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RESEARCH ARTICLE

THE CAUSES AND CONSEQUENCES OF OVER-INDEBTEDNESS OF MICRO-FINANCE CLIENT: EVIDENCE FROM KHULNA DIVISION, BANGLADESH.

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Abstract

Microfinance strives to reduce poverty and promote social welfare, and thereby, MFIs provides a wide range of financial services to their client. However, some critics argue that microfinance can adversely drive its client towards over-indebtedness. Therefore, the key purpose of the study is to shed light on examining the causes and consequences of microfinance client in Bangladesh, especially in the context of Khulna division, as a few numbers of studies in Bangladesh have made an effort to serve this purpose. Using a partial least square method (PLS), and structural equation modelling (SEM), the study analyzed data of respondents (n=380). The study employed cross sectional survey method and infield (on-site) interaction with respondents to maximize response rate. The study found that psychological and cognitive bias, sociological, and economic factor cause over-indebtedness of micro-finance clients in Khulna division, Bangladesh. The study revealed that over-indebtedness causes negative material, social, and psychological and physical consequences. The findings of the study can be used to develop sophisticated policies and devise effective strategies as a mean of assisting the people, who are over-indebted, and who have the possibility to be over-indebted.

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Introduction:-

The annual GDP growth of Bangladesh decreased by 6.953 in 2018 from 7.334 in 2017 (The World Bank, 2018). The slower and more unequal household consumption growth has gained a wider attention to mainstream media, economists, and country leaders in Bangladesh. The fall of average annual consumption growth from 1.8% to 1.4% (The World Bank, 2018) is a sign of the income distribution gap (Piketty, 2015, p.51), which increases the discrepancy between rich and poor. The microfinance sector works to reduce poverty and generate employment, and thereby, it has a great role to equalize the income distribution. According to Microfinance Regulatory Authority (2018), the sector belongs to 706 licensed MFIs as of 1st July 2018.

In the annual report of 2016 related to NGO-MFIs in Bangladesh, the Microcredit Regulatory Authority (2018) claims that the microfinance activities in Bangladesh have taken already almost 3 million people under the shed of financial inclusion and improved the macro-economic growth at the same time. The microfinance activities have a great impact on every sphere of the rural financial system.

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According to the Microcredit Regulatory Authority Act 2006, section 2 (22),

“microcredit means loan facilities offered by microcredit organization certified under the act of poverty alleviation, employment generation, and facilitate a small entrepreneur and under the Act section no. 24 (20 (a) microcredit institution shall have the authority to accept deposit from members of the institution” (Microcredit Regulatory Authority, 2018, p.6).

Employment generation, and poverty alleviation are two important purposes of providing micro credit in Bangladesh (Microcredit Regulatory Authority, 2018, p.6). Some critics argue that the increasing demand of micro-credit in Bangladesh is vulnerable to overlapping (Microcredit Regulatory Authority, 2018). This means that the majority of microcredit clients tend to receive loans from one MFI to repay the outstanding loans of another MFI. In 2016, the microfinance sector accounted for BDT459 million loans outstanding and BDT787 million loan disbursement that are higher than BDT 352 million loans outstanding and BDT634 million loan disbursement in 2015 (Microcredit Regulatory Authority, 2016). In spite of having a significant contribution of MFIs in Bangladeshi economy, the sector is highly criticized by unchanging level of poverty, and high interest rate, while at the same time, the issues of exploitation of women borrowers, ineffective micro-finance provision of the target group, and loan repayment structure have highlighted this sector negatively.

Gurein (2013) depicts that little economies of scale, high administrative cost, and staff cost compared to formal financial institution leads MFIs to charge high interest rate, which leads to loan default. When clients are unable or struggling to pay debt, they fall under over-indebtedness (Schicks, 2010; Gonzalez, 2008, p.29). Through victimizing over-indebtedness, many microfinance clients are losing their valuable assets or properties (Van Bastealer, 2000, p.12). This not only harms the clients financially, but also deteriorates physically, psychologically, and socially. However, this is contradicted by the MFIs and its regulatory authorities who claim that MFIs are improving the living standard of clients through providing financial services, and creating employment opportunity. This point is contradicted by several critics who urge that MFIs are provoking clients to receive loan rather than justifying their real credit worthiness. This leads microfinance clients to suffer from over-indebtedness. This opens up as to the question what are the causes and consequences of over-indebtedness of microfinance clients?

Literature Review:-

Over-indebtedness:-

The concept ‘over-indebtedness’ is still a subject of debate due to its complexities in the context of micro-finance. Scholars often consider either the prospective of borrowers or lenders to define over-indebtedness. In micro-finance sector, the MFIs tend to employ portfolio at risk value (PAR value), developed by Albeit to measure the over-indebtedness of their clients. The term “liquidity and strategic default” have been used by Guerin (2013) to define over-indebtedness. When clients fail to repay the loan, they fall under liquidity defaulters. The strategic default occurs when clients take shelter of family, friends, money lenders, pawnbrokers, and other MFIs to avoid liquidity default. The current study views client perspective to define over-indebtedness. If clients have to struggle and sacrifice to repay the loan, they are over-indebtedness. This is confirmed by previous studies (Schicks, 2010, p.6; Gonzalez, 2008, p.).

The economic theories and concepts are widely applicable in identifying the causes and consequences of over-indebtedness of individuals, especially the microfinance clients (Schicks, 2010). The life cycle permanent income theory (Hall, 1978), the behavioral life cycle theory (Shefrin & Thaler, 1988), and the projection bias theory (Loewenstein et al., 2003). The lifecycle permanent income theory assumes that people tend to lead a stable life, and thereby, they divide consumption into present and future, while at the same time, do the fraction of their consumption. Although the theory has mass application in economics, Shefrin & Thaler (1988, p.971) argue that people cannot make rational decision in all of the cases due to perceived self-control, mental accounting, and framing that are presented by the behavioral life-cycle theory of consumption. This concept was used by Blundell et al., (2015, p.60) to perform studies on labor income dynamics, and Li et al., (2016, p.13) to examine the housing over time and over the life cycle. The projection bias theory (Loewenstein et al., 2003, p.4) assumes that people underappreciate their own behavior and other exogenous variables, and therefore, they cannot create a balance between their future and the current preference of consumption. This theory employs endowment effect, mental accounting, and perceived control that are the core concepts behavioral economics (Thaler & Benartzi, 2004, p.165).

As the behavioral economics (Thaler & Benartzi, 2004) have gained the replacement of the life cycle permanent income theory, and the projection bias theory, the concept of behavioral economics is highly relevant to our study in

measuring the causes and consequences of over-indebtedness of micro-finance clients at individual level. However, only a few of the studies have applied the behavioral life cycle theory to investigate the causes and consequences of over-indebtedness of Microfinance clients in the context of Bangladesh. Therefore, the theory has been used as a theoretical underpinning of the research.

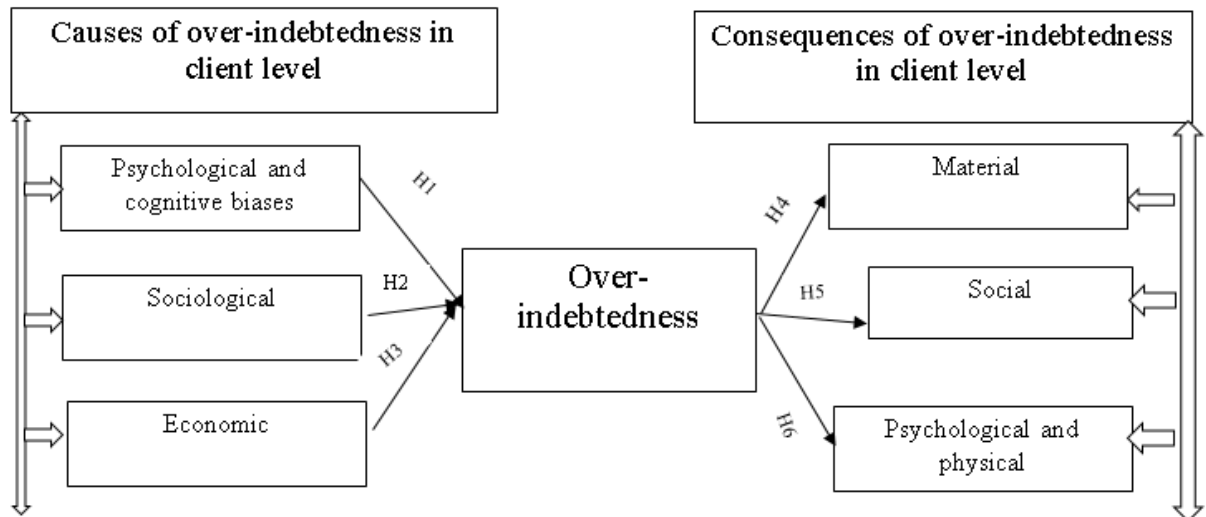


Figure 1:-Research Model

Causes of Over-indebtedness:-

Psychological and cognitive bias:-

The concept 'psychological and cognitive bias' is an utmost cause of over-indebtedness, as mentioned in the behavioral life cycle of consumption (Thaler & Benartzi, 2004, p.165). The author argue that people tend to highly focus on addressing the immediate needs rather than considering the future demand. In most of the cases, the individual receives micro-credit for addressing the immediate demand, but they do not consider the future consequences (Thaler & Benartzi, 2004). This concept is highly supported by the theory of projection bias (Lowenstein et al., 2003, p.4). The authors show that people tend to underestimate their behavior in terms of resembling between the current and future preference. In the context of micro-finance clients, the lack of poor self-control, and endowment effects lead to increasing over-indebtedness. Through the aforementioned discussion, the study proposes the following hypothesis.

H1: Psychological and cognitive biases lead to higher risk of over-indebtedness among micro-finance clients

Sociological:-

The current study is confined within the individual context in terms of identifying the causes and consequences of over-indebtedness of micro-finance clients. Schicks (2010) argue that people often take a multiple loan, when they experience scarcity of money. In some of the cases, they are highly criticized by their neighbors, friends, and peer groups. In addressing the financial demand, people often engage in multiple borrowing. The concept "economic socialization" whereby individual has poor ability to manage money and debt properly (Schicks, 2011). Disney (2008) claims that people often engage in over-indebtedness due to supporting the family members. Through the aforementioned discussion, the study proposes the following hypothesis.

H2: sociological factors lead to higher risk of over-indebtedness among micro-finance

Economic:-

Anderloni and Vandone (2008, p. 15) show that poor income, unemployment, poor working condition, and fluctuating income are the most important economic factors that causes over-indebtedness by performing a systematic literature review. This observation has been supported by Brown et al., (2005, p.23), who argue that when people suffer from financial scarcity, they tend to receive multiple borrowing and loan. This leads to increasing the over-indebtedness of microfinance client. Hossain (2013) employs a case study of Andhra Pradesh Crisis to conclude that the lack of sufficient income, lack of knowledge in managing money, and fluctuated income

increase the over-indebtedness of the individual. Through the aforementioned discussion, the study proposes the following hypothesis.

H3: Economic factors lead to higher risk of over-indebtedness among micro-finance

Consequences of over-indebtedness:-

Material:-

Van Bastelaer (2000, p.12) points out that the continuous default of loan installment causes the material repercussion, which leads to the seizure of collateral, especially assets, and other utensils. In order to repay the loan, the majority of the over-indebted micro-finance clients tend to sell their assets or reduces their expenditure (Gonzalez, 2008, 29). For example; during the off season of business, micro-finance clients are unable to repay the loan. This forces micro-finance clients engage in multiple borrowing (Schicks, 2011, p.5). Through the aforementioned discussion, the study proposes the following hypothesis.

H4: Over-indebtedness leads to negative material consequences

Social consequences:-

The over-indebted people are more vulnerable to experience humiliation and scolding. In his study, Smets and Bahre (2004, p.228-32) presents numerous cases of humiliation, and scolding due to over-indebtedness. In some the case, the over-indebted people are being harassed. This leads to deteriorating their social reputation and prestige. This point of view is further extended by Gurein et al., (2013, p.144-145), who argue that the over-indebted people continuously experience the reduction or deterioration of their social capital. Through the aforementioned discussion, the study proposes the following hypothesis.

H5: Over-indebtedness leads to negative social consequences

Psychological and physical consequences:-

When people are continuously victimized by humiliation and harassment, they loss their self-efficacy and self-esteem (Sweet et al., 2013, p.98-99). This lowers their self-confidence. In addition, it causes psychological and physical distress Gurein et al., (2013, p.144-145). For example; when people are vulnerable to be harassed, they feel anxiety and depression that causes the loss of their cognitive ability. In the long run, this might cause severe psychological disorder. Over-indebtedness does not only cause psychological distress, but also generated physical disease. For example; the probability of heart attack increases due to high anxiety and depression. To that end, over-indebtedness reduces the creditworthiness of an individual that lowers the possibility of taking future loan. This has a great impact on psychological and physical consequences. Through the aforementioned discussion, the study proposes the following hypothesis.

H6: Over-indebtedness leads to negative Psychological and physical consequences

Research questions and objectives:-

Research Questions	Research objectives
1. What are the causes of over-indebtedness of Microfinance clients in Khulna Division, Bangladesh?	To analyze the causes of over-indebtedness of Microfinance clients in Khulna Division, Bangladesh
2. What are the consequences of over-indebtedness of Microfinance clients in Khulna Division, Bangladesh?	To determine the consequences of over-indebtedness of Microfinance clients in Khulna Division, Bangladesh?

Research Methodology:-

Research setting:-

The microfinance client is the unit of analysis in the study, because the research strives to examine the causes and consequences of over-indebtedness of MFIs client at the individual level. The research population was the MFIs clients in Khulna division. The study examined the Khulna division for threefold reasons. First, the magnitude of poverty in Khulna exceeds the corresponding household survey (Khatun, 2017, p.14). Second, the majority of the MFIs client in Khulna involved in multiple borrowing (Afroz et al., 2014, p.2017). Third, the number of MFIs is increasing gradually in Khulna division due to rising the demand of micro loan (Mia, 2017, p.37). For example; the number of MFIs increased from 64 in June, 2009 to 109 in 2014 (Mia, 2017, p.37). However, the study selected two districts of the northern part (Chudanga and Jhenidah), and two districts of the southern part (Jessore and Kushtia). In terms of obtaining some measure of generalizability, the study employed a simple random sampling of micro-

finance clients listed in the Microfinance regulatory authority in Bangladesh, and Bangladesh Bureau of Statistics (BBS) (Bryman & Bell, 2015).

The sample size is a powerful tool to measure the representativeness of the sample, while at the same time to execute the statistical analysis (Saunders et al., 2009). However, the extant literature recommends various sampling theory to determine the sample size. The sample size requirements determine on the type of statistical analysis and the varieties of research opinion (Bryman & Bell, 2015). In performing structural equation modeling (SEM) as the prime tool for data analysis, it is crucial to consider more than 100 sample size (Hair et al., 2016). In terms of collecting data, the study conducted a cross sectional survey method due to its utility. The respondents of the study were microfinance clients, who are female and married. These individuals have an extensive knowledge about the causes and consequences of over-indebtedness.

Measurements:-

Through critically reviewing the extant literature and prior empirical studies, the study selected the measurement items to fit the research model of the study. The items for economic were adopted from Anderloni and Vandone (2008, p.15). Psychological and cognitive bias was adopted from Thaler & Benartzi (2004, p.165), and sociological was adopted from Schicks (2010). In identifying the constructs of the consequences of over-indebtedness, prior studies were selected. Material consequence was adopted from Van Bastecaler (2000, p.12); social consequences was adopted from Smets and Bahre (2004, p.228-32); and psychological and social consequences were adopted from Sweet et al., (2013, p.98-99). By adopting a five-point Likert scale (from '1' =strongly disagree to '5'=strongly agree), most of the variables were scored. The greater standing on the variables of interest was represented by the high score.

Table 1:-Measurement items

Construct	Item	Source
<i>Causes</i>		
Psychological and cognitive biases	PC1: I have taken loan for addressing immediate demands of money PC2: I have only assessed immediate loan benefit rather than assessing its potential benefit in the future PC3: I am not yet ready to cut my consumption for addressing the goal of saving plan	Anderloni and Vandone (2008, p.15)
Sociological	SI1: Social pressure leads me to take too much debt SI2: I can manage money and debt properly SI3: I take too much debt for supporting my family during a crisis	Thaler & Benartzi (2004, p.165)
Economic	EF1: My low income increase my over-indebtedness EF2: My unemployment increases my over-indebtedness EF3: Money mismanagement increases my over-indebtedness	Schicks (2010)
<i>Consequences</i>		
Material	MC1: I have reduced expenses to repay debt MC2: I have taken loan from other MFIs to repay loan MC3: I have sold assets to repay debt	Van Bastecaler (2000, p.12)
Social	SC1: I have to tolerate humiliation, and scolding for my over-indebtedness SC2: I have experienced harassment from MFIs for my debt SC3: Social capital deteriorates due to loss of reputation and standing in the community	Smets and Bahre (2004, p.228-32)
Psychological and physical	PCC1: I always feel anxiety and stress for over-indebtedness PCC2: Over-indebtedness has deteriorated my physical condition PCC3: I often misbehave with people for my over-indebtedness	Sweet et al., (2013, p.98-99)

Questionnaire design and data collection:-

The research questionnaire was divided into three parts. Part A contains relevant socio-demographic information, such as age, gender, marital status, education qualifications, household income level, and household size. Part B contains relevant information about the state of the loan taken from micro finance, such as amount of micro-credit, amount of monthly installment, and the number of MFIs from which the micro-finance clients have taken loan. In addition, it includes the constructs measuring over-indebtedness. Part C includes the constructs of measuring causes

and consequences of over-indebtedness. Initially, the questionnaire was developed by using Standard English, and then, it was translated into the local language (Bengali). The questionnaire had been revised repeatedly. Then, a pilot study of 20 participants was conducted in order to accurately present the choice of word, content, sequence, format, layout, simplicity and clarity. The feedback of pilot test and pre-testing were employed to develop the final version of the questionnaire.

In order to get the maximum response rate, the study conducted one to one, face to face, and on-site survey. Saunders & Lewis (2012) claim that the in-field or on-site survey technique is a better choice to get maximum responses, compared to the telephone, mail, and online survey. In addition, it helps to minimize the missing value of the data, while at the same time to improve the accuracy of the data. Two researchers relentlessly worked to collect data. In addition, four research assistants were recruited to distribute a copy of the questionnaire to each respondent. As the majority of the respondents were not highly educated, it has been clarified them the purpose of the research, and how the questionnaire was to be filled by avoiding mistakes. Even, they were clarified how the completed questionnaires would be collected. However, five hundred survey questionnaires were distributed among the microfinance clients. We returned 423 questionnaires, but 380 questionnaires were usable to interpret the data. The data collection period was from 3rd March 2018 to 24th July 2018.

Data analysis and findings:-

The key purpose of using partial least squares (PLS) method is to analyze the data of the study. Wong (2013) define PLS as a statistical technique to develop a structural equation model (SEM). Many acknowledge authors have considered SmartPLS as a sophisticated software to analyze data in terms of partial least square equation modelling (Hair et al., 2016). It saves time in terms of data analysis (Afthanorhan, 2013).

Socio-Demographics:-

Table 2:-Frequency

Description	Frequency	Percentage	Description	Frequency	Percentage
Location			Marital status		
Jhenidah	120*	32*	Married	380	100
Jessore	100	26	Unmarried	0	0
Chuadanga	100	26	Amount of micro-credit loan		
Kushtia	60	16	Less than 10000	0	0
Gender			10000-19999	22	6
Female	380	100	20000-29999	14	4
Male	0	0	30000-39999	12	3
Age			40000-49999	42	11
18-25	20	5	50000+	290*	76*
26-33	152*	40*	Amount of monthly installment		
34-41	138	36			
42-50	70	19	Less than 1000	0	
50+	0	0	1000-1999	4	1
Education			2000-2999	11	3
Not going to school	102	27	3000-3999	47	12
Primary School	119	31	4000-4999	92	24
High School	132*	35*	5000+	226*	60*
College	16	4	Number of MFIs from which taken loan		
University	11	3	1	19	5
Household Income			2	42	11
0-5000	25	7	3	99*	26*
6000-10000	180*	47*	4	90	24
11000-15000	102	27	5	72	19
16000-20000	49	13	5+	58	15
20000+	24	6			
Occupation					
Farming	96	25			

Business	71	19			
Day labor	162*	43*			
Job holder	20	5			
Others	31	8			

* The majority of the respondents in terms of frequency and percentage

The table 2 shows the socio-demographic characteristics of the micro-finance clients, who were the respondents of the study. Geographically, 32% respondents in Jhenidah participated in the study, followed by Jessore (26%), Chuadanga (26%), and Kushtia (16%). All the respondents (100%) were female and married. The majority of the participants (40%) were aged between 26 and 33. The education level of the most of the participants (35%) was high school level. The level of income of the majority of the respondents is between 6000 and 10000. The occupation of the majority of the respondents (43%) were day labor, followed by farming (25%), business (19%), job holder (5%), and others (8%). The majority of the participants (76%) took loan more than 50000BD TK. Most of the participants (60%) have to pay monthly installment more than 50000. However, most of the respondents (26%) took loan from 3 MFIs, followed 1 MFI (5%), 2 MFIS (11%), 4 MFIs (24%), 5 (19%), and more than 5 (15%).

Measurement model:-

Prior to testing hypotheses, it is crucial to estimate the reliability and validity of the constructs. The study assessed the reliability by using Cronbach's alpha, and composite reliability. Hair et al., (2014) point out that the acceptable value of Cronbach's alpha is more than 0.60, and so is applicable for composite reliability. Table 3 shows that the composite reliability and Cronbach's alpha of all constructs are more than 0.798 and 0.621 respectively (Table 3). This reveals that all constructs have addressed the reliability criteria of composite reliability and Cronbach's alpha value.

Table 3:-The Measurement Model

	Cronbach's Alpha	Composite Reliability	AVE
Over-Indebtedness	0.912	0.928	0.617
Psychological _and_ Cognitive Biases	0.765	0.865	0.684
Sociological	0.621	0.798	0.571
Social	0.840	0.903	0.755
Material	0.694	0.803	0.594
Economic	0.671	0.814	0.594
Psychological _and_ Physical	0.640	0.807	0.583

The convergent validity was assessed by employing an average variance extracted (AVE) and items loading. Fornell & Larcker (1981) say that the accepted value of the average variance extracted (AVE) and item loading must be greater than 0.50. The AVE of all constructs is more than 0.571, while at the same time 0.547 for item loading (Table 4). This is enough to prove that all constructs were deemed to have adequate validity. For assessing the discriminant validity, it was employed cross loading matrix. As the value of all constructs is more than 0.547, the study addressed the discriminant validity criteria.

The square root of the AVE and the cross loading matrix were used to estimate the discriminant validity. Fornell & Larcker (1981) argue that the square root AVE of a construct must be greater than its correlation with other constructs in order to address the criteria of discriminant validity. The table 5 shows the square root of the AVE and correlation matrix. It presents that the square root of the average is greater than the cross loading

Structural model:-

In identifying the path relationships among the constructs in the current research model, it was constructed the structural model, while at the same time, it was used the bootstrap method in testing the research hypothesis. By using the *t*-statistics and path coefficient (β), it was tested the relationship between endogenous and exogenous variables. Therefore, the study found that psychological and cognitive biases ($t= 4.021$, $\beta=0.253$), sociological ($t= 2.662$, $\beta=0.171$), economic ($t= 3.565$, $\beta=0.224$), material ($t= 8.230$, $\beta=0.344$), social ($t= 8.453$, $\beta=0.454$), and psychological and physical ($t= 8.856$, $\beta=0.512$). This results scientifically motivate to accept H1, H2, H3, H4, H5, and H6.

Table 4:-Cross loading matrix

	Economic	Material	Psychological_ and _Cognitive Biases	Psychological _ and Physical	Social	Sociological
EF1	0.783	0.502	0.430	0.595	0.510	0.426
EF2	0.757	0.544	0.192	0.471	0.609	0.514
EF3	0.771	0.731	0.206	0.480	0.683	0.696
MC1	0.242	0.547	0.575	0.476	0.331	0.225
MC2	0.718	0.891	0.250	0.531	0.648	0.663
MC3	0.702	0.888	0.193	0.525	0.640	0.698
PC1	0.387	0.383	0.868	0.554	0.444	0.351
PC2	0.301	0.399	0.887	0.531	0.443	0.364
PC3	0.262	0.293	0.715	0.408	0.374	0.382
PCC 1	0.553	0.476	0.454	0.744	0.516	0.482
PCC 2	0.486	0.474	0.535	0.830	0.567	0.516
PCC 3	0.520	0.592	0.400	0.712	0.625	0.532
SC1	0.704	0.611	0.434	0.712	0.880	0.647
SC2	0.670	0.651	0.408	0.622	0.896	0.652
SC3	0.602	0.642	0.488	0.603	0.830	0.595
SI1	0.544	0.567	0.109	0.472	0.529	0.727
SI2	0.673	0.698	0.247	0.512	0.682	0.842
SI3	0.351	0.370	0.576	0.523	0.437	0.688

Table 5:-Correlation Matrix and Square root of average

	Economic	Material	Psychological and Cognitive Biases	Psychological and Physical	Social	Sociological
Economic	0.627					
Material	1.149	0.596				
Psychological and Cognitive Biases	0.524	0.621	0.734			
Psychological and Physical	1.031	1.070	0.856	0.608		
Social	0.991	0.987	0.618	1.010	0.799	
Sociological	1.055	1.149	0.627	1.067	0.994	0.589

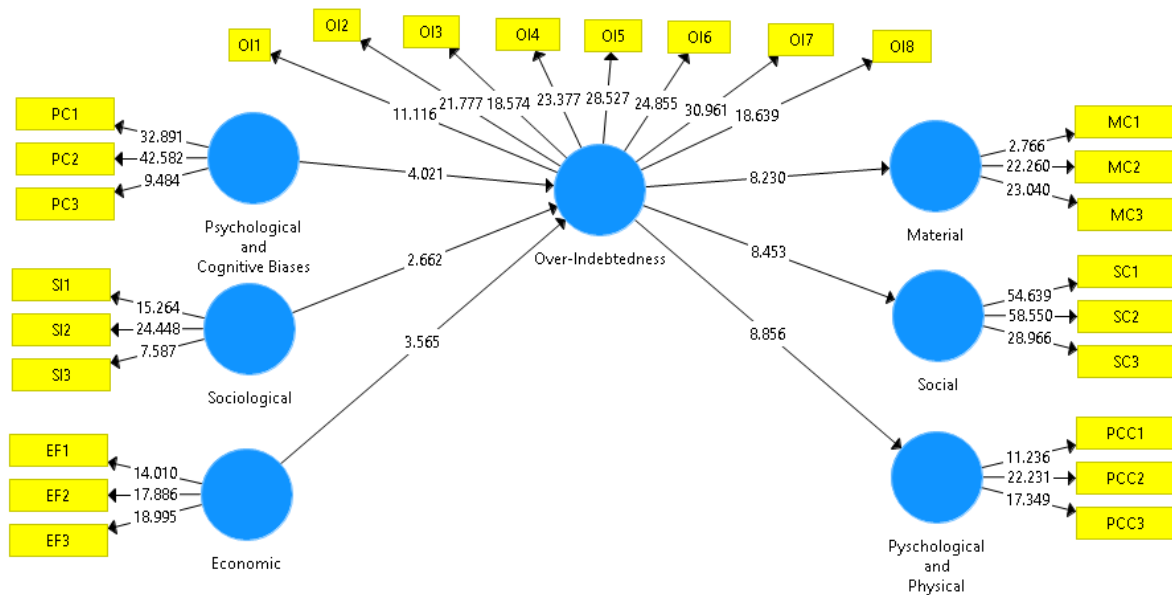


Figure 2:-Findings of SEM model

Table 6:-Structural model

Hypothesis	Path	Beta (β)	T Statistics	P Values	Comment
H1	Psychological and Cognitive Biases -> Over-Indebtedness	0.253	4.021	0.000*	Accepted
H2	Sociological -> Over-Indebtedness	0.171	2.662	0.008*	Accepted
H3	Economic -> Over-Indebtedness	0.224	3.565	0.000*	Accepted
H4	Over-Indebtedness -> Material	0.444	8.230	0.000*	Accepted
H5	Over-Indebtedness -> Social	0.454	8.453	0.000*	Accepted
H6	Over-Indebtedness -> Psychological and Physical	0.512	8.856	0.000*	Accepted

* Significant at $p < .05$, $N=380$ **Discussion:-**

In spite of having a numerous studies (e.g. Schicks, 2010; Hossain, 2013; Disney et al., 2008, among others) on identifying the drivers of over-indebtedness at individual, institutional, and environmental level, few studies have tested the causes and consequences of over-indebtedness in client level, especially in the context of Bangladesh. Even, no study measures the causes and consequences of over-indebtedness of micro-finance client in Khulna Division, Bangladesh.

The study found that there is a strong positive relationship between psychological and cognitive bias and over-indebtedness. The result is consistent with Thaler & Benartzi, (2004). In addressing the immediate needs, people often loss their self-efficacy and self-control, and thereby, they underappreciate their behavior and future preference. This result is confirmed by the behavioral life cycle consumption theory, and projection bias theory (Thaler & Benrtzi, 2004; Lowenestini et al., 2003). There is a positive relationship between sociological and over-indebtedness. The fact is that the lack of managing money properly, and social pressure often force microfinance clients to engage in multiple borrowing (Schicks, 2010). In some of the cases, people are being forced to take loan by their family

who needs financial support (Disney, 2008). Low income, poor employment opportunity, and fluctuating income leads the possibility of being over-indebted (Anderloni & Vandone, 2008). The result shows that economic factor cause over-indebtedness. This finding is confirmed by Brown et al., (2005). In essence, the psychological and cognitive bias, sociological, and economic factors are mainly cause over-indebtedness at the individual level.

The study revealed that over-indebtedness causes material repercussion. This means that over-indebted people are more vulnerable to repay monthly installment. This increases the probability of loan default. When micro-finance clients fail to meet their installment in a proper way, they decide to sell their valuable assets and utensils (Schiks, 2011; Van Bastealer, 2000; Gonzalez, 2008). Through the results of the study, over-indebtedness leads to negative social consequences and so is negative psychological and physical consequences. The existing literature shows that over-indebtedness decreases the self-esteem of an individual. This leads to decreasing their social reputation, and self-confidence.

Therefore, over-indebted people are more vulnerable to be suffering from psychological and physical problem, such as anxiety, depression, and heart attack (Smets & Bahre, 2004; Gurein et al., 2013; and Sweet et al., 2013).

The findings of the study can be used to develop sophisticated policies and devise effective strategies as a mean of assisting the people, who are over-indebted, and who have the possibility to be over-indebted. The study suggests that micro-finance institutions should properly assess the creditworthiness prior to granting loans. This will reduce the probability of loan default. Further, it recommends that micro-finance clients should employ the key concepts of behavioral theory, developed by Thaler & Nertzi (2004). Specifically, the microfinance clients should properly assess information, give full attention, and take control over their temptation in addressing the immediate needs for considering the future preferences. This will help them to overcome from over-indebtedness. Moreover, the study suggests that Microfinance Regulatory Authority should properly pay attention to implement the existing rules and regulations in taking control over the microfinance activities.

Conclusion:-

MFIs play a crucial role in developing the standard of living of rural people, while at the same time, contributing to the economic welfare of Bangladesh. The key purpose of MFIs to help the rural people so that they can be self-employed, and reduce their poverty level. However, the current research has found a significant gap between the purpose of MFIs and its practical implication. The study strives to identify the causes and consequences of micro-finance clients at the individual level. By employing partial least squares (PLS) method, and employing structural equation modelling, the study found that psychological and cognitive bias, sociological, and economic factor cause over-indebtedness of micro-finance clients in Khulna division, Bangladesh. In addition, the study revealed that over-indebtedness causes negative material, social, and psychological and physical consequences.

The study has twofold limitations. First, the study only identifies the causes and consequences of over-indebtedness based on Khulna division. Therefore, it is not worthy to generalize the research results in terms of the overall Bangladesh. Second, the study only collects and analyzes quantitative data. Consequently, further research can be carried out by using both qualitative and quantitative data based on using a large same size of the whole country.

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