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**Care Strategies of Linen and Guest Satisfaction
among Hotels in Upper East Region of Ghana**

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Care Strategies of Linen and Guest Satisfaction among Hotels in Upper East Region of Ghana

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Abstract

Purpose: The care of linen is paramount in hotel operations for its sustainability. The study sought to investigate linen care strategies in some selected star-category hotels in the Upper East Region of Ghana. The objectives of the study were to examine the strategies used in the care of linen and their effect on guest satisfaction and to test if a relationship exists between them.

Materials and Methods: The study employed descriptive survey design by the use of quantitative and qualitative approaches. Through purposive sampling, a sample size of 52 hotel employees was selected from 24 star-rated hotels. Structured questionnaire and observations were used to collect data. Statistical Package for Social Sciences (SPSS) version 26 was used for the data analysis. Means and standard deviations were used for the descriptive statistics. Multiple linear regression was employed for the inferential statistics. The hypothesis was tested at a 5% significance level. Thus, data were presented in tables and text for both descriptive and inferential statistics.

Findings: The study findings were that hotels operated On-premise laundry systems. Outsourcing of linen from commercial service providers was absent. Linen inventory control was done through stock-taking and record-keeping. Hotels followed the laundry processes (sorting dirty clothes, putting dirty apparel in a machine or hand wash, applying detergent, drying the washed articles on the line or in a tumble dryer, ironing, folding and storage of laundered articles) but were not diligent with the manufacturer's instructions. The linen reuse programme was mostly not through designed cards. Available laundry tools/equipment were laundry bins, washing machines/extractors, washing basins, drying lines, ironing boards and irons. Tools/equipment not available were tables/shelves for sorting linen, tumbler dryers, calendaring machines, industrial steam irons and a laundry folder. Linen care strategies had a significant effect on guest satisfaction ($R = 0.671$, $R^2 = 0.451$, $F = 3.828$, $p = 0.001$). The hypothesis that linen care strategies do not have any significant effect on guest satisfaction among

hotels in the Upper East Region of Ghana was rejected ($P = 0.0001 < 0.05$).

Implications to Theory, Practice and Policy: The study employed Management Administrative Theory and Practice Theory. Through the application of management functions, thus, forecasting and planning, organising, commanding, coordinating and controlling; hotel leaderships are in a better position to increase efficiency through the creation of organisational structures. Through the administrative structures, housekeeping supervisors can suggest and monitor the care and maintenance of linen. About the

Practice theory, if hotels identify linen care strategies that make sense to their operations and do so religiously through principles and procedures; higher standards of various care strategies could be attained to promote the hotel business. It is therefore recommended that policymakers such as GTA should come out with training and retraining programmes for hotels to improve knowledge and skills in linen care strategies

Keywords: *Linen, Linen Care Strategies, Guest Satisfaction, Upper East Region, Ghana JEL Codes-D12, Z31, Z32*

1.0 INTRODUCTION

The United Nations World Tourism Organization (UNWTO) in 2015 explained the hospitality industry as a service industry fashioned to provide care and serve guests with warmth. The hotel industry falls under the ambit of the hospitality industry and has the propensity to provide accommodation, food and beverages among others in an enabling environment for guests (Discover Hospitality, 2015). Per international standards, hotels are classified by the Star System or Budget. While the Star System are categorized by star ratings such as one star to five stars, the Budget are not star-rated and predominately guest houses (Ivica, 2015; Hotel Association of Canada [HAC], 2014). Irrespective of the category, the use of textiles thus, linen to render service in the hotel business are paramount (Crown Linen, 2017a).

According to Community IPC policy (2020), linen is explained as every single reusable item of textile that involves cleaning or disinfection through the process of laundering. Examples given included, bed linen in the form of bedsheets, pillowcases, blankets and counterpanes. Bath linen such as all kinds of towels (bath towels, hand towels, face towels etc.), curtains, staff uniforms and guests' clothing. Zümüt et al. (2017) share similar views by indicating linen as a launderable textile and adding table linen (table cloth, serviette, underlays etc.), kitchen and cleaning cloths (dishcloths, rugs, mops etc.). Consequently, linen is found in various departments of the hotel like Housekeeping, Front Office, Foods and Beverage Service and Kitchen departments. Mostly except for the kitchen/Food Production Department, hotel customers come into direct contact with linen in the stated departments (Textiles Services Association [TSA], 2014).

In contemporary times, linen could be made of various fibres, yarns and fabrics. The fibres can be natural or man-made. The yarn strength could be even or uneven, and the fabric could be closely or loosely woven not leaving out the fastness of dyes (Hemmes, 2017). No matter what informs the fabric selection for hotels, care and maintenance are very important. Azhar (2019) and Schmidt (2016) pointed out some qualities of linen including fabric strength, laundering qualities, absorbency, comfort, colour fastness, pattern and texture qualities, shrinkage, thermal insulation and flame retardancy. Schmidt reiterated all good qualities expected of linen cannot be obtained from one particular fibre but through mixtures and blends. A case is made by Hemmes that purely synthetic fibres take less time to launder but require a smaller number of wash cycles in linen processing and lower temperatures for ironing as compared to natural fibres like a hundred per cent cotton. Conversely, though cotton is highly absorbent, it takes more time to iron due to crease formation when washed.

To Kumar (2020), the colour of the linen should appeal. Linen appearance should be retained irrespective of repeated washing through dye stability. Light-coloured fabrics demonstrate more dirt with visible stains if any. On the other hand, dark-coloured fabrics show dust and lighter marks easily. Azhar (2019) pointed out that linen especially bed and bath linen if chemically free processed, prevents irritation to the body and is good for the skin. As hotels invest money in linen for the business, linen should be durable and serviceable. To derive these, linen care strategies among others can prolong linen life span. The care of linen is imperative with the outbreak of Coronavirus (COVID-19) disease; a global pandemic affecting businesses including the hotel industry (Young, 2020). There is a need for hotels to follow

COVID-19 protocols with improved programmes for cleaning and disinfecting rooms including linen (World Health Organization [WHO], 2020).

Association for Linen, Uniform and Facility Services Industry (TRSA) launched a programme for the hotel industry in America for the promotion of responsible linen. The urgency and as part of COVID-19 control measures; called for local and state officials in American governance to be involved in the preparation of documents on guidance for hotels. The document spelt out that the officials should provide guidance and ensure hotels have their textiles clean daily. Furthermore, the handling of linen should conform to the universal precautions of Occupational Safety and Health (OSHA) which assures guests of safety and confidence in the use of linen (Lodging Staff, 2020; Ricci, 2015). Ricci reiterated linen should go through sanitary conditions as a precautionary measure. If laws governing hotel operations expect the daily provision of linen and linen is expected to be clean, fresh, crisp, spotless, attractive and comfortable to the satisfaction of guests then linen should be cared for and maintained (Hotel Association of Canada, 2014, GTA, 2011).

Some care strategies could be based on the laundry system via On-premise laundry and Off-premise laundry and wash cycle (Braun Linen, 2019). The laundry process from sorting dirty linen, washing, drying, ironing folding and storage (Riesenberger, 2017), inventory control system where techniques are used to maintain and check stock (Kumar, 2020), laundry outsourcing by hiring services from third-party companies to supplement linen stock (Lutkevich, 2020) and linen reuse programmes for linen not to be washed daily but through options (Green Hotels Association, 2015).

Hotels can be classified by the Star System and Standards per international requirements. The star rating ranges from one star to five stars. The non-star rated are classified as Budget hotels (UNWTO, 2015; Hotel Association of Canada [HAC], 2014). The star rating system of hotels is a tool that classifies hotels based on quality, amenities, accommodation standards and service which in effect influences pricing and the role of quality assurance among others. A correlation therefore exists between the higher the rated hotel, the higher the expected rates with the anticipated service coupled with customer experience (UNWTO, 2015). Though Budget hotels are expected to provide basic facilities like clean bedding, washing facilities and bathrooms, the features are not luxurious like the star-rated ones. Employees who care for the facilities including linen are not necessarily experts or professionals as compared to the star-rated. Similarly, the degree of professionalism of employees and the care strategies used in managing hotels not leaving out linen vary depending on the star category. Highly rated hotels go for highly professional employees (Crown Linen, 2016, Discover Hospitality, 2015)

Statement of the Problem

Studies have shown that if a hotel operates below the recommended par of three, the par stock is overstretched due to hastening and poor washing process thereby generating low-quality linen (Akomaning, 2023, Mahardika et al., 2020; Aucamp, 2016). The consequences of unpleasant linen could bring dissatisfaction to guests which could affect hotel patronage. The study therefore sought to investigate linen care strategies among hotels in the Upper East Region of Ghana.

Purpose of the Study

The study objectives were to examine strategies used in the care of linen among hotels in the Upper East Region of Ghana and their effects on guest satisfaction. Additionally,

a hypothesis was formulated to test whether the relationship was significant. The stated hypothesis was as follows:

H₀₁: Care strategies of linen do not have any significant effects on guest satisfaction among hotels in the Upper East Region of Ghana.

Significance of the Study

It is anticipated the study findings could be beneficial to various stakeholders. First, the division of Ghana's Ministry of Tourism, Culture and Creative Arts could be more informed on linen care strategies adopted by some hotels. The awareness could bring to the fore the formulation of policies and programmes to educate and guide the activities of hotels on standards. Second, the findings could create awareness among hotel management on various linen care strategies adopted by other hotels. The discovered strategies could help management put measures in place through supervision and monitoring for better linen management. Third, the findings could be useful to hotel guests. The confidence level of guests could increase through some identified linen care strategies to enhance loyalty.

2.0 LITERATURE REVIEW

Theoretical Framework

Management Administrative Theory

The study used the Management Administrative theory (Fayol-1900) cited by Lawal (2012) Fayol's Management Administrative theory looks at five management functions that need to be considered by organisations in the creation of structures to increase efficiency. These are, forecasting and planning, organising, commanding, coordinating and controlling (Griffin, 1993 as cited in Olarewaju, & Olusoji, 2014). Through effective management practices, the units within the system can function well to achieve their target. Based on this hotel management team could be in a position to predict the types and quantities of linen appropriate for running the facility and the needed resources for effective care and maintenance practices. This could help direct housekeepers to exhibit the needed knowledge and skills to care for and maintain linen effectively through training and retraining workshops. Supervision and inventory control could be used to coordinate linen usage in various departments. Adoption and monitoring of other practices by management on linen care strategies to influence customer satisfaction.

Practice Theory

Additionally, the Practice Theory (Schatzki-1996), cited by Loscher, Splitter and Seidl (2019) was applied. The Practice Theory (Site Ontology) states that what makes sense for people to do is what they do and with practice, their horizon of intelligence is made up. Hotels are expected to maintain standards set by their regulators, the Ghana Tourism Authority (GTA). When activities are put in an ordered form and procedures and principles are followed clearly through practice; standards for hotel linen could be maintained. For instance, following laundering procedures in the care and maintenance of linen.

Linen Care Strategies and Guest Satisfaction

The acquisition of quality linen alone is not enough rather how it is cared for to enhance customer satisfaction (Hemmes, 2017). Every textile-like hotel linen over a lifetime, is

exposed to light, dust, moisture, and stain risks (blood, food, soil) and can be damaged (Aucamp, 2016). Whatever process is used in linen maintenance whether linen is hung, stored in a wardrobe, or thrown over furniture, there is a need for proper care (Jalan, 2019). Linen care strategies were looked at from the laundry systems operated by hotels, laundry machinery and equipment, disinfection of linen, laundry processes, linen inventory control, linen outsourcing and linen reuse programmes.

Two kinds of laundry exist in the hotel industry. Thus, On-premise laundry and Off-premise laundry (Braun Linen, 2019). Braun Linen indicated that while laundry done on the same premise of the hotel falls under On-premise laundry; those done outside the premises of the hotel are classified as Off-premise laundry or Out-source laundry. On-premise laundry allows access to linen all through the year (24/7/365), also, logistics are simpler, and linen quality control is better with reduced linen pilferages (Ricci, 2015). Ricci enumerated benefits in the engagement of Off-premise laundry as maximisation of physical space of property for other income generating activities like gyms, café and retail shops. Again, reduction in capital expenditure for costs to be redirected to other areas and for business improvement. Off-premise laundry also allows hotels to be more focused on the core functions of serving guests. Irrespective of the laundry system in operation, laundry equipment is required.

The laundry machinery includes tables/shelves for sorting, machines for washing/extractors, tumble dryers, irons, flat ironers (calendaring machine), equipment for folding sheets and machines for folding towels as well as hangers (Griffin, 2013). Chemicals and cleaning agents like alkali detergents, water, softeners, bleaches, conditioners for emulsifiers, solvents for dry cleaning and mildewcide cannot be left out (Sargeant, 2012). A study was conducted by Máša et al. (2013) in three European countries (France, Germany and Czech Republic) to analyse energy efficiency and environmentally friendly technologies in professional laundry service. The findings were that electrical energy and natural gas were used for water heating and air drying in professional laundry services (e.g., hotels, hospitals etc.). Professional laundry service had a direct environmental impact. Wastewater became contaminated with laundry detergent. Natural gas was the medium for drying. Much of the energy used goes to waste with little profit. The study concluded that waste and gas emissions in professional laundry services should be minimized through the best and appropriate technologies to ensure efficient maximization of energy consumption.

Disinfection of hotel linen is equally important because linen can easily get contaminated by people and the environment. Linen should therefore be sorted, packaged, transported and stored in a manner that would prevent the risk of contamination by debris, dust and soil (Queensland Health, 2020). Regular disinfection during the laundering of linen prevents infestation and improves the health of guests and staff (Horney, Kirsch, & Kline, 2020). Disinfection of linen has become essential to counteract viruses such as COVID-19 and for any new emerging infection (Community IPC policy, 2020). As a result, infection prevention and control guidance should be followed for safe linen management. For instance, precautionary measures have to be taken by hotel managers to disinfect linen and other surfaces with bleach or alcohol-based sanitizer of 70 per cent (WHO, 2020). Additionally, an inexhaustive list of products compiled by the American Chemistry Council (ACC) Center for Biocide Chemistries (CBC) and approved by the United States Environmental Protection Agency (EPA) are on the market for use in fighting emerging

viral pathogens like COVID-19 (American Chemistry Council, Center for Biocide Chemistries, 2020). Housekeepers therefore should be well trained in the safe and correct use of disinfectants and manufacturer's instructions should be followed to the letter to get any pathogen killed (Young, 2020).

Machine or hand can be used to clean and this can be done through washing and dry cleaning (Jalan, 2019). Riesenberger (2017) pointed out that laundering encompasses a system of interdependent steps which includes sorting dirty clothes, putting dirty apparel in a machine or hand wash, applying detergent, drying the washed articles on the line or in a tumble dryer, ironing, folding and storage of laundered article. Community IPC policy (2020) reiterated sorting of linen can be done based on the degree of soil or the use of colour codes to segregate the laundry bags or containers. As a standard procedure, the laundry cycle involves collection and sorting of dirty laundry, pre-testing of stains, washing, drying, repairs if any, ironing, folding and stacking as well as delivery of clean articles to rooms for use (Lodging Media, 2019).

Palma (2020) stated that for effective laundering, the wash stages of the washing machine should ensure that linen is visibly clean and devoid of contamination of fabric. If the laundry cycle is using hot water, the wash with detergent in water could be equal to or greater than 160 degrees Fahrenheit ($\geq 160^{\circ}\text{F}$ ($\geq 71^{\circ}\text{C}$) for 25 minutes or more (≥ 25 minutes). As part of linen storage, the Community IPC policy (2020) advised that clean linen should be put in a cupboard not used for any other activities. The cupboard should have shelves that can easily be cleaned and allow for free movement of air around the linen stored. Stored linen should be in a cool dry environment devoid of water. Linen should be stored away from direct sunlight but above floor level and preferably in a clean designated room (linen room)

A case study was conducted by Depiné (2020) on the process of laundry optimization at Yeatman Hotel, a five-star hotel in Porto, Portugal. The study aimed at enhancing of competitiveness and sustainability of hotel laundry. Data was collected through observation and interviews. The findings indicate that flow chart (a technique on flow process across the organization using boxes and rows), swim lane (linen collection and receipt with tagging controls, washing, drying and ironing processes through various paths) and value stream (activities of different kinds that aggregate value) were used to map the laundry process. Eight wastes of lean production were proposed for improvement. The study concluded that improvement of the laundry process in hotel operations can be achieved through lean thinking (strategic level-understand value, operational level tools to eliminate waste).

Kumar (2020) and Crown Linen (2017b) discussed inventory as the stock of items, equipment and purchases of other supplies for future operations of a hotel that can be recycled or non-recycled. Kumar indicated for efficient management of inventory; each department of a hotel should have an inventory control system and mentioned some inventory control systems such as physical inventory and perpetual inventory system. Physical inventory, for instance, can be conducted regularly to provide the needed information for the determination of how sufficient the amount of linen in circulation is for the operation of a facility (Kumar, 2019).

Crown Linen (2016) mentioned par stock and stock-taking as some of the techniques in the inventory control system. Stock-taking is the physical counting of stock at periodic intervals for the valuation of prevailing records (Kumar, 2020). Some benefits of inventory control were mentioned by Kumar as follows: inventory control helps with

checking and maintaining the right stocks at departmental levels and the reduction of the risk of loss; keeps the smooth flow of supplies in housekeeping and supports its operations; helps with the efficient management of storage space; prevents shortage of supplies or poor rotation which can result in the reduction in standards to yield low revenue; facilitates standardization of quality to enable the provision of better customer service by housekeeping departments.

Crown Linen (2016) added that taking stock regularly brings out poor stock control practices, problems with damaged stock, missing orders or unprocessed stock. Also, departments are prompted of shortages and how to add on next time. Areas of weakness and loss are acted on and improved upon through stock-taking. Kumar (2019) suggested effective control of inventory can be possible through practices such as proper storage, spot checks, regular stock-taking, control of misuse, mix-ups and shortages as well as proper supervision.

Sarika and Deepa (2019) conducted a study on linen inventory management in housekeeping at star hotels in Pimprichinchwad-Pune, India. The purpose was to evaluate stock control practices followed by housekeepers in hotels. By the use of a semi-structured interview guide, data was collected from five hotel establishments and their executive housekeepers. The study results showed hotels adopted a physical stock-taking inventory. Linen inventory (bed linen, bath linen) was the most important and carried out once every month. The conclusion drawn was that proper records are needed in inventory taking to check pilferages, damages and misuse. Consequently, proper supervision and monitoring are needed from housekeeping supervisors.

According to Lutkevich (2020), outsourcing is a business practice where a company hires the services of a third party in the performance of a task, handling of operations or providing services for the company. Lutkevich disclosed that outsourcing is a practice common in the hospitality industry. As a management practice, some hotels outsource linen from linen service providers to ensure clean and ready use of linen at all times. Lutkevich reiterated companies outsource to improve the focus of core competencies, improve efficiencies, lower costs and gain speed from the third-party service provider. Skews (2015) added that through outsourcing, organizations can enhance internal efficiencies of some non-core functional aspects of business. Similarly, outsourcing offers the best technology within an industry that a firm might not have and increases the flexibility of employees (Envision Team, 2020). According to Ricci (2015), a commercial laundry that is well-managed may be more proficient in the use of chemicals for laundering. Likewise, regular servicing of equipment and machine repairs tied with protocols for monitoring hardily damaged linen. Kim, Hawkins and Hill (2018) emphasized that commercial laundry with automated machines helps more with the improvement of hotel operations.

Rousochatzakis and Apostolakis (2016) carried out a study on outsourcing in hospitality firms in Crete, Greece. The purpose of the study was to explore the use of outsourcing in local hotels. Additionally, to identify factors influencing outsourcing decisions and the level of influence of outsourcing decisions on a hotel's operational performance. Through judgmental sampling, 70 star-rated hotels were selected and a questionnaire was used for the data collection. The findings were that there were fundamental differences in the main reasons for adoption decisions in hotel outsourcing by small and larger hotels. For instance, some hotels outsource because of a lack of professional equipment or the absence of trained personnel. The study concluded that activities in

hotels differ due to hotel category and size hence the influence of outsourcing adoption if any.

Some hotels have instituted programmes to minimise laundry operations on the environment by 'going green' like linen and towel reuse programmes (Green Hotels Association, 2015). Accordingly, linen and towel reuse programmes are programmes that give hotel guests the option for linen not to be washed daily (opt-in option). Therefore, guests may request for towels to be changed, if not towels are changed as and when the guest checks out. Alternatively, guests who show their intentions for linen change (opt-out option) leave towels on the floor, or bathtub or put a designed card on the bed (European Union, 2017). Other specific instructions can also be given if the towel is not to be reused (Blöse, Mack, & Pitts, 2015). Nuwer (2014) pointed out an action is required from guests through notices spelt out on cards for the two options whether opt-in or opt-out for linen.

A study was carried out by Blöse et al. (2015) on how message framing can influence hotel guests' linen reuse intentions in Charleston, South Carolina, USA. The purpose of the study was to use participants to explore guest responses on the linen reuse programme through various framed messages to affect behaviour and attitude intentions regarding linen reuse. Through quota sampling, 427 adult tourists journeying to Charleston were used. Two sets of framed messages were used. One message covered gains on linen reuse and the second the loss. Location was attached to the framed messages to appeal to the participants that reusing towels could contribute to the environmental sustainability of the location. The findings were that respondents generally accepted frame messages that avoided loss such as "Do not miss out". The mention of a specific destination (Charleston) boosted the opinion of respondents on the likelihood of participating in the linen reuse programme.

3.0 METHODOLOGY

The study employed a descriptive survey design to describe the given state of affairs that existed between linen care strategies and guest satisfaction. The study was carried out in 24 selected hotels in the Upper East region of Ghana with special reference to star-category hotels. The region is located in the northern sector of Ghana with many tourist sites and unique weather conditions (Ghana Statistical Service [GSS], 2021; Issahaku, Campion & Edziyie, 2016).

The total population was 72 hotel employees made up of hotel managers and housekeeping supervisors (accommodation and laundry supervisors). Through purposive sampling, a sample size of 52 hotel workers made up of 24 managers and 48 housekeeping supervisors was obtained. By the use of a structured questionnaire and structured observation, data was attained. The validity of the instrument was ensured by developing the instrument based on the study objectives and review of related literature. Cronbach's Alpha was used to calculate the reliability of the instrument of which the correlation coefficient was 0.72. Logistical and ethical considerations were adhered to. For quantitative data analysis, Statistical Package for Social Sciences (SPSS) version 26 was used to conduct both the descriptive and inferential statistics. In addition, the qualitative data from the observed on linen care and maintenance was categorized into themes using content analysis. Data were presented in tables and text.

4.0 FINDINGS

To examine the strategies used in the care of linen in the selected hotels, responses from hotel employees are presented in Table 1 on a nine-item question.

Table 1: Linen Care Strategies Adopted by Hotels

Statement (N=52)	Mean	Standard Deviation (SD)
Operates its laundry on-premise	4.60	0.69
Stock-taking on linen is done monthly	3.37	1.58
Records are kept on inventory made on linen	3.82	1.25
Laundry processes are followed strictly	4.03	1.07
Manufacturer's instructions are followed during washing and ironing	3.27	1.66
Linen is disinfected during washing	4.19	0.86
Linen reuse programme is practised with labelled cards	1.90	1.12
Linen is rented from service providers	1.23	0.51
Engage commercial laundry for clean linen due to wash formulas	1.57	0.96

As shown in Table 1, responses from the employees of hotels operating their own laundry On-premise recorded a mean of 4.60 (SD = 0.69). The relatively high means with homogeneity in the standard deviation could mean hotels saw the operation of On-premise laundry as worthwhile. The finding confirms the views of Ricci (2015) that the operation of On-premise laundry gives hotels the ability to control the quality of linen better. The means on monthly stock-taking and record-keeping of linen inventory were 3.37 (SD =1.58) and 3.82 (SD =1.25) respectively. The data suggest the mean for record-keeping was relatively higher than the mean for stock-taking and respondents varied in their opinions as depicted by the standard deviations. It could be that for record purposes hotels do take inventory of items possessed but as regards regular monthly stock-taking to check the inventory system lies the issue. Nevertheless, stock-taking might have been done by some hotels to check linen condition, control linen depletion or excesses and for proper rotation of stock. The findings support the views of Kumar (2020) and Crown Linen (2016) who indicated stock-taking ensures the smooth flow of supplies to sustain hotels' operations.

In connection with hotels following the laundry processes to clean linen, the mean was 4.03 with a standard deviation of 1.07. Although the mean was relatively high, the variability in the standard deviation implies that not in all instances could hotels follow the laundry processes strictly. The mean for manufacturing instruction being followed during washing and ironing was 3.27 and the standard deviation of 1.66. The variability in the responses equally suggests manufacturing instruction could not be followed to the latter. Disinfestation of linen during washing had a mean of 4.19 and a standard deviation of 0.86. The relatively high means suggest linen disinfestation was given much attention perhaps due to the outbreak of COVID-19. The findings on cleaning of linen conform with Riesenberger's (2017) views that laundry encompasses a system of interdependent steps embracing sorting of dirty linen, disinfecting, machine or hand

wash, application of detergent, rinsing, drying by machine or on drying line, ironing, folding and storage. The laundry procedures were expected to go through supervision by leadership which supports Fayol Management Administrative theory which called for forecasting and planning, organising, commanding, coordinating and controlling various activities (Olawaju, & Olusoji, 2014). Also, with the Theory of Practice, as hotels internalize laundry processes, they become used to and would not want to do without the processes.

With the practice of a linen reuse programme with the use of labelled cards for guests to decide on, the recorded mean was 1.90 (SD = 1.12). The data suggest the use of design cards to put messages across whether guest needed their linen change or not; the practice was absent in the hotels visited except the four-star-rated hotel. The common practice was for housekeepers to ask guests verbally whether they wanted their linen changed at the prescribed time or wanted it used for some time. Generally, the non-existence of design cards whether to opt for a linen reuse programme or not contradicts the views of Nuwer (2014). Thus, the two options (opt-in or opt-out) of the linen reuse programme require an action from guests through notices spelt out on a card.

Regarding hotels renting linen from service providers, the mean was 1.23 (SD = 0.51) and hotels' engagement in commercial laundry for clean linen due to wash formulas recorded a mean of 1.57 (SD = 0.96). The standard deviations show the respondents were quite homogeneous in their views. It could be that the hotel's facilities were underutilized so did not call for the engagement of commercial service providers as it were if there was an overflow. Additionally, hotels might have known some wash formulas/chemicals to use in cleaning linen. It was therefore better to save cost. The findings contradict the views of Lutkevich (2020) that outsourcing is done by companies to improve and focus on core competencies, lower costs, improve efficiencies and gain speed from the third-party service provider.

Data Analysis of Study Observation

The facilities of all the hotels were visited and observed for first-hand information on tools/equipment for linen management. The observed areas were predominantly guestrooms and laundries to check the tools and equipment available for the types of linen used. All the hotels (100%) operated On-premise laundry to clean linen (bedsheets, pillowcases, duvet covers, curtains etc.). It could mean that the hotels compared the advantages of On-premise to the disadvantages and saw it worthwhile to launder linen on the premises of the hotel. The finding affirms the views of Ricci (2015) that On-premise laundry allows access to linen all through the year (24/7/365). Concerning how linen was carried from rooms to laundry and vice versa 21 hotels (87.5%) predominately had laundry bins.

The remaining three (12.5%) used bags, chutes and trolleys. After the collection of dirty linen, 11 hotels (45.8%) had tables available for sorting linen according to soil, stain, colour, texture of fabric etc. while with 13 hotels (54.2%), tables were not available but sorting of linen was done mainly on the floor. It could be that the hotels thought their laundry floors were cemented or tiled so were hygienic enough or hotels were not prepared to incur extra costs for tables or raised platforms for sorting linen. Hasan et al. (2022) stressed that the management of linen needs to be handled in the context of cleanliness, health, safety and environment.

In connection with washing machines/extractors, 17 hotels (70.8%) had washing machines available but seven (29.2%) did not. Washing basins and created sinks were used for washing. Hotels with no washing machine were a result of spoilage and had not been repaired. Such hotels washed manually without the use of hot water. Some hotels also engaged the services of casual workers to do washing manually. Only five hotels (20.8%) had dryers available for drying linen after washing. The remaining 19 hotels (79.2%) used a raised drying line for drying. It can be inferred that the hotels depended mostly on the sun because all through the years, the Upper East Region is noted for a prolonged dry season with heavy sunshine (October to April) as compared to the rainy season from May to September (Issahaku et al., 2016). It can be deduced that hotels save money from the cost of electricity due to direct drying from the sun. As a result, some hotels had spoilt dryers which were not repaired and good ones were highly underutilized. Drying lines were also mounted in rooms during the rainy season. Only one hotel (4.2%) had a laundry boiler to distribute hot water for washing and rinsing and an air compressor to take away heat from the laundry room; a technology seen at the four-star hotel. The rest of the hotels 23 (95.8%) managed without advanced technology.

All the hotels (24) had irons and ironing boards (100%). Some few (10) had steam irons while the majority (14) had predominately flat dry irons. Some of the ironing boards were the domestic type with metal or wooden legs while others used large flat tables or raised platforms (wooden, concrete) to enable them to get wider surfaces for ironing. Only three hotels (12.5%) had Calendaring machines for ironing in addition to flat irons but 21 hotels (87.5%) did not have any such equipment. No hotel (100%) had a laundry folder. Ironed linen was folded manually. Ten hotels (41.7%) added hangers to their storage facilities to keep ironed bedsheets and pillowcases. The remaining 14 (58.3%) did not have hangers. The majority of the hotels 22 (91.7%) kept ironed and folded linen in wardrobes or shelves. The wardrobes had doors for cover but the shelves were found open without doors. Only two hotels (8.3%) stored ironed linen in jute bags ('Ghana Must Go').

Testing the Null Hypothesis Using Regression Model

To examine strategies used in the care of linen and their effect on guest satisfaction, a null hypothesis was formulated:

H_{01} : Linen care strategies do not have any significant effect on guest satisfaction among hotels in the Upper East Region of Ghana.

A multiple linear regression model was used to test if linen care strategies significantly predicted guest satisfaction. Table 2 presents the results. The reason for the choice of the test is to prove significantly whether linen care strategies had an effect on guest satisfaction. In testing the null hypothesis, a 5% significant level was used.

Table 2: Model Summary of Linen Care Strategies Affecting Guest Satisfaction

Model	R	R-Squared	Adjusted R-Squared	Std. Error of the Estimate	Df	F	Sig.
1	0.671 ^a	0.451	0.333	0.6359	9	3.828	0.001

- a. Predictors: (Constant) Hotel engages commercial laundry, Hotel practices linen and towel reuse programme, Linen (textile) is disinfected during washing, the

hotel operates on-premise laundry, Records are kept on inventory, Linen is rented from linen service providers, Manufacturer's instruction is followed during washing and ironing, Hotel strictly follow the laundry processes

b. Dependent Variable: Guest Satisfaction

The multiple linear regression summary model as shown in Table 2 depicts the overall regression as statistically significant ($R = 0.671$, $R^2 = 0.451$, Adjusted $R^2 = 0.333$, $F = 3.828$, $p = 0.001$). It was found that linen care strategies significantly predicted guest satisfaction ($R^2 = 0.451$, $p = 0.001$). It implies that linen care strategies had effect on guest satisfaction. The hypothesis which stated linen care strategies do not have any significant effect on guest satisfaction was rejected ($p = 0.001 < 0.05$). However, the predictor variables explained approximately 45.1% of the variations in guest satisfaction. The finding aligns with the theory of practice by Schatzki (1996) implying if activities of an organisation are ordered and principles as well as procedures are followed through constant practice, desired results are attainable.

5.0 CONCLUSIONS

All the hotels operated On-premise laundry systems (Mean = 4.60, SD = 0.69). The services of commercial laundry were not engaged (Mean = 1.57, SD = 0.96). Stock-tacking (Mean = 3.37, SD = 1.58) and record-keeping (Mean = 3.82, SD =1.25) were done as part of linen inventory control however stock-tacking was not regularly done every month. Hotels disinfected linen (Mean = 4.19, SD = 0.86) and followed the laundry process when cleaning linen. Thus, collecting and sorting out dirty linen, testing stains, washing, drying, repairs if any, ironing, folding, stacking and dispatching clean linen to rooms for use (Mean = 4.03, SD = 1.07). However, the hotels were not too diligent when it came to following the manufacturer's instructions in washing and ironing linen (Mean = 3.27, SD = 1.66). The practice of linen and towel reuse programme with labelled cards provided for guests to opt-in or otherwise was virtually absent (Mean = 1.90, SD = 1.12). Hotels communicated to guests about linen reuse verbally.

The hotels predominantly used the following tools and equipment in the management of linen: laundry bins, washing machines/extractors, washing basins, drying lines, ironing boards, irons, and wardrobes for storage. Conspicuously absent were tables/shelves for sorting linen, tumbler dryers, calendaring machines (flat ironers), industrial steam irons and a laundry folder. Linen care strategies had a significant effect on guest satisfaction ($R = 0.671$, $R^2 = 0.451$, $F = 3.828$, $p = 0.001$). The hypothesis that linen care strategies do not have any significant effect on guest satisfaction in the hotels was rejected ($P = 0.0001 < 0.05$). The predictor variables explained approximately 45.1% variation in guest satisfaction typifying the care strategies used in linen management had some significant influence on guests' satisfaction.

Policy Implication

The government of Ghana, through the Ghana Tourism Authority, can enact policies on linen care strategies to ensure standards in hotel operations for guest satisfaction. To do so training and retraining of hotel employees, especially managers and housekeepers can go on in various regions of the country for more knowledge and skills acquisition. From the training, GTA can come out with workable linen care strategies for hotels.

6.0 RECOMMENDATIONS

From the findings and conclusions drawn, various stakeholders can consider the following recommendations:

Recommendation for Government and Ghana Tourism Authority

One of the means the government of Ghana obtains income is through taxation and hotels are not exempted. For continuous improvement in hotels to meet their core mandate of serving guests, the government should institute policies on training to equip hotels with more skills and knowledge in handling hotel linen. The government can empower institutions of hospitality and tourism such as the Ghana Hoteliers Association, and Hotel, Catering and Tourism Training Institute (HOTCATT) to organise workshops, conferences and seminars on linen care strategies.

Recommendations for Hotel Management

Hotels should invest in tools and equipment for the care of linen to ensure the prolonged lifespan of linen and for the comfort of end-users (guests). Investment can be put into modern technologies for efficiency and for reduction in time for linen maintenance. The acquired tools and equipment should be used for the right jobs for efficient outcomes. Stock-taking and record-keeping should be encouraged to check the depletion and excesses of linen. Linen reuse programmes should be well structured through the use of cards to opt-in or opt-out to reduce cost and to ensure environmental sustainability. Notices on linen reuse can be put in rooms and guests should be educated at the front desk for better understanding.

Training and retraining activities should continuously be discussed at the management level for further improvement. Managers and supervisors are to note that if standards are to be ensured and maintained at the hotels, then it is expedient for them to do effective supervision and monitoring of housekeepers. These groups of workers come into direct contact with linen. Routine supervision and periodic review of reports with management are recommended. Further research can be done on pragmatic ways of linen reuse programmes in hotels and guests' attitudes towards linen reuse.

REFERENCES

- Akomaning, E. L. (2023). Linen quality and guest satisfaction in star-rated hotels in Upper East Region of Ghana. *Journal of Hospitality and Tourism*. 3 (1), 43 – 55. American Chemistry Council, Center for Biocide Chemistries (2020). Novel coronavirus (COVID-19)-fighting products. Retrieved from <https://www.americanchemistry.com/novel-Coronavirus-Fighting-Products-List.pdf> on 15th September 2021.
- Aucamp, M. (2016). *Housekeeping and linen management*. North Ireland: International Federation of Infection Control. Belmont: Wadsworth Publishing.
- Azhar, M. L. (2019). Housekeeping Operations retrieved from <https://www.slideshare.net> on 20th October 2022.
- Blose, J. E., Mack, R. W., & Pitts, R. E. (2015). The influence of message framing on hotel guests' linen-reuse intentions. *Cornell Hospitality Quarterly*, 56(2), 145–154.
- Braun Linen (2019). How to manage a hotel and restaurant linen at the same time. Retrieved from <https://www.braunlinen.com/blog/how-to-manage-hotel-and-restaurant-linen-at-the-same-time> on 16th July 2021.
- Community IPC policy (2020). *Community infection prevention and control policies for care home settings: Safe management of linen* (2020). Retrieved from www.infectionpreventioncontrol.co.uk. On 25th October 2022
- Crown Linen (2016). Hotel operations management: best practices for protecting your hotel linen inventory. Retrieved from <https://www.crownlinen.net/blog/best-practices-for-protecting-your-hotel-linen-inventory> on 29th July 2021.
- Crown Linen (2017a). Three laundry tips to improve guest satisfaction in hotels. Retrieved from <http://www.crownlinen.net/blog/three-laundr-tips-to-improve-guest-satisfaction-in-hotel/> on 22nd August 2021.
- Crown Linen (2017b). Best practices for setting par levels for linen. Retrieved from <https://www.crownlinen.net/blog/best-practices-for-setting-par-levels-for-linen> on 17th July 2021.
- Depiné, H. (2020). *Laundry's process optimization: A case study in a five-star hotel*. Master's thesis, University Do Porto, Portugal.
- Discover Hospitality. (2015). What is hospitality? Retrieved from <http://discoverhospitality.com.au/what-is-hospitality/> on 19th September 2021
- Envision Team (2020). Pros and cons of outsourcing in the travel & hospitality industry. Retrieved from <https://www.envision-jpn.com> on 10 October 2021.
- European Union (2017). Best environmental management practice in the tourism sector: Efficient housekeeping. Retrieved from <http://ec.europa.environment/emas/takeagreenstep/pdf/BEMP-5.3> on October 2022.
- Ghana Statistical Service (2021). 2021 population and housing census: Preliminary report. Accra, Ghana: GSS.

- Green Hotels Association (2015). What are green hotels? Retrieved from www.greenhotels.com on 29th August 2021.
- Griffin, R. (2013). Hospitality laundry five areas to watch. Retrieved from https://cdn.ymaws.com/www.almnet.org/resource/resmgr/certification/contact_hour_Articles/107_HospitalityLaundry5Areas.pdf on 15 September 2021.
- GTA (2011). Accommodation and catering enterprises regulations, 1979 (Li 1205). Retrieved from [https://Www.Bcp.Gov.Gh/Acc/Registry/Docs/Accommodation%20and%20catering%20enterprises%20regulations,%201979%20\(Li%201205\).Pdf](https://Www.Bcp.Gov.Gh/Acc/Registry/Docs/Accommodation%20and%20catering%20enterprises%20regulations,%201979%20(Li%201205).Pdf) on 8th October, 2022.
- Hasan, Z., Armoni, N., Arjana, W., Triyuni, N., Kanah, N., & Dyah, W. (2022). The Handling of Linen Needs in the Context of Cleanliness, Health, Safety, and Environment Sustainability. *International Journal of Travel, Hospitality and Events*. 1(2), 96-108.
- Hemmes, S. (2017). Best practices for keeping linen clean. Retrieved from <https://lodgingmagazine.com/best-practices-for-keeping-linen-clean/> on 10th May 2021.
- Horney, J., Kirsch, K., & Kline, S (2020). COVID-19 tips for hotel managers. Retrieved from <https://www.hospitalitynet.org/opinion/4097377.html> on 15th September 2021.
- Hotel Association of Canada [HAC], (2014). Standards for hotels & motels. Retrieved from <https://www.hotelassociation.ca> on 10th May 2021.
- Issahaku, A.; Campion, B. & Edziyie, R (2016). Rainfall and temperature changes and variability in the Upper East Region of Ghana. *AGU Publications, Earth and Space Science* 10, 1-11, DOI: 10.1002/2016EA000161
- Ivica, B. (2015). New technologies. *International Journal of Process Management* 3(4), 67-75.
- Jalan, K. (2019). Threads of life: Caring for textiles. Retrieved from <https://www.threadsoflife.com/caring-for-your-textile/> on May 10, 2022
- Kim, C.; Hawkins, E. Hill, D. (2018). How outsourcing hotel laundry can improve operations Retrieved from <http://www.hotelmanagement.net> on 20th July 2022.
- Kumar, P. (2019). Planning and organizing housekeeping department: Recycled and non-recycled inventories. Retrieved from <https://pardeepapr.blogspot.com/> on 20th September 2021.
- Kumar, P. (2020). Accommodation operations theory: Purchase of linen. Retrieved from <http://hmhub.in> on 19th October 2022.
- Lawal, A. A. (2012). *Management in focus*. Lagos: Sahanit Nigeria Limited.
- Lodging Media (2019). Best practices for keeping linen clean. Retrieved from <https://lodgingmagazine.com/best-practices-for-keeping-linen-clean/> on 15th May 2022.

- Lodging Staff (2020). TRSA Releases Guidelines for Cleaning and Handling Hotel Linens. Retrieved from <https://lodgingmagazine.com/trsa-releases-guidelines-for-cleaning-and-handling-hotel-linens/> on 8th October 2021.
- Loscher, G. Splitter, V., & Seidl, D. (2019). Theodore Schatzki's practice theory and its implication for organization studies. Retrieved from <https://www.researchgate.net/publication/333576427> on July 8th 2022.
- Lutkevich, B. (2020) *What is Outsourcing and how it works*. Retrieved from <https://www.techtarget.com> Retrieved 8th October 2022.
- Mahardika, M., Heryanda, K., & Parma, P (2020). Proceedings of the 5th International Conference on Tourism, Economics, Accounting, Management and Social Science (TEAMS 2020). *Advances in Economics, Business and Management Research*, 158, 127-136.
- Máša, V., Bobák P., Stehlík P., Kuba, P. (2013). Analysis of energy efficient and environmentally friendly technologies in professional laundry service. *Clean Technologies and Environmental Policy*, 15(3), 445-457. DOI: 10.1007/s10098-013-0618-2.
- Nuwer, R. (2014). Reusing hotel towels actually does make a difference. Retrieved from <https://www.smithsonianmag.com/smart-news/reusing-hotel-towels-actually-does-make-difference-180949890/> on 20th September 2020.
- Olarewaju, A. D., & Olusoji, J. G. (2014). *Management theories and its application in organisations: The Nigerian experience*. Proceedings of the Conference on Management Theories and its Application in Organisations in Nigeria. UK: British Academy of Management.
- Palma, N. (2020). *Safe management of linen: Standard infection prevention & control and transmission-based infection control precautions* (version 3.0). Scotland: ARHAI Scotland.
- Queensland Health (2020). NHS Fife Infection Control Manual -Safe Management of Linen. Retrieved from <https://www.health.qld.gov.au/public-health/industry-environment/disease-prevention-control/covid19-industry/linen-management-for-healthcare-facilities-and-linen-management-services> on 1st September 2020.
- Ricci, J. (2015). What's in your linen closet? Best practices for reducing linen loss. Retrieved from https://www.hotelexecutive.com/business_review/4183/whats-in-your-linen-closet-best-practices-for-reducing on 28th July 2021.
- Riesenberger, J. (2017). On premise-laundry facilities. Retrieved from <https://pdfslide.net> on 2nd September 2021.
- Rousochatzakis, S., & Apostolakis (2016). *Outsourcing practices in hospitality firms in Crete, Greece*. Paper presented at the 4th International Conference on Contemporary Market Issues. (22-24). Crete, Greece.
- Sargeant, B. (2012). Training manual on launder linen and guests' clothes by the Association of Southeast Asian Nations (ASEAN), Headquarters of ASEAN, Indonesia. Retrieved from www.asean.org on 16th February 2021.

- Sarika J., & Deepa, P. (2019). *Study on housekeeping linen inventory management with reference to star-category hotels in Pimprichinchwad-Pune*. ASM Group of Institutes ISBN: 978-93-88441-42-1, pp. 408-419.
- Schmidt, A. (2016). Bath towels 101: How to choose towels. Retrieved from www.crateandbarrel.com on 28th July 2021.
- Skews, M. (2015). *Adding further efficiencies to the laundry and hospitality Industries*. Bachelor's Thesis. Turku University of Applied Sciences. Finland.
- Textile Service Association (TSA). (2014). *TRSA reusable textile apparel white paper*. Retrieved from www.trsa.org on 20th February 2021.
- United Nations World Tourism Organization. (2015). U.S. Travel Association: U.S. travel answer sheet. Retrieved from <https://www.ustravel.org/answer-sheet> on 20th July 2020.
- WHO (2020). COVID-19 management in hotels and other entities of the accommodation sector: Interim guidance. Geneva: World Health Organisation; 2020. Retrieved from <https://aps.who.int/iris/handle> on 20 August 2020.
- Young, A. (2020). Is the hotel industry about to self-destruct? media exposes shocking hotel fails and growing guest destruct. Retrieved from <https://www.hospitalitynet.org/opinion/4099772.html> on 25th Sept 2022.
- Zümrüt, B., Esra, D., Eda, A., & Okşan, O. (2017). A study on tracking of textile products used in hotel businesses. *Journal of Tourism Theory and Research*, 3(1), 10-19.

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