This study sought to examine the relationship between financial literacy and financial behavior among owners/managers of MSEs in the Sunyani Municipality. Primarily, the research examined the financial literacy level as well as the extent to which financial knowledge informs financial behaviour and financial attitude which will aid in making a rational decision for their business. In accordance with the study’s objective, the study employed primary data and used a quantitative approach as well as a descriptive survey design to randomly sample 230 owners/managers from five categories of MSEs in the Sunyani Municipality. From the findings, it was revealed that owners/managers of MSEs who had high levels of financial knowledge exhibited good financial behaviour and demonstrated a good financial attitude as compared to those with lower levels of financial knowledge. The positive outcomes of being financially literate were driven by behaviour such as planning expenditure and building up a financial safety net. Since financial literacy is necessary for the demonstration of good financial behaviour and attitude, it was recommended to MSEs strive for financial knowledge to enable them make good financial decisions. Again, any policy that aims at the growth and development of MSEs must include financial education since it is the key to good financial behaviour and attitudes that aids owners/managers to make good decisions.

**Key words:** Financial literacy, knowledge, behaviour, attitude, micro and small-scale enterprise, Ghana.

**INTRODUCTION**

Financial literacy among micro and small-scale rises (MSEs) is gaining prominence in development literature (Tuffour et al., 2020). This is because the financial literacy levels of owners/managers of these enterprises have implications for financial behaviour thereby affecting their financial decision-making. Financial literacy is the *sine qua non* in the management, performance, and sustenance of small enterprises (Nyabwanga, 2011). In Nyabwanga’s view, financial education builds the capacity of owners/managers which enables them to create business budgets, decide on savings plans, and make strategic investment decisions, making it possible for them to meet financial obligations.

Berman and Knight (2008) have noted that in situations where the owners/managers of enterprises are financially educated they achieve financial viability. Similarly,
Like many countries, Ghana has identified the private sector as the engine of growth, a strategy for wealth creation, and poverty reduction (Nii, 2011). As part of the overall national strategy, the Sunyani Municipality is aggressively pursuing prudent private-sector friendly programmes and projects towards accelerated socio-economic development of the District. This is being done using financial literacy programmes by MSEs’ promotion institutions as well as microfinance institutions (Alhassan, 2016). State institutions such as the Business Advisory Centre (BAC) and the National Board for Small Scale Enterprises (NBSSI) are mandated to build the capacities of owners/managers of MSEs.

Aside from these state promotional institutions of MSEs, some banks, and non-bank institutions also operate credit with education which aims to build the business and financial capacities of MSEs.

According to Van Rooij et al. (2011), financial literacy is a broader phenomenon that triggers an individual to make financial decisions notably equity market participation, diversification of portfolio, ability to avoid extreme indebtedness, and making sound investment decisions that bring liberation to the people. However, despite the financial capacity programmes of both state and non-state institutions, there are concerns that financial institutions have not been able to include a vast segment of the population, especially the underprivileged sections of society such as small firms into the fold of basic financial services due to their poor financial behaviour and attitude which affects their decision making for business growth (Nunoo and Andoh, 2012). Moreover, MSEs market has been perceived as risky, costly, and difficult to serve banks and financial institutions (Ackah and Vuvor, 2011). In the case of Sunyani Municipality, microfinance institutions, according to Alhassan (2016), have contributed to the growth of small businesses by assisting them to overcome their financial challenges. Owusu (2015) explains that despite these efforts, businesses still lack financial literacy resulting in poor decision making which ultimately affects their financial inclusiveness due to poor financial judgments.

The liberalization of Ghana’s financial sector in the 1980s witnessed the proliferation of bank and non-bank financial institutions across the country. With poor supervision from regulation institutions, many of these financial institutions, especially microfinance institutions often prey on the poor financial literacy levels of their clients. By the end of 2019, many owners of MSEs, institutions, and other individuals had lost their investments to some financial institutions.

Following from this, the Ministry of Finance and the Central Bank of Ghana put in measures to overhaul the financial sector which led to the closure of many financial institutions. Many have attributed the success of the scam to the inadequate financial knowledge of owners/managers of SSEs. This study examined the financial literacy levels of the owners/managers of MSEs and how their financial knowledge affects their financial behaviour and decision-making.

**Theory and empirics on financial literacy and financial behaviour**

Different theories have been used to explain financial literacy and financial behaviour however, in relation to
this study, the researcher considered two core theories which are evidenced to be highly related and will be very instrumental in forming the foundation on which the objective of this study will be fulfilled. Financial literacy and financial behaviour are underpinned by the Human Capital Theory and the Theory of Planned Behaviour.

The association between financial literacy and financial behaviour for micro and small enterprise owners/managers is underpinned by the nexus between the Theory of Planned Behaviour (Ajzen, 1991) and the Human Capital Theory (Becker, 1964). According to the theory of Planned Behaviour, information affects the human capital of individuals which, in turn, influences their attitudes in decision making. The Human Capital Theory, of Scultz (1961) advocates that education or training imparts useful knowledge and skills to workers which, in turn, inform their thoughts, attitudes, and behaviour. Whiles, the central premise of the Theory of Planned Behaviour is that intentions mediate the relationship between attitudinal beliefs and actual behaviour (Ajzen, 1988, 1991). Influences such as traits, demographics, skills, social, cultural, and financial support affect attitudes and indirectly intentions and behaviour (Kadoya and Khan, 2017).

The association among these theories depicts that financial literacy can inform financial behaviour in that once a person is financially literate; he/she will be able to make good decisions on accessing and using financial products and services. This is because as people access and use more financial products and services, they tend to learn from their experiences and thus, become financially literate.

For owners/managers of MSEs, investment in human capital in the form of knowledge, skills, competencies, experience, and attributes, enables them to make informed decisions which often contribute to the achievement of firm goals (Marimuthus et al., 2009). Becker (1964) distinguishes between specific human capital and general human capital.

According to Becker, while specific human capital builds the capacity of people to perform a specific activity general human capital is the knowledge that is valuable across the board. According to Huston (2010), financial literacy is viewed as finance specific to human capital. Thus, it is an input intended to increase a person’s human capital, specifically financial knowledge, and financial application.

Kadoya and Khan (2017) has identified some of the important skills of successful entrepreneurs to include accounting, marketing, sales, and financial management. The assumption is that the higher human capital of entrepreneurs increases the chances of their company’s survival and success (Mahdavi and Horton, 2014). According to Hilgert et al. (2003), managers who are financially literate or have acquired financial knowledge can control their behaviour in financial matters. These behaviours include management of cash flow and credit, savings, and investment. Evidence has also shown that for any small enterprise to be successful, owners/managers must possess appropriate skills and abilities to run the business (Okpara and Wynn, 2007; Orisanaye, 2004).

The above theories, in one way or the other, explain how stakeholders can move from being passive collectors and reporters of information to active users of the information for firms’ activities. Second, the theories help managers or owners to better understand the kind of evaluation they need to make in their day-to-day financial decisions. Third, the theories help the evaluator develop research questions that focus on changes that can occur given the particular strategies that are operative at the system, programme, and client levels.

Financial literacy is knowledge of financial concepts, skills, and attitudes that translate financial knowledge into financial behaviour that results in good financial outcomes (Sebast et al., 2006). According to Agarwalla et al. (2015), financial literacy is often hypothesized as the essential knowledge of financial matters and desirable attitudes which leads to outcomes related to money and finance. Worthy of note is the fact that the various definitions view financial literacy, not as an end but as a means to an end (Lusardi and Mitchell, 2014; Mandell, 2008). People invest in financial literacy when they perceive that they need it to meet their financial and life goals. This is an indication that financial literacy requirements vary among people and groups.

One major criticism of financial literacy definitions is that, over the years, the definitions do not stress the influence of an increasingly complex and volatile economy (Remund, 2010). Remund, thus proposes a definition of financial literacy as a measure of the degree to which one understands key financial concepts and the confidence to manage personal finances through the appropriate short-term decision-making and sound long-range financial planning, while mindful of life events and changing economic conditions.

There are levels of financial literacy even though the categorizations are somewhat difficult (Atkinson and Messy, 2012). According to Lusardi and Mitchell (2011), any determination of financial literacy levels must take into consideration financial attitudes and financial behaviours while keeping in mind four key principles: simplicity, relevance, brevity, and capacity. Despite these guiding principles, the difficulty in determining the levels of financial literacy still existed until the OECD (2013) developed acceptable benchmarks to that effect. The OECD proposed a complete questionnaire that includes items on financial knowledge, financial behaviour, and financial attitudes (Atkinson and Messy, 2012).

Financial literacy is expected to translate into good financial decision-making. To this end, it is incumbent on owners/managers of MSEs to acquire skills in money management. Money management skills, usually, boarder on financial needs, acquisition of funds, and how they
should be allocated (Remund, 2010). To achieve these goals, Inyang and Enuoh (2009) have advised entrepreneurs to maintain the correct proportion of the firm’s finances in saving, insurance, and investment. The acquisition of money management skills through financial literacy is, therefore, a necessary factor in entrepreneurial success.

Several empirical studies suggest that high levels of financial literacy translate into good financial behaviour. In a study on the relationship between financial knowledge and financial behaviour among households in Michigan Hilgert et al. (2003) measured financial knowledge in terms of cash-flow management, credit management, savings, and investment while financial behaviour was measured using financial attitude, positive childhood experiences, and tax incentives. The study found a significant relationship between financial knowledge and financial behaviour across a range of personal finance activities. Major sources of financial knowledge that the study identified are learning experiences, the media, friends, family and knowledge from a formal school. However, the study did not provide conclusive evidence on how financial literacy leads to sound personal finance decisions.

In another study that examined the effect of financial literacy on financial decision-making in the Kissi South District of Kenya, Nyabwanga (2011) found that knowledge in business management directly affects the financial decisions and performance of SSEs. The study concluded that enterprises with high knowledge in financial and business management take good financial decisions as compared to those with low knowledge in business. In a similar study in Bosnia and Herzegovina, Bruhn and Zia (2011) found a significant effect of business training on survival rate among entrepreneurs with higher ex-ante levels of financial literacy. Bruhn and Zia concluded that enterprises that receive financial training are more likely to implement new production processes, inject new investment, operate separate business and personal accounts, and refine existing loans for more favorable terms.

This study draws important lessons from the theoretical and empirical review of financial literacy and financial behaviour and decision-making. The various discussions show that financial literacy is not an end in itself but a means to an end. While financial literacy is knowledge of financial concepts, skills, and attitudes that translate financial knowledge into good financial behaviour and good business decision-making, financial behaviour borders on taking good decisions concerning accounting, marketing, sales, and financial management. Other best financial behavioral are exhibited in the management of cash flow, credit, savings, investment, and the use of financial products and services.

The analytical design is both descriptive and inferential. The research is deductive, and it follows a quantitative strategy and is supported by philosophical underpinnings of positivism epistemology and objectivism ontology. The study analyzes the association between financial literacy and financial behaviour for selected MSEs in the Sunyani Municipality. The choice of this design was informed by studies by Hilgert et al. (2003) and Nyabwanga (2011).

A multistage sampling method, consisting of probability sampling techniques, was used to select the respondents for the study. First, the total number of MSEs in the Sunyani Municipality was determined after which they were stratified into five subsectors based on the National Board for Small Scale Industries (NBSSI) groupings of MSEs. The subsectors were agrochemical, wood processing, dressmaking, food, and hairdressing. The total number of MSEs in the municipality provided by the NBSSI at the time of the study was 650. To ensure the representativeness of the sample to the study population, a total of 242 MSE operators were sampled. This was based on the sample size determination table of Krejcie and Morgan (1970) which states that a population of 650 requires a sample size of 242 given a 95% confidence level with 0.05 degree of accuracy. The proportionate sampling was then applied to determine the sample for each stratum. Due to the homogeneity of the SSES under each stratum, the simple random sampling technique was used to select the MSEs from each stratum. The distribution of the sample by subsector is captured in Table 1.

For this research, data were collected on the financial literacy levels of small business entrepreneurs, based on the different dimensions of financial literacy identified in the conceptual framework. Data were collected quantitatively. The quantitative data collection instrument was an interview schedule. This tool was used to collect data from the MSEs operators mainly because most of them have only basic education or informal education (GTUC, 1995). It was therefore assumed that some operators may not be able to read and write. By using an interview schedule possible errors that could result from misinterpretation of questions were avoided.

A correlational test was employed to assess the impact of financial literacy on the financial behaviour and attitude of the target population. Here, financial knowledge, awareness, and engagement in financial activities were used to measure financial literacy and formed the dependent variable whilst financial behaviour and financial attitude described the extent of respondents’ engagement toward the financial concepts, products, and services.

The core questionnaire, therefore, included items that were used to test the financial knowledge levels of the respondents. The items were chosen to cover a range of financial topics with various degrees of difficulty even though none of them was excessively complex enough to require expert knowledge. The process of counting correct responses begins by assigning 1 to a correct response and 0 in all other cases. The combination of knowledge items was summed and classified into a high level of knowledge, a moderate level of knowledge, and a relatively low level of knowledge using Chen and Volpe (1998) and OECD (2013) criteria. The mean percentage of correct scores was grouped into three grades using (1) 80% and more (2) 60 to 79% and (3) below 60% for high, moderate, and low levels of financial knowledge respectively.

RESULTS AND DISCUSSION

Out of the 242 sampled owners/managers, 230 of them consented to be interviewed. The discussion is therefore based on a response rate of 95%.

METHODOLOGY

The study is a cross-sectional and explanatory research design.
Background characteristics

The variables examined for the background information of the owners/managers are age, sex, and educational level. The enterprise characteristics covered some years in business, registration status, association status, and type of ownership.

Findings from the study showed that the youngest respondent was 27 years while the oldest was 54. The mean age was 39 years. The study revealed that young people owned most of the enterprises and this could be attributed to the demographic area chosen for the study where youth in their early years were more vibrant and ready to start a business for themselves rather than staying with an older population for support and dependence (Booyens and Galvaan, 2015). For sex, the majority (52.6%) of the 230 respondents was males, and the rest (47.4%) were females. Also, most of the respondents had either basic (40.4%) or secondary education (40.3%) education with the rest having acquired tertiary (18.3%) education or no formal education (1.3%). The examination of sex distribution and education was necessary because these two variables to a large extent determine his/her literacy level (Longinos et al., 2019).

Aside from the background information of respondents, the study further examined the characteristics of the sampled enterprises. The discussion covered the number of years in business, association status, and type of ownership.

Concerning the number of years in business, the minimum was one year, and the maximum was 22 years. The distribution of the number of years in business was approximately normal. The mean number of years in business was 10.4 years (skewness = 0.163, median = 10 years) with a standard deviation of 5.9 years. Another enterprise characteristic that the study examined was association status. Out of the 230 sampled enterprises, 52.6% belonged to an association or group while the rest (47.4) did not. The sampled enterprises were dominated by sole proprietors (63.0%), followed by family businesses (24.3%) and partnerships (12.7%) in that order.

Financial literacy levels of MSEs' owners/managers

To determine the general financial knowledge levels of the MSEs’ owners and managers, several items were listed to elicit information on the knowledge of financial products, services, and concepts. The discussion centered on respondents’ knowledge of financial products and services. Respondents were asked to indicate their knowledge of investment accounts, mortgages, secured bank loans, unsecured bank loans, current account and savings accounts, insurance, stock/shares, and bonds.

Out of the 230 responses, 73.5% had heard of investment accounts; 54.3% had heard of mortgages; 87 and 86.5% had heard of secured and unsecured bank loans respectively. In addition, 80.4% of the respondents had heard of insurance, 77 and 97% of them had heard of current and savings accounts respectively with only 30.4% each knowing stock/shares and bonds. It can be deduced that respondents had higher knowledge of some products than others. A binary scale was developed for each of the items with zero indicating no knowledge and one indicating knowledge of these services and products. An index involving these nine items (investment account, mortgage, secured bank loan, unsecured bank loan, insurance, current account, savings account, stock/shares, and bonds) was created to measure the financial knowledge of the respondents.

The data showed a minimum financial knowledge score of one and a maximum score of nine. The distribution of the financial knowledge score was positively skewed (skewness = 0.593) as most of the respondents had financial knowledge scores of more than 6.16 (mean). The median financial knowledge score was 7.0 with a quartile deviation of 2.5. According to Atkinson and Messy (2013), a financial knowledge score of five or more indicates that people are financially literate.

Financial behaviour

To examine the financial behaviour levels of the respondents, a five-point scale item, with one indicating least agreement to five indicating strong agreement, was
designed and administered to the respondents. The items covered monthly financial budgets, spending, the decision on purchases, savings, borrowing, monitoring of cash flows, and payment of bills and taxes. The details of the descriptive statistics related to the distribution of the financial behaviour of respondents are presented in Table 2.

The first item examined as part of the analysis of the financial behaviour levels of respondents was budgeting for monthly financial activities. The mean score was 4.3 (skewness = 0.17) with a standard deviation of 0.5 (Table 2). Most of the respondents agreed that they draw budgets for their monthly financial activities. This is evident in the high median score (4).

The second item examined concerning the financial behaviour of the sampled respondents was planning before spending. Data from the field show that the distribution of planning before spending was approximately normal (Skewness = 0.03). The mean score for planning before spending was 4.2 with a standard deviation of 0.55 (Table 2). The median score of four suggested that owners/managers of MSEs planned their spending.

The ability of entrepreneurs to consider products from different market outlets before purchasing is one of the attributes of people with good financial behaviour (OECD, 2013). Respondents were therefore asked to indicate the extent to which they agree with this proposition. The mean score on the consideration of products from different market outlets before purchases were made was 3.1 (Median = 3, Skewness = 0.21) with a standard deviation of 0.76 (Table 2).

The median score of three indicates that more than half of the 230 respondents did consider products from competing market outlets before making purchases.

Another issue of interest related to the financial behaviour of entrepreneurs is the ability to consider competing for interest rates before savings are made. Based on the data as presented in Table 2, almost all the respondents considered various interest rates before savings. This is demonstrated by the minimum score of four and a median score of 4.0 (Mean = 4.3, Skewness = 0.86) with a quartile deviation of 0.5.

Like the distribution on the consideration of competing interest rates on savings, the study examined the consideration of competing interest rates on loans. A mean score of 4.2 suggests that most of the respondents considered the interest rates from various financial institutions before borrowing. The median score was 4.0 (Skewness = 0.18) with a standard deviation of 0.53.

The liquidity of every enterprise is essential for its survival (Remund, 2010). In this respect, owners/managers of enterprises that keep a close eye on the cash flow of their enterprises ensure that there is adequate liquidity for the running of their businesses (OECD, 2013). 80% of the respondents monitored the cash flow of their enterprises as depicted by a minimum score of 4.0. The distribution of the score concerning the monitoring of cash flow was negatively skewed (Skewness = -1.6) indicating that the monitoring of cash flow score for most of the respondents was higher than the mean score of 4.8. The median score was five with a quartile deviation of 0. This value suggests that the respondents were keen on maintaining enough cash flow for their business to thrive.

The final variable examined about the financial behaviour of respondents was their agreement concerning the timely payment of taxes and bills. As captured in Table 2, most of the respondents agreed that they pay their bills and taxes on time. While the minimum score was 4.0, the maximum was 5.0. The median score for the timely payment of bills and taxes was 5.0 (Mean = 4.7, Skewness = -0.68) with a quartile deviation of 0.5. It can be deduced from this distribution that almost all the respondents paid their bills and taxes timely. As agreed by Garang (2016), people with knowledge of financial terms understand how important it is to pay bills on time to build proper financial connections.

Further analysis was done to determine the overall financial behaviour level of the respondents. In all, seven items were used to measure the financial behaviour level of the respondents. As a result, an aggregate score of 21 or more was considered good financial behaviour while a score of less than that signified bad financial behaviour. Data from the field showed that the minimum financial behaviour aggregate score was 23 as compared to a maximum of 29. The median aggregate score was 25 (Mean = 25.4, Skewness = 0.67) with a quartile deviation of 1.5. It can be seen from the descriptive statistics that the respondents generally had good financial behaviour.

**Relationship between financial knowledge, financial behaviour, and financial attitude**

The relationship between financial knowledge, financial behaviour, and financial attitude was examined using Spearman’s Rank Order Correlation test. As explained by Tuffour (2020), managers who have acquired knowledge and skills in financial matters have a positive attitude towards budgeting, financial management, and other financial matters which positively affect their behaviour and inclusiveness in financial services. The data, as presented in Table 3, show a direct correlation between financial knowledge, attitude, and behaviour (Rho >= 0.266, p-value = 0.000).

Owners/managers of MSEs who had high levels of financial knowledge exhibited good financial behaviour and demonstrated a good financial attitude as compared to those with lower levels of financial knowledge. The positive outcomes of being financially literate were driven by behaviour such as planning expenditure and building up a financial safety net.
The data were further disaggregated by type of enterprise. The owners/managers of agrochemical enterprises with high levels of financial literacy generally demonstrated good financial attitudes and behaviour (rho >=0.375, p-value = 0.000). The relationship between financial knowledge and financial behaviour (rho <=0.210, p-value >= 0.073) and financial attitude (rho <= 0.237, p-value >= 0.925) was not significant for wood processors, dressmakers, food industry and hairdressers. However, the wood processors, dressmakers, food industry, and hairdressers that demonstrated good financial behaviour also had good financial attitudes (rho >= 0.565, p-value <=0.023) (Table 4).

**Conclusions and policy implications**

This paper analyzed the relationship between financial literacy and financial behaviour. It concludes from the findings that the financial literacy levels of MSEs’ owners/managers are relatively high. This is evident in the high financial knowledge, financial behaviour, and the financial attitude of the owners/managers of MSEs in the Sunyani Municipality.

Generally, owners/managers of MSEs that are knowledgeable in financial issues also demonstrate good financial behaviour and attitude. However, good financial behaviour does not lead to a good financial attitude. Since financial literacy is necessary for the demonstration of good financial behaviour and attitude, it is recommended to MSEs strive for financial knowledge to enable them to make good financial decisions. Also, any policy that aims at the growth and development of MSEs must include financial education since it is key to good financial behaviour and decision-making.

**CONFLICT OF INTERESTS**

The author has not declared any conflict of interests.
Table 4. Relationship among financial knowledge, financial behaviour and financial attitude by type of enterprise.

| Type of Enterprise | Financial behaviour | Financial attitude |
|--------------------|---------------------|-------------------|
|                    | rho 0.375**         | 0.504**           |
|                    | P-value 0.007       | 0.000             |
|                    | N 50                | 50                |
| Agrochemical       | rho 0.916**         |                   |
|                    | P-value 0.000       |                   |
|                    | N 50                |                   |
| Wood Processing    | rho 0.194           | 0.183             |
|                    | P-value 0.152       | 0.147             |
|                    | N 64                | 64                |
| Dressmaking        | rho 0.210           | 0.120             |
|                    | P-value 0.073       | 0.309             |
|                    | N 74                | 74                |
| Food Industry      | rho 0.184           | 0.237             |
|                    | P-value 0.588       | 0.482             |
|                    | N 11                | 11                |
| Hairdressing       | rho 0.102           | 0.018             |
|                    | P-value 0.586       | 0.925             |
|                    | N 31                | 31                |
|                    | rho 0.618**         |                   |
|                    | P-value 0.000       |                   |
|                    | N 31                |                   |

**. Correlation is significant at the 0.01 level (2-tailed).*. Correlation is significant at the 0.05 level (2-tailed).

Source: Author

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