were later contacted for responses. The respondents were reminded they had enough time to respond to the questions and so opportunity was provided to even amend mistakes in their responses. It should be reiterated that the quality of results with Likert scales depends largely on the range of attributes given to the scale and clarity with which the respondents interpret them. Considering the classes of respondents that were selected for the study, it is expected that they had enough experience to respond appropriately to the questions. The responses from the questionnaire were entered into the Statistical Package for the Social Sciences (IBM SPSS 20) now known as the Predictive Analytics SoftWare (PASW) for analysis. The scaled questions were analyzed into a form scale ranking (mean score analysis) using one-sample t-test presented reported in tabular forms with ranks. The bio-statistics of the respondents comprising of the demographic features, facility locations and category of facilities were reported using frequency distribution tables. The study also reported reliability statistics of the scaled responses in a tabular form using the Cronbach's Alpha and the suggestions given in section D was taken through content analysis.

4. Results and Discussions

This section presents the results and discussion of the data that was gathered to answer the research questions. Of a total of 150 questionnaires that were administered, 102 of them were received from the respondents, representing a response rate of 68%. It was considered enough for the study because the response rate exceeded 50% of the total number of questionnaires administered. This section has four sub-sections comprising of the bio-statistics of the respondents, reliability statistics of the responses using the Cronbach's Alpha, critical drivers of poor facility management and critical consequences of poor facility management using one sample t-test.

4.1 Bio-Statistics of the Respondents

The study gathered data on the demographic characteristics of respondents comprising of hostel caretakers, facility managers and maintenance teams. The demographic data was necessary to ascertain the scope of the respondents and how wide different opinions were factored into the study. The demographic data for the study included the gender, age and educational status of the respondents. Data was also collected on the location of the facilities and category of properties being managed. A summary of the various demographic data are presented below:

Table 4.1: Bio-Statistics of Respondents

Gender	**No. of Respondents (N=102)**	**% of Respondents (N=100%)**
Male	70	68.6
Female	42	31.4
Age (years)	**No. of Respondents (N=102)**	**% of Respondents (N=100%)**
16-25	4	3.9
26-35	20	19.6
36-45	64	62.8
46 and Above	14	13.7
Location	**No. of Respondents (N=102)**	**% of Respondents (N=100%)**
Asokwa Sub-Metro	10	9.8
Bantama Sub Metro	11	10.8
Kwaadaso Sub-Metro	12	11.8
Manhyia Sub- Metro	8	7.8
Nhyiayeso Sub-Metro	11	10.8
Oforikrom Sub-Metro	8	7.8
Suame Sub- Metro	6	5.9
Subin Sub-Metro	9	8.8
Tafo Sub- Metro	12	11.8
KNUST Community	15	14.7
Category of Property	**No. of Respondents (N=102)**	**% of Respondents (N=100%)**
Public	40	39.2
Private	62	60.8
Educational Status	**No. of Respondents (N=102)**	**% of Respondents (N=100%)**
No Formal Education	12	11.8
Basic Education	34	33.3
Secondary Education	35	34.3
Tertiary	7	6.9
Degree and More	14	13.7

Source: Field Survey, 2017

From the table above, it can be noticed that there were more male respondents 70(68.6%) than the female respondents 42(31.4%). This was expected because the design, construction and management of buildings in Ghana tend to be dominated by men. The reasons for this skewed attitude are not established in this study. However, the inclusion of both male and female respondents in the study allowed for the views of the gender differentiations to be captured. It was also realized that majority of the respondents were between 36 and 45 years 64(62.8%) and the least of them were in the age bracket of 16-25 years 4(3.9%). The youth comprising of 35years and below therefore constituted 24(23.5%) of the total respondents, indicating that facility management in the Kumasi Metropolis is dominated by Adults comprising of 36 years and above. Also, it can be seen from the table above that the study was able to capture the views of the different age brackets. Regarding spatial and geographical coverage, the study captured views from across all the nine sub-metros in the Kumasi Metropolis and the Kwame Nkrumah University of Science and Technology; which is a hub of hostel facilities in the region. Opinions from around the entire Metropolis were captured under **location** in table 4.1. The study also assimilated views of respondents from both public 40(39.2%) and private 62(60.8%) facilities in the Metropolis. It can therefore be said that the opinions netted in this study have both private and public facility management components. It was also realized that only 12(11.8%) of the facility managers or hostel caretakers had no formal education. This was amazing because facility management requires prior knowledge of maintenance inspection and report writing as well statements of financial transaction relating to facility repairs among others and it is expected that to be a facility manager, one should be able to read and write. It was also found out that 92(88.2%) of the respondents had at least basic education comprising of primary and junior secondary school education. However, majority of the respondents had secondary education 35(34.3%) and the least of them had tertiary education 7(6.9%).

4.2 Reliability Statistics of the Responses using Cronbach's Alpha

It was necessary to measure the internal consistency in the responses that were given to each of the variables under the study. The study therefore used the Cronbach's Alpha to ascertain the degree of reliability of the responses. From the **table 4.2** below, the Alpha coefficient of the 11 variables comprising of the drivers of poor facility was 0.843 and that of 9 consequences of poor facility management was 0.779. By convention, a Cronbach's Alpha of 0.7 and above indicates a significant correlation within the responses in the data set and therefore, it can said that the internal consistency of responses relating to the drivers and consequences of poor

facility management in the study was reliable in the context of the sample size. The implication is that the appropriate calibre of respondents replied to the questionnaire during the data collection process and also provided further evidence that the respondents had the appropriate knowledge, experience and expertise in answering the questionnaires.

Table 4.2: Reliability Statistics of Responses

Variables	Cronbach's Alpha	No. of Items
Drivers of Poor Facility Management	0.843	11
Consequences of Poor Facility Management	0.779	9

Source: Authors' construct 2017

4.3 Critical Drivers of Poor Facilities Management

One of the objectives of study was to identify and rank the drivers of poor facility management in the Kumasi Metropolis after the drivers have been identified from the literature and confirmed by the respondents. The respondents ranked the drivers of poor facility management on a five point Likert scale of 5-**very critical**, 4-**critical**, 3-**normal**, 2-**not critical** and 1-**not very critical**. As a result, a driver was said to be critical if it scored a mean above a conventional mean of 3.5. This is because a mean score of 3.5 is the midway between normal and critical on the 5-point Likert scale and any score above 3.5 is closer to 4(critical) than 3(normal) on the scale. The table below is a mean score analysis of the drivers of poor facility management using one sample t-test.

Table 4.3: Critical Drivers of Poor Facility Management

Driver(s)	N	Mean	Std. Deviation	Std. Error Mean	Rank
Deferred Maintenance	102	4.1765	1.17239	.11608	4th
Insufficient property knowledge	102	4.3137	1.07151	.10609	2nd
Insufficient funds and resources	102	3.9706	.88391	.08752	9th
Budgetary restrictions	102	4.5686	.83855	.08303	1st
Lower priority in capital budgeting	102	4.1078	.91095	.09020	6th
Non-Involvement at Building Design Stage	102	3.9216	1.19972	.11879	10th
Gross Indiscipline among the users of the facilities	102	4.1176	1.05581	.10454	5th
Bureaucracy in the process of getting funds from the central government	102	3.8137	.87575	.08671	11th
Poor designs of buildings as against the physical conditions of the area	102	4.0098	.94915	.09398	8th
Use of inappropriate materials	102	4.0588	1.10645	.10955	7th
Lack of qualified facility managers	102	4.1863	1.01211	.10021	3rd

Source: Authors' Construct 2017

From the table above, it was realized that all drivers of poor facility management were regarded by the collective respondents as at least critical since all the variables scored mean values above the conventional mean of 3.5. However, based on the mean score ranking, budgetary restrictions was ranked 1st as a driver of poor facility management with a mean score of 4.5686. The mean score is closer to 5(very critical) than it is closer to 4(critical). Therefore, the respondents collectively indicated that placing a limit on how much to spend on expenditure is a very critical driver of poor facility management. Any budgetary restriction on maintenance is designed to regulate excessive spending by management on facility management but when the amounts are not carefully planned, it might not be sufficient to allow for effective facility management and this is more dominant in the public institutions (Wuni, 2016). This is in line with Yusof et al (2008) who indicated that poor facility management is driven by the unavailability of sufficient funds and human resources to undertake proper and timely facility management in public institutions. It was also realized that insufficient property knowledge among hostel caretakers, facility managers or maintenance team was a critical driver of poor facility manager and was ranked 2nd with a mean score of 4.3137. Apparently, facility management can be such a complex occupation and require special training to be able to effectively discharge the associated responsibilities. Therefore, it is expected that if an individual is employed to manage facilities and he has insufficient facility management knowledge, the facilities will certainly be poorly managed. This finding is corroborated by Wuni (2016) who also established that insufficient knowledge of facility management could generate poor facility management. Also, lack of qualified facility managers was ranked 3rd as a driver of poor facility management with a mean score of 4.1863. Actually, it is interesting because even the respondents who are not privy to the information regarding the availability of facility managers in the Kumasi Metropolis, ranked lack of qualified facility managers to be a critical driver of poor facility management. Similarly, Hamid et al (2007) and Jusoff et al (2008) reported the same as a driver of poor facility manager. It was also recognized that the attitude of deferred maintenance or poor maintenance culture was a critical driver of poor facility management and ranked 4th with a mean score of 4.1765. This has also been established by (Hamid et al., 2007). It was also noticed that

gross indiscipline among users of the facilities scored a mean of 4.1176 and was ranked 5th as a critical driver of poor facility management. Also, low prioritization of facility management in the financial planning and capital budgeting on institutions was ranked 6th as a driver of poor facility management with a mean score of 4.1078. The respondents also indicated that the use of inappropriate construction material accounted for poor facility management and ranked it 7th with a mean score of 4.0588. The 8th critical driver of poor facility management is poor designs of buildings as against the physical conditions of the area with a mean score of 4.0098. It was however intriguing that insufficient funds and resources was ranked 9th with a mean score of 3.9706. This is because insufficient financial resources is more linked and connected to budgetary restrictions in a way and was ranked far away from budgetary restriction as a driver of poor facility management. It was noticed that the last two critical drivers of poor facility management included non-involvement of facility managers at the building design and construction stages and bureaucracy in the process of getting funds from the central government; ranked 10th with a mean score of 3.9216 and 11th with a mean score of 3.8137. The latter driver was more evident in the public institutions of Ghana where maintenance expenditure is being provided and synchronized by the central government; who also regulates the amount to be spent on facility management (Wuni, 2016)

4.4 Critical Consequences of Poor Facilities Management

The nucleus of the study was to identify and rank the drivers and consequences of poor facility management. After examining the drivers of poor facility management in table 4.3, it was vital to proceed with the evaluation of the consequences of poor facility management. After the drivers have been identified from the literature and confirmed by the respondents. The respondents ranked consequences of poor facility management on a five point Likert scale of 5-**very critical**, 4-**critical**, 3-**normal**, 2-**not critical** and 1-**not very critical**. As a result, a driver was said to be critical if it scored a mean mark above a conventional mean of 3.5. This is because a mean score of 3.5 is the midway between normal and critical on the 5-point Likert scale and any score above 3.5 is closer to 4(critical) than 3(normal) on the scale. The table below is a mean score analysis of the consequences of poor facility management using one sample t-test.

Table 4.4: Critical Consequences of Poor Facility Management

Consequence(s)	N	Mean	Std. Deviation	Std. Error Mean	Rank
Loss of Financial Resources	102	4.1961	.75831	.07508	3rd
Pressure on future financial budgets	102	4.3725	.86656	.08580	2nd
Recipes for disasters	102	3.9712	.90604	.08971	5th
Increased health and safety hazards	102	4.4020	.73471	.07275	1st
Building deficiencies and short economic lives of buildings	102	3.9706	.76373	.07562	6th
Exorbitant future maintenance expense	102	3.9118	.69086	.06841	8th
Malfunctioning and abandonment of buildings	102	4.0588	.99328	.09835	4th
Gloomed visual outlook and aesthetic impressions	102	3.9510	.99879	.09889	7th
Poor quality of services to the users	102	3.7451	.80452	.07966	9th

Source: Author's Construct 2017

From the table above, it can be seen that all the consequences of the poor facility management scored means above the conventional average of 3.5 and accordingly, all of them were regarded as at least critical from the collective perspective of all the respondents. The consequences however were ranked from one to nine, starting from one with the highest mean (scoring 1st) to one with lowest mean (scoring 9th). It can be seen that the respondents indicated that poor facility management had the consequence of increasing the health and safety hazards of facility users and ranked it 1st with a mean score of 4.4020. This has also been reported by Hamid et al (2007) and Wuni (2016). The mean score is however closer to 4(critical) than it is to 5(very critical) on the scale. Therefore, it can only be said that increased health and safety hazards is a critical (not **very** critical) consequence of poor facility management. The respondents also indicated that poor facility management could lead to pressure on financial budgets and ranked it 2nd with a mean score of 4.3725. This is because when facilities are poorly managed and they fall into a state of dilapidations, management might have earmark massive sums of funds to rehabilitate the facilities in question or opt to construct new buildings and will have to allocate money in the budget therefrom to address the facility management defect and this tend to put so much pressure on the financial resource of the associated institution largely because it can be expensive to correct some maintenance defects in facilities. Hamid et al (2007) and Waziri (2016) also reported this in their studies. Loss and waste of financial resources was also ranked 3rd as a consequence of poor facility management with a mean score of 4.1961. This happens when facilities that took so much to be constructed become malfunctioned and abandoned because of the potential threats to human lives. This certainly constitutes a waste or loss of financial resources to the concerned institution. Wuni (2016) also corroborated this in his study in the northern region of Ghana. Also, the respondents ranked malfunctioning and abandonment of services and buildings respectively as

a critical consequence of poor facility management and was ranked 4th with a mean score of 4.0588. Wuni (2016) validated that poor facility management is one the major reasons why facilities are abandoned in Ghana. The respondents also indicated that poor facility management could constitute a recipe for building disasters and ranked it 5th with a mean score of 3.9712. This is line with the findings of Hamid et al (2007) and Jusoff et al (2008). It can also be seen from the table above that poor facility management can lead to building deficiencies and shorter economic lives of buildings (as reported by Hamid et al (2007) and Wuni (2016) in their studies) and was ranked 6th with a mean score of 3.9706. The respondents ranked gloomed visual and exterior outlook of facilities 7th as a consequence of poor facility management with a mean score of 3.9510. The 8th and 9th consequences of poor facility management were respectively exorbitant future maintenance expenditure (with a mean score of 3.9118) and poor quality of services to facility users (with a mean score of 3.7451). The last three consequences have been reported previously by Wuni (2016), Hamid et al (2007) and Kamarazaly et al (2013).

5. Conclusion and Recommendations

This section of the paper presents the appropriate conclusion from the study guided by the findings and the tentative recommendation therefrom. The conclusion reflects the evidences from both the drivers and consequences of the poor facility management without the introduction of new elements aside the available evidence presented above.

5.1 Conclusion

The paper endeavoured to examine poor facility management in the Kumasi Metropolis of Ghana and to identify and rank the critical drivers and consequences of poor facility management from the opinions of facility managers, hostel caretakers and maintenance teams. From the foregoing discussions, it can be concluded that all the drivers of poor facility management in the study are at least critical because the variables scored mean values above the conventional mean of 3.5 but the five topmost drivers included budgetary restrictions (ranked no. 1); insufficient property knowledge (ranked no. 2); lack of qualified facility managers (ranked no.3); deferred Maintenance (ranked no.4) and gross Indiscipline among the users of the facilities (ranked no.5). It can also be concluded that all the consequences examined in the study are also critical because all of them were scored means above a conventional mean of 3.5 by the respondents but the five topmost consequences included increased health and safety hazards (ranked no. 1); pressure on future financial budgets (ranked no. 2); loss of financial resources (ranked no.3); malfunctioning and abandonment of buildings (ranked no.4) and recipes for disasters (ranked no.5).

5.2 Recommendation

Directed by the findings from the study relating to the critical drivers or consequences of poor facility management and suggestions of the respondents, the study proposes the following tentative recommendations and policy options to improve the practice of facility management in Ghana and beyond.

- It is recommended that all organizations should make enough funds available for facility management. Some of the funds could come from other sources even if there are budgetary restrictions on maintenance expenditure. The amount will have to be guided by facility management planning to be able to anticipate the future need of preventive and corrective maintenance of the facilities.
- Since it might be expensive to employ full-time facility managers for institutions with smaller facilities portfolio or little financial capacities, the institutions should endeavour to expose the individual(s) already employed to act as facility managers to basic practices to be able to effectively manage the facilities. They should be sponsored to go for career advancement in facility management or to attend available short courses in the practice.
- It is recommended that if institutions with large facility portfolios have the financial capacity, they should locate and employ qualified facility managers to be able to deliver the management process effectively. Alternatively, institutions can also contract outsourced facility managers to routinely check for maintenance defects for timely corrections.
- Facility management especially maintenance should be made one of the top priority areas of all institutions more especially, those of wider facility portfolios. Facility management should therefore be given a major consideration in the financial planning and capital budgeting of the institutions. Consequently, the attitude of deferred maintenance or poor maintenance culture should be avoided. Arrangement must therefore be made to respond timely to maintenance defects soonest before they develop into major renovation and repair works.
- Measures to regulate the conduct of facilities users toward buildings should be engineered and implemented to the letter. For institutions where rents are not paid for the use of buildings, facility users should be made to pay facility damage fees commensurate with the amount required to right (the waste or) their wrong conduct, but for institutions where facility occupiers pay rent, there should be rent

escalator clauses in the tenancy agreements where maintenance expenditure beyond a specified amount generated from a waste by the tenant, will be borne by the tenants. If enforced with due diligence, it will regulate the indiscipline in the use of facilities.

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