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Dedication

It is our pleasure and great privilege to present the thirty-sixth issue of the Academic Journal of Research and Scientific Publishing to all researchers and doctors who published their research in the issue, and we thanks and appreciate to all contributors and supporters of the academic journal and those involved in the production of this scientific knowledge edifice.

Academic Journal of Research and Scientific Publishing

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The Relationship between School Leadership and Teacher Motivation in Kuwait

Nader Abdullah Shaddad

MSc Educational Leadership and Management, Manchester Metropolitan University,
United Kingdom

Email: dr.nader_al3jmiii@outlook.com

Abstract:

The main aim of this paper was to examine how school leadership influences teacher motivation in Kuwait. This purpose has been fulfilled using both graphical and statistical analysis methods applied to primary quantitative data. The data was gathered from 108 Kuwaiti teachers from 15 Kuwaiti schools, including the author's school. It can be concluded that school leadership has a strong positive effect on the degree to which Kuwaiti teachers are motivated in the workplace. The carried out analysis has demonstrated that monetary rewards and working conditions quality statistically predict the participants' motivation level.

Considering the limitation of this paper, it can be recommended that the future researchers in the field should examine the impact of motivation and hygiene factors such as employee autonomy, personal development opportunities, emotional support and non-monetary rewards on the motivation of Kuwaiti teachers. Furthermore, it is recommended that the future researchers in the field should contact a greater number of Kuwaiti teachers in order to add to internal validity and reliability. Finally, it is recommended that the future researchers should gather data from Kuwaiti school leaders to arrive at more comprehensive conclusions concerning the link between school leadership and teacher motivation in Kuwait.

Keywords: Leadership styles, Motivation, School, Teachers

1. Introduction

The main aim of this paper is to examine how school leadership influences teacher motivation in Kuwait. The role of leadership in employee motivation is a well-studied area. Numerous researchers have attempted to identify what factors associated with different leadership styles are the most effective in building employee motivation (Markova and Ford, 2011, p. 813; Frick, 2009, p. 50). It is commonly accepted that the extent to which workers are motivated to demonstrate high levels of performance is positively associated with good communication, competitive salary, access to career development opportunities, close collaboration between leaders and their followers, frequent praise from a leader and good working conditions (Duignan, 2012, p. 67). At the same time, school leadership and its impact on teacher motivation is understudied, which justifies the selection of this topic (Cameron, 2008, p. 57; Cameron, 2013, p. 76). Furthermore, too little attention has been given to this issue in Kuwait, which is another reason for the selection of this topic (Dimmock and Tan, 2013, p. 320).

Employee motivation can be explained by means of different theories, the most popular of which are needs-based theories (Markova and Ford, 2011, p. 813). According to one of these theories, which is usually referred to as Maslow's (1943, p. 370) hierarchy of needs, employees' motivation to a considerable degree depends on their employer's ability to satisfy their needs, which range from the most basic needs (e.g. the need for food and shelter) to the intellectual needs (e.g. the need to self-actualise, fulfil potential and achieve personal goals) (Freeman and Auster, 2011, p. 15). Herzberg's (1968, p. 53) two-factor theory is another needs-based theory, which implies that there are two major motivator groups, namely hygiene or extrinsic factors (e.g. working conditions, salary, job status, working relations and benefits) and motivation or intrinsic factors (e.g. recognition, achievements, responsibility and growth opportunities).

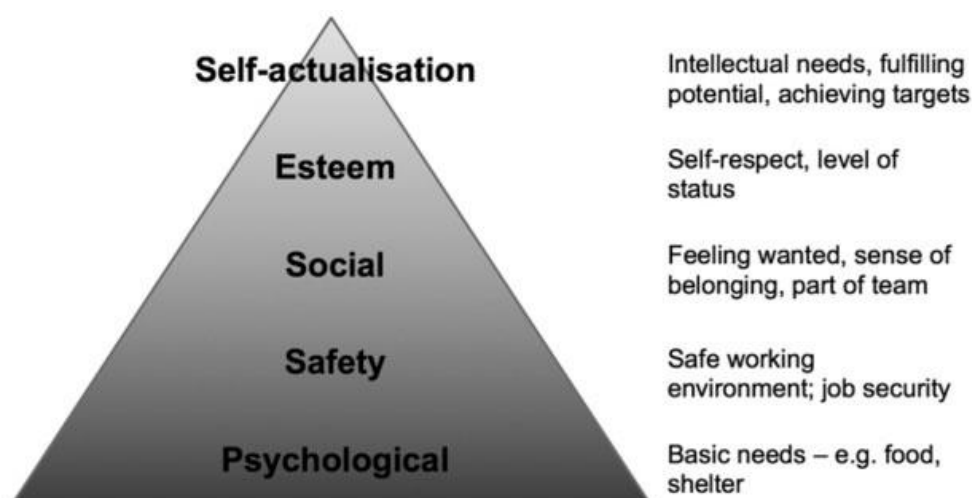
According to the leadership theory, there are two major leadership styles, namely transformational and transactional (Duignan, 2014, p. 152; Heck and Hallinger, 2010, p. 226). Transformational leadership is characterised with inspirational motivation, individual consideration and intellectual stimulation (Cameron, 2013, p. 76). Transformational leaders tend to encourage their followers through close communication.

At the same time, transactional leaders are more interested in reinforcements and rewards, while communication is of secondary importance (Muogbo, 2014, p. 134; Mercer et al., 2010, p. 57). These leaders put an emphasis on labour-money relations. Gopal et al. (2014, p. 1) mentioned that rewards, self-actualisation needs, improved working conditions and compensation were among the strongest predictors of employee motivation. In turn, Naile (2014, p. 175) found that transformational leadership behaviours contribute to higher levels of employee commitment, trust and motivation in the workplace.

2. Literature Review

Employee motivation plays the key role in the success of any organisation and its ability to achieve strategic goals and demonstrate good financial results (Moos, 2012, p. 461). Motivated workers demonstrate higher levels of productivity, commitment and loyalty. That is why leaders and managers should pay close attention to the issue regardless of the industry, in which their organisation operates (Markova and Ford, 2011, p. 813). In accordance with Dimmock and Tan (2013, p. 320), workers' motivation depends on their ability to meet their needs in the workplace. The researchers were convinced that individuals perform better and more consistently if their needs are met by their employer. One of the first attempts to link motivation with the commonly recognised human needs was made by Maslow (1943, p. 370).

Figure 1: Maslow's Hierarchy of Needs



Source: Riley (2012, p. 1)

Maslow (1943, p. 370) structured human needs according to their perceived importance. Psychological and safety needs were reported as the most basic needs, which can be fulfilled with the help of financial remuneration and pay (Riley, 2012, p. 1). Interestingly, it is impossible to meet the needs of a higher level without addressing the mentioned basic needs (Dunham and Pierce, 1989, p. 84; Tan, 2012, p. 183). Hence, school managers cannot count on teachers' self-actualisation until their psychological and safety needs are ignored. It should be critically remarked, however, that Maslow's (1943, p. 370) framework suffers from the lack of detail since it does not adequately differentiate between universal and personal needs.

The mentioned limitation was overcome by Herzberg (1968, p. 53) who suggested that employee motivation depends on two broad groups of factors, namely hygiene factors and motivation factors.

Figure 2: Herzberg's Two-Factor Theory

Hygiene Factors	Motivation Factors
<ul style="list-style-type: none"> • Working Conditions • Salary & Job Status • Company Policy & Benefits • Working Relationships 	<ul style="list-style-type: none"> • Recognition • Achievements • Level of Responsibility • Need for Personal Growth

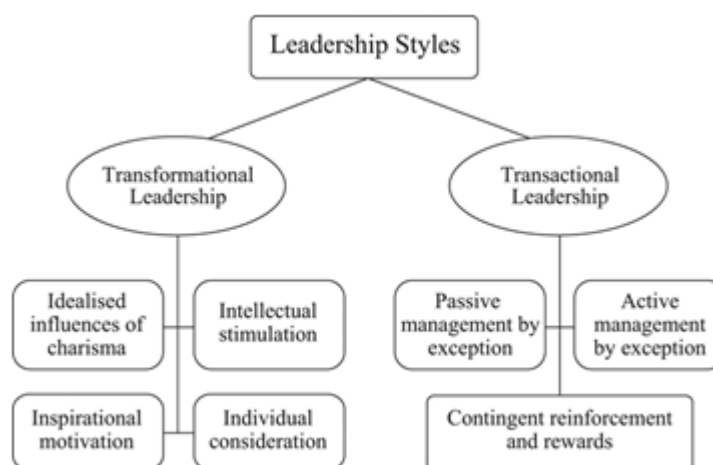
Source: Herzberg (1968, p. 53)

Alternatively to Maslow's (1943, p. 370) theory of needs, Herzberg (1968, p. 53) outlined specific individual factors that shape and form a worker's motivation. The hygiene group of factors are extrinsic to the work and include aspects such as working conditions, salary, job status, company policy and benefits and working relationships (Muogbo, 2014, p. 134). In turn, motivation factors refer to intrinsic conditions of the job, including recognition, achievements, responsibility and personal growth (Li et al., 2015, p. 422). In their study, Markova and Ford (2011, p. 813) found that hygiene factors were the main contributors to teachers' motivation. These findings can be explained by the fact that teachers' salary is usually lower in comparison with other jobs (Haines et al., 2008, p. 443).

However, the researchers were focused exclusively on developing countries, meaning that their outcomes cannot be applied to developed countries. Nevertheless, given that Kuwait is a developing country, Markova and Ford's (2011, p. 813) outcomes are still relevant to this paper.

In their study, Fiedler (1971, p. 54) distinguished between two major leadership styles, namely transactional and transformational.

Figure 3: Transactional and Transformational Leadership



Source: Fiedler (1971, p. 54)

As it can be observed from the scheme above, the transformational leadership style is characterised with idealised influences of charisma, intellectual stimulation, inspirational motivation and individual consideration (Erkutlu, 2008, p. 708). In turn, transactional leaders put a heavy emphasis on reinforcement and rewards as well as passive and active management (Almansour, 2012, p. 161). Li et al. (2015, p. 422) mentioned that transactional leadership is more focused on labour-money relations, while transformational leadership is about close communication and inspiration. Individual needs and personality are of secondary importance to transactional leaders, meaning that they are more result-oriented in comparison with transformational leaders (Togia et al., 2012, p. 41). Therefore, the need-based theories are linked much closer with the transformational leadership style.

Transformational leaders were reported by Othman and Wanlabeh (2012, p. 237) to give close attention to the empowerment of their followers through intrinsic motivators, including recognition, responsibility and career growth opportunities.

On the downside, transactional leaders tend to motivate their followers using extrinsic motivators such as bonuses, financial remuneration and favourable working conditions (Erkutlu, 2008, p. 708). Although both transactional and transformational leadership behaviours are perceived as standalone styles, real-life leaders usually use a mix of these styles to achieve organisational goals (Almansour, 2012, p. 161).

Regardless of their leadership style, effective leaders and managers should adequately respond to their followers' needs to contribute to their motivation in the best possible way. This can be done by increasing workers' pay, establishing closer collaboration, introducing disciplinary procedures, creating better working conditions and allocating new responsibilities (Meyer et al., 2004, p. 91).

In accordance with Li et al. (2015, p. 422), the need for employee motivation can be addressed by leaders and managers through communication, feedback and participation. The role of communication in employee motivation was also emphasised by Haines et al. (2008, p. 443) who reported that only by establishing close communication with their followers, organisational leaders can effectively add to their motivation, commitment and involvement. Freeman and Auster (2011, p. 15) were convinced that feedback was a form of manager-employee communication. By providing their followers with positive feedback, managers and leaders can also add to their overall motivation (Muogbo, 2014, p. 134). At the same time, negative feedback may negatively impact workers' willingness to perform tasks. Finally, it is commonly accepted that effective leaders should be participative, meaning that they should involve their followers in the process of taking management decisions at the organisational level (Fidler et al., 2009, p. 435). By doing this, leaders contribute to employees' feeling of value and engagement. Nevertheless, the final decision making authority is still retained by the leader (Erkutlu, 2008, p. 708).

The relationship between leadership and employee motivation was investigated by Gopal et al. (2014, p. 1). The researchers attempted to identify the impact of different leadership styles (i.e. transformational, transactional and laissez-faire) on employee motivation using primary evidence. Gopal et al. (2014, p. 1) concluded that workers were motivated by rewards, self-actualisation needs, improved working conditions and compensation. It was also found that transformational leadership was the most effective in building strong employee motivation in the workplace.

These findings correlate closely with those produced by Meyer et al. (2004, p. 91), according to whom transactional leaders do not pay close attention to their followers' needs and abilities. At the same time, by providing a supportive environment, transformational leaders help workers develop their talent (Akpa et al., 2011, p. 100).

Even though Gopal et al. (2014, p. 1) managed to link leadership with employee motivation, the generalisability of their study is limited to a certain sector of economy, namely the oil and gas sector and cannot be applied to other sectors. Nevertheless, Dimmock and Goh (2011, p. 215) were convinced that the relationship between leadership and employee motivation does not change across industries or economy sectors, meaning that Gopal's et al. (2014, p. 1) findings are still applicable to this document.

A more focused empirical study was carried out by Naile (2014, p. 175). The researcher attempted to establish the role of leadership in motivating the teaching staff of 13 high schools. Similarly to this paper, primary data was collected from teachers by means of self-administered questionnaires. Naile (2014, p. 175) arrived at the conclusion that there was a positive relationship between transformational leadership behaviours and employee commitment, trust and motivation. Similar outcomes were produced by Akpa et al. (2011, p. 100) who reported that transformational leaders were capable of building trust, encouraging creativity and inspiring a shared vision in a more effective way in comparison with transactional leaders. At the same time, the transactional leadership style is more effective in contributing to employee productivity in a short-term perspective. Through a set of reward-punishment schemes, transactional leaders can effectively influence a level of employee motivation (Othman and Wanlabeh, 2012, p. 237). However, transactional leaders' ability to meet their followers' self-esteem and self-actualisation needs is highly limited, making this leadership style less effective compared to transformational behaviour in the long-term (Haines et al., 2008, p. 443).

A sense of belonging was reported by Togia et al. (2012, p. 41) as an important indicator of employee motivation. As mentioned by the researchers, this sense is constructed by organisational leaders and managers due to worker involvement and information sharing between employees (Togia et al., 2012, p. 41). Teachers who have gained a sense of belonging are willing to demonstrate high levels of performance since they do not oppose their personal goals to their school's priorities (Haines et al., 2008, p. 443).

Therefore, according to the existing body of literature, there is a positive relationship between this intrinsic motivator and employee motivation. Career growth opportunities were also attributed by Yousaf et al. (2015, p. 133) to intrinsic motivators. The role of development opportunities in employee motivation was examined by Dimmock (2012, p. 94).

It was concluded that only by providing their followers with career growth opportunities, organisational leaders and managers can fulfil their followers' need for self-actualisation and self-esteem (Dimmock, 2012, p. 94). At the same time, the lack of this intrinsic factor has a strong negative impact on the extent to which a worker is willing to demonstrate high levels of performance (Akpa et al., 2011, p. 100).

According to Othman and Wanlabeh (2012, p. 237), it is possible to motivate responsible workers by assigning challenging tasks to them. On the contrary, irresponsive and lazy employees were reported by Li et al. (2015, p. 422) to demonstrate resistance to additional challenges. In their empirical investigation, Yousaf et al. (2015, p. 133) found that completing challenging tasks and assignments positively influenced individuals' motivation and willingness to achieve better results. The researchers reported that more complex tasks were perceived by students as intellectual challenges. Yousaf's et al. (2015, p. 133) study is relevant to this document since it was also focused on the learning and teaching environment. At the same time, it is important to ensure the feasibility of assigned tasks. Otherwise, too complicated assignments may ruin teacher motivation (Li et al., 2015, p. 422; Freeman and Auster, 2011, p. 15).

3. Methodology

The methodology is based on primary data, which can be defined as the "data collected specifically for the research project being undertaken" (Saunders et al., 2009, p. 598). Primary data was gathered with the help of self-administered questionnaires. This technique was selected since it allows for collecting a large amount of data at low financial and time costs (Nandagopal et al., 2009, p. 84). Questionnaires are unified, meaning that each sample consists of the same set of statements and questions (Bryman and Bell, 2010, p. 105). Thus, there is no need to devise a new questionnaire for each survey participant.

Furthermore, questionnaires provide researchers with quantitative data, which can be easily processed with the help of graphical or statistical analysis techniques and methods (Zikmund et al., 2003, p. 192). On the downside, self-administered questionnaires limit respondents' creativity since they are offered to select from several response options, rather than giving their own answers.

As a result, their ability to give honest and detailed answers is limited (Bryman and Bell, 2010, p. 105). Participant bias was reported by Saunders et al. (2009, p. 156) as an important limitation of self-administered questionnaires as a data collection technique.

Given that this paper is focused on Kuwaiti schools, teachers are approached as the target population. It was initially planned to gather data from at least 100 Kuwaiti teachers. In accordance with Sekaran and Bougie (2009, p. 128), questionnaire surveys have a low response rate, meaning that it is impossible to obtain data from 100 individuals by sending 100 questionnaires. A normal response rate of a questionnaire survey is commonly accepted to be around 35% (Zikmund et al., 2003, p. 192). Hence, 300 questionnaires were distributed among potential respondents in 15 Kuwaiti schools, including the author's school. As a result, 108 individuals returned their questionnaires. It should be mentioned that the questionnaires with missing data were excluded from the sample in order to add to the validity and reliability of the produced findings (Nandagopal et al., 2009, p. 84). The questionnaire sample is presented in Appendix A.

The non-probability convenience sampling technique was used, meaning that only the most easily accessed teachers from Kuwaiti schools were contacted. On the one hand, this sampling technique allowed the researcher to gather data in an effective and efficient way since all Kuwaiti teachers had equal chances to be contacted (Ghauri and Gronhaug, 2005, p. 87). On the other hand, the formed sample may not be representative of the whole population of teachers from Kuwaiti schools (Nandagopal et al., 2009, p. 93). The Likert scale methodology was employed to measure Kuwaiti teachers' responses and complete a set of raw data. Secondary data was collected from a wide range of reliable sources, including journals, empirical articles and books on the link between leadership and employee motivation (Markova and Ford, 2011, p. 813; Frick, 2009, p. 50).

Primary data was processed using both graphical and statistical methods of analysis. The Excel software was used to complete a set of raw data and build charts, histograms and graphs (Bryman and Bell, 2010, p. 105). In turn, the researcher utilised the Statistical Package for the Social Sciences (SPSS) software in order to analyse the collected data statistically and identify whether there was a relationship between school leadership and teacher motivation in Kuwait (Collis and Hussey, 2003, p. 95).

The obtained results are going to be contrasted and compared with secondary evidence in the following sections of this document (Sekaran and Bougie, 2009, p. 128).

Given that this paper attempts to link school leadership and teacher motivation, it is relevant to state that it is explanatory in nature (Collis and Hussey, 2003, p. 77). Thus, school leadership aspects and characteristics are used as independent variables, while teacher motivation is a dependent variable. Each variable can be defined as follows.

Table 1: Variable Definition

No	Variable	Definition	Literature Source
1	BLN	A sense of belonging	Togia et al. (2012, p. 41)
2	RSP	Responsibility	Othman and Wanlabeh (2012, p. 237)
3	BNF	Status and reputation benefits	Dimmock (2012, p. 94)
4	RWR	Monetary reward	Moos (2012, p. 461)
5	CMP	Competition	Togia et al. (2012, p. 41)
6	OPP	Career growth opportunities	Duignan (2012, p. 67)
7	PUN	Punishments and penalties	Togia et al. (2012, p. 41)
8	CON	Working conditions	Duignan (2012, p. 67)
9	MOT	Teacher motivation	Cameron (2008, p. 57)

According to the table above, 'BLN', 'RSP', 'BNF', 'RWR', 'CMP', 'OPP', 'PUN' and 'CON' are dependent variables, while 'MOT' is the dependent variable. The statistical analysis has the following regression model:

(1)

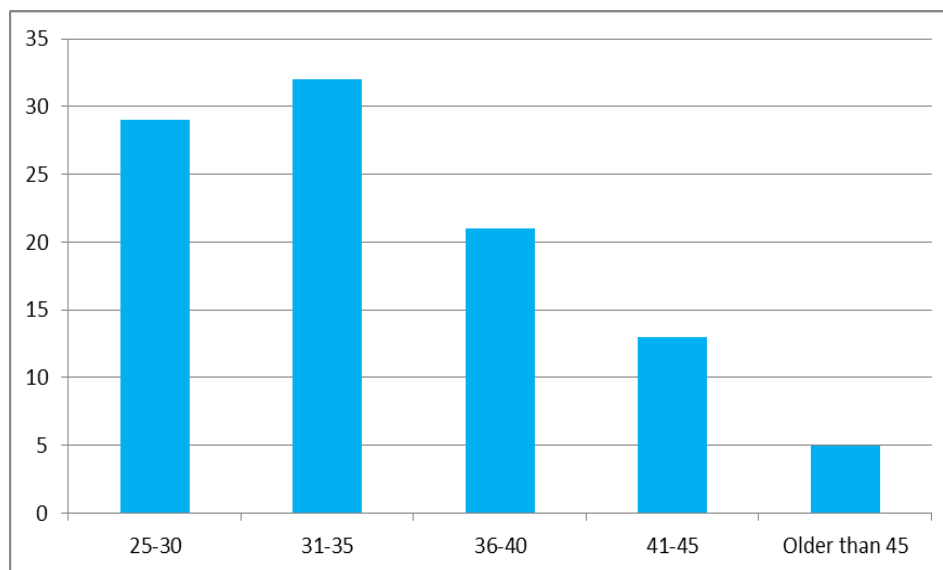
where, 'MOT' is teacher motivation (the dependent variable), α_0 is a constant, $\beta_{1,2,3...8}$ are indicators that influence the predictors, 'BLN', 'RSP', 'BNF', 'RWR', 'CMP', 'OPP', 'PUN' and 'CON' are dependent variables ($i=1, 2, 3...108$) and ϵ is residuals.

Ethical issues should be discussed in this section since primary data is involved. No sensitive information regarding respondents' telephones or addresses was collected. Furthermore, all questionnaires were fully anonymous in order to add to Kuwaiti teachers' willingness to participate in the questionnaire survey (Easterby-Smith et al., 2008, p. 94). The informed consent of all teachers was gained before collecting any data in order to ensure their voluntary participation (Collis and Hussey, 2003, p. 77). All the gathered data is securely stored on the author's personal computer. Access to this data is restricted to any third-party individual or organisation without the formal permission of the questionnaire survey participants (Saunders et al., 2009, p. 254).

4. Analysis

4.1. Respondent Background

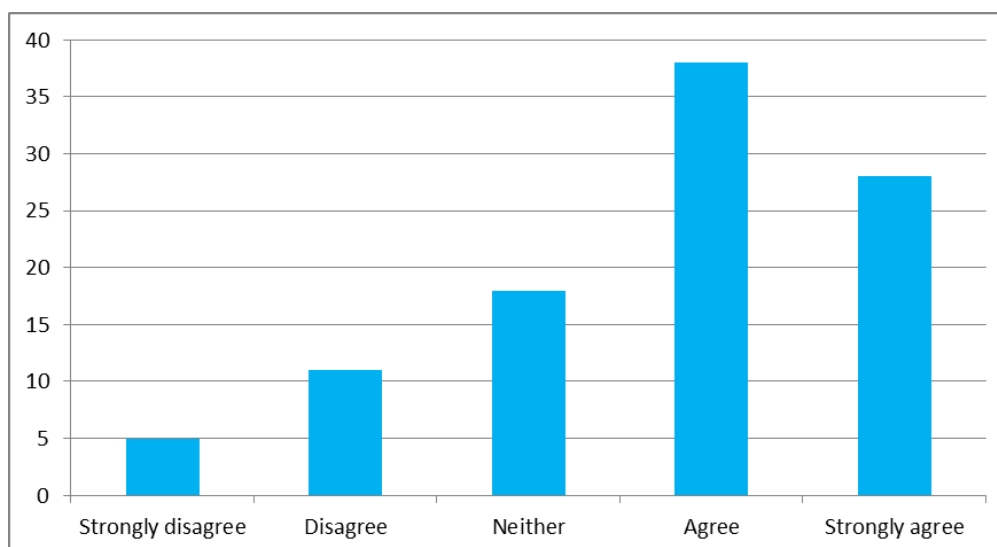
Even though the analysis of respondent background data does not allow for examining how school leadership influences teacher motivation in Kuwait, it provides the author with an opportunity for constructing detailed respondent profiles (Collis and Hussey, 2003, p. 67). By using the non-probability convenience sampling technique, it is impossible to access individuals who belong to a specific age or gender group since all population members have equal chances to be included in a study (Ghauri and Gronhaug, 2005, p. 95). This statement is in keeping with this paper since Kuwaiti teachers of different age, gender, educational background and working experience participated in the questionnaire survey (see Appendix B). For example, the participants' division into age groups is presented as follows.

Figure 4: How Old Are You? (%)

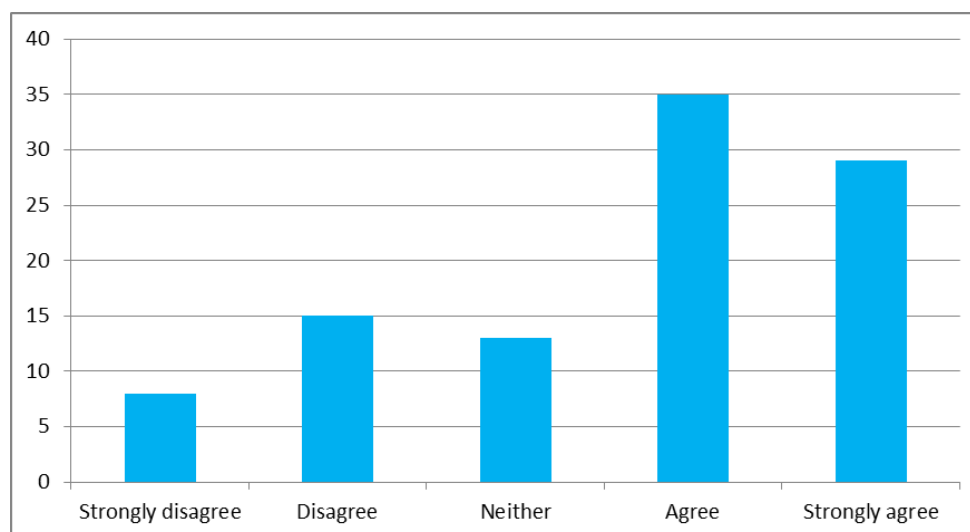
The chart above demonstrates that 32% of those who returned their questionnaire reported that they were between 32 and 35 years. 29% of the Kuwaiti teachers asserted that they belonged to the '25-30' years group. As much as 21% of the respondents indicated that they were between 36 and 40 years. The questionnaire survey participants who reported that they were from 41 to 45 years accounted for 13% of the sample. Finally, the remaining 5% of those surveyed were older than 45 years. These findings indicate that Kuwaiti teachers between 31 and 35 years formed the overwhelming majority of the sample.

4.2. Leadership Styles in Kuwaiti Schools

According to the literature review section of this document, transformational leaders are highly communicative and participative (Yousaf et al., 2015, p. 133). The extent to which the research participants' leaders are perceived as participative and open to communication is presented by means of the following histogram.

Figure 5: My Leaders Are Participative and Open to Communication (%)

More than one third or 38% of those who returned their questionnaire agreed that their superiors in the school were participative and open to communication. As much as 28% of the Kuwaiti teachers strongly agreed with their counterparts. On the downside, a total of only 16% of the participants either disagreed or strongly disagreed that their leaders were participative or communicative. The remaining 18% of the teachers gave neutral responses to this statement. These outcomes may demonstrate that Kuwaiti school leaders exhibit transformational leadership, which is focused on communication between leaders and their followers (Moos, 2012, p. 461). Similarly to this document, Naile (2014, p. 175) arrived at the conclusion that transformational leadership behaviours are more common to teaching and learning environments. However, the researcher stated that school leaders also exhibited transactional leadership to stimulate employee productivity in the workplace (Naile, 2014, p. 175). As mentioned by Li et al. (2015, p. 422), transactional leadership is more focused on reward-labour relations rather on communication or employee empowerment. The extent to which the Kuwaiti teachers perceive their leaders as transactional is presented as follows.

Figure 6: My Leaders Put a Heavy Emphasis on Reward-Labour Relations (%)

The outcomes of the graphical analysis suggest that more than one third or 35% of the questionnaire survey participants agreed that their leaders were focused on reward-labour relations. The teachers who strongly agreed with this statement accounted for 29% of the sample. At the same time, in total, almost one fourth or 23% of the respondents either disagreed or strongly disagreed that their leaders put an emphasis on rewards and punishments. Finally, 13% of the Kuwaiti teachers responded neutrally to this question. Interestingly, the graphical analysis results indicate that Kuwaiti school leaders exhibit both transactional and transformational leadership behaviours. These outcomes are in line with Li et al. (2015, p. 422) who also stated that effective leaders should use different leadership styles in order to ensure that their organisation is capable of achieving its strategic objectives.

4.3. The Link between School Leadership and Teacher Motivation

Prior to the examination of whether there is a relationship between school leadership and teacher motivation, it is relevant to identify the motivator, which is perceived by the Kuwaiti teachers as the most actively 'used' by their leaders. For this purpose, the descriptive statistics function in the SPSS software was performed. The analysis results are presented by means of the following table.

Table 2: Motivation Stimuli (Descriptive Statistics)

Variable	N	Minimum	Maximum	Mean	Std. Deviation
BLN	108.000	1.000	5.000	3.361	1.343
RSP	108.000	1.000	5.000	3.417	1.298
BNF	108.000	1.000	5.000	3.704	1.170
RWR	108.000	1.000	5.000	4.037	0.916
CMP	108.000	1.000	5.000	3.722	1.167
OPP	108.000	1.000	5.000	3.833	1.140
PUN	108.000	1.000	5.000	3.778	1.163
CON	108.000	1.000	5.000	3.676	1.151

The Mean of the 'RWR' variable is equal to 4.03, which is the highest among all the variables. These outcomes suggest that the overwhelming majority of those surveyed either agreed or strongly agreed that they received sufficient monetary reward. This statement is also supported by the fact that the standard deviation of this variable is not far from 1. Hence, most respondents selected either the 'Agree' or 'Strongly agree' response variant (Bryman and Cramar, 2011, p. 99). On the contrary, the Mean of the 'BLN' variable is the lowest and equal to 3.36. Thus, the overall response to this question was neutral. Alternatively to this document, Togia et al. (2012, p. 41) arrived at the conclusion that a sense of belonging was an important indicator of employee motivation in the workplace. Kuwaiti teachers who have gained this sense are more willing to demonstrate high levels of performance comparing to those who do not feel that they belong to their school. This link is statistically examined in the course of this study.

The relationship between school leadership and teacher motivation was established using the linear regression function in the SPSS software. The results of the carried out statistical analysis are presented by means of the following table.

Table 3: School Leadership and Teacher Motivation (Linear Regression)

Variable	Unstandardized Coefficients		t	Sig.	Collinearity Statistics
	B	Std. Error			Tolerance
α	0.669	0.899	0.744	0.458	
BLN	0.097	0.086	1.133	0.260	0.945
RSP	0.074	0.090	0.819	0.415	0.928
BNF	0.091	0.100	0.912	0.364	0.930
RWR	0.298	0.128	2.320	0.022	0.912
CMP	-0.024	0.100	-0.239	0.812	0.934
OPP	0.024	0.103	0.235	0.815	0.911
PUN	0.000	0.099	-0.003	0.998	0.947
CON	0.234	0.101	2.306	0.023	0.929

Only two independent variables, namely 'RWR' and 'CON' have statistically significant power over the dependent variable, which is 'MOT'. As it can be observed from the table above, the Significance (Sig) of both predictors is much lower than the threshold value of 0.05. Hence, both links are statistically significant at least at 95% (Carver and Nash, 2011, p. 58). The beta coefficient of both predictors is positive, meaning that the relationships are also positive. Therefore, the more sufficient monetary reward is received by Kuwaiti teachers, the more they are motivated to demonstrate a high level of performance in the workplace. Although it is commonly accepted that teachers' salary is relatively low in developing countries (Mercer et al., 2010, p. 102), teachers in Kuwait get a good salary, which typically ranges between £1,500 and £2,500 per month. Furthermore, this salary is tax-free, which is another benefit provided by Kuwaiti schools to their teachers (Teach Anywhere, 2015, p. 1).

Further analysis also demonstrates that the better are the working conditions, in which Kuwaiti teachers work, the more they are motivated to demonstrate good individual performance. The role of working conditions in employee motivation was emphasised by Mercer et al. (2010, p. 102).

According to the scholars, organisational leaders can contribute to the motivation of their followers by creating better working conditions. It was also mentioned that allocating new responsibilities is another possible way of addressing employees' needs and adding to their motivation in the workplace (Mercer et al., 2010, p. 102). At the same time, the carried out statistical analysis failed to build any statistically significant relationship between employee motivation and responsibility.

In accordance with Bryman and Cramar (2011, p. 87), it is important to do diagnostic tests in order to identify whether a constructed regression model is reliable. The table above shows that the value of the Variance Inflation Factor (VIF) is lower than its threshold value of 10. Hence, it can be stated that there is no collinearity associated with the independent variables. The outcomes of the R-square and F-test analyses are presented as follows.

Table 4: Diagnostic Tests

Test	Value	Sig.
R-square	0.158	n/a
F-test	2.326	0.025

The value of the R-square test, which shows the amount of variation in the analysis results that can be explained by the predictors in the model, is equal to 0.158 (Carver and Nash, 2011, p. 58). Around 16% of the variation in the outcome is accounted for the 'RWR' and 'CON' variables. Given that the value of the F-test is higher than 2, it can be stated that the likelihood of all independent variables being zero is small. Hence, the constructed regression model is reliable.

4.4. Summary

It can be summarised that Kuwaiti school leaders exhibit both transactional and transformational leadership behaviours in order to add to the motivation of their followers and ensure that their organisation is capable of achieving its strategic objectives. In turn, this combination has produced a strong positive impact on the extent to which Kuwaiti teachers are motivated in the workplace.

It is relevant to summarise that the more sufficient monetary reward is received by Kuwaiti teachers and the better are their working conditions, the more they are motivated to demonstrate a high level of performance in the workplace. At the same time, the analysis failed to establish any statistically significant link between employee motivation and the remaining factors such as a sense of belonging, career growth opportunities, responsibility, competition and penalties.

5. Conclusion

The main aim of this paper was to examine how school leadership influences teacher motivation in Kuwait. This purpose has been fulfilled using both graphical and statistical analysis methods applied to primary quantitative data. The data was gathered from 108 Kuwaiti teachers from 15 Kuwaiti schools, including the author's school. It can be concluded that school leadership has a strong positive effect on the degree to which Kuwaiti teachers are motivated in the workplace. The carried out analysis has demonstrated that monetary rewards and working conditions quality statistically predict the participants' motivation level. These findings are consistent with those produced by Gopal et al. (2014, p. 1) who also arrived at the conclusion that rewards were among the strongest predictors of employee motivation. Interestingly, Othman and Wanlabeh (2012, p. 237) were convinced that this motivator was effective in building employee motivation only in a short-term perspective.

As argued in the literature review section of this document, a sense of belonging is an important indicator of employee motivation. Togia et al. (2012, p. 41) acknowledged that workers who had gained this sense were willing to demonstrate high levels of individual performance. However, the findings of the carried out analysis are not in keeping with those produced by Togia et al. (2012, p. 41). No statistically significant link has been established between worker motivation and a sense of belonging as well as career growth opportunities, responsibility, competition and penalties. It is also relevant to conclude that Kuwaiti school leaders exhibit both transactional and transformational leadership behaviours. Despite the fact that the transformational leadership style is considered as more effective in building employee motivation,

This paper has demonstrated that only by combining both transactional and transformational leadership qualities, Kuwaiti school leaders are capable of contributing to teachers' motivation in the workplace (Duignan, 2014, p. 152).

The key limitation of this paper is the number of Kuwaiti teachers who could be surveyed. As mentioned in the methodology section, only a proportion of those who are invited to fill out a questionnaire would actually participate (Carver and Nash, 2011, p. 58). From the 300 Kuwaiti teachers who had been invited, only 108 agreed to participate in the questionnaire survey. Another limitation concerns the scope of the undertaken analysis. Although several predictors were included in the questionnaire, there are still motivators, the impact of which can be further examined. For example, factors such as employee autonomy, personal development opportunities, emotional support and non-monetary rewards were ignored by the author (Dimmock and Tan, 2013, p. 320). Limited time and financial resources can be viewed as a reason for this action.

Considering the limitation of this paper, it can be recommended that the future researchers in the field should examine the impact of motivation and hygiene factors such as employee autonomy, personal development opportunities, emotional support and non-monetary rewards on the motivation of Kuwaiti teachers. Furthermore, it is recommended that the future researchers in the field should contact a greater number of Kuwaiti teachers in order to add to internal validity and reliability. Finally, it is recommended that the future researchers should gather data from Kuwaiti school leaders to arrive at more comprehensive conclusions concerning the link between school leadership and teacher motivation in Kuwait.

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Appendix A

Questionnaire

I. Respondent Profile

1. How old are you?
 - ☐ 25-30
 - ☐ 31-35
 - ☐ 36-40
 - ☐ 41-45
 - ☐ Older than 45
2. What is your gender?
 - ☐ Male
 - ☐ Female
3. What is your educational background?
 - ☐ Secondary school

- ☐ College/university student
- ☐ Bachelor's degree
- ☐ Master's degree
- ☐ PhD

4. How long have you been working in the school?

- ☐ Less than 1 year
- ☐ 1-3 years
- ☐ 4-6 years
- ☐ 7-10 years
- ☐ More than 10 years

II. Leadership Styles

5. My leaders are participative and open to communication.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither
- ☐ Agree
- ☐ Strongly agree

6. My leaders put a heavy emphasis on reward-labour relations.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither
- ☐ Agree
- ☐ Strongly agree

III. Extrinsic and Intrinsic Motivators

7. I have a sense of belonging to the school.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither
- ☐ Agree
- ☐ Strongly agree

8. Ultimate responsibility rests with me as a teacher.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither
- ☐ Agree
- ☐ Strongly agree

9. I acquire status and reputation benefits in response to achievement.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither
- ☐ Agree
- ☐ Strongly agree

10. I receive sufficient monetary reward (e.g. pays financial bonuses, incentives, etc.).

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither
- ☐ Agree
- ☐ Strongly agree

11. I work in a competitive environment with other teachers.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither
- ☐ Agree
- ☐ Strongly agree

12. I have access to career opportunities and promotion.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither
- ☐ Agree
- ☐ Strongly agree

13. Punishment and penalties are applied to me in the workplace.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither
- ☐ Agree
- ☐ Strongly agree

14. I am placed in good working conditions.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither
- ☐ Agree
- ☐ Strongly agree

IV. Motivation

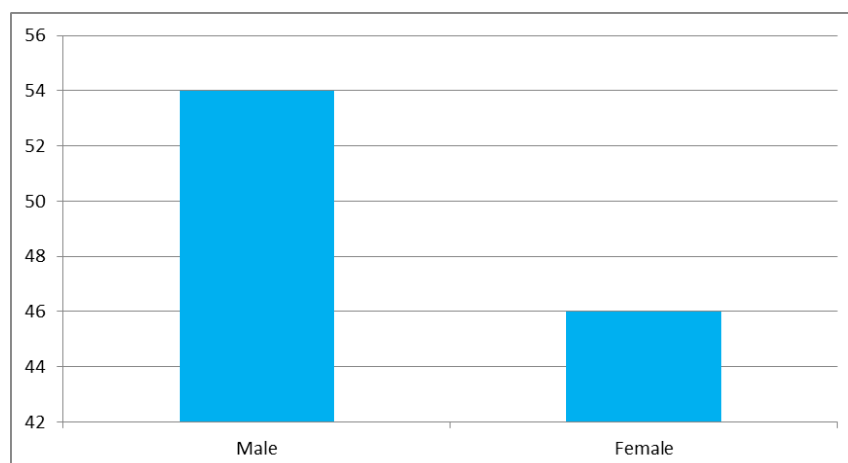
15. I am highly motivated to demonstrate high levels of performance in the workplace.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither
- ☐ Agree
- ☐ Strongly agree

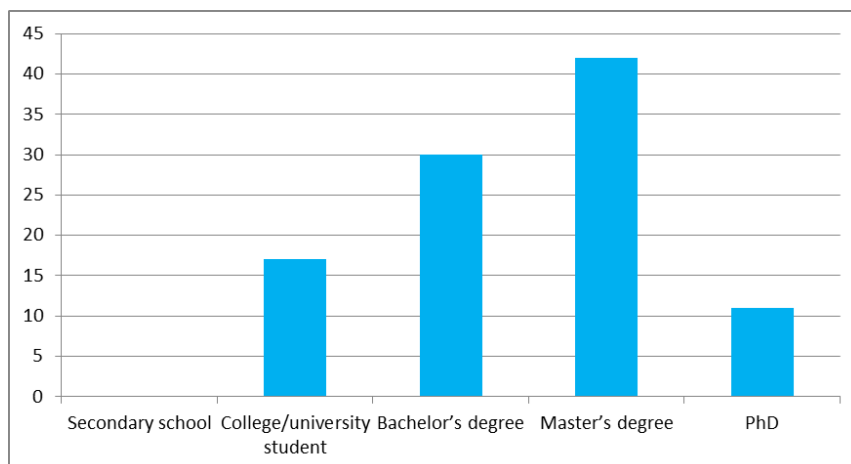
Appendix B

Graphical Analysis Outcomes

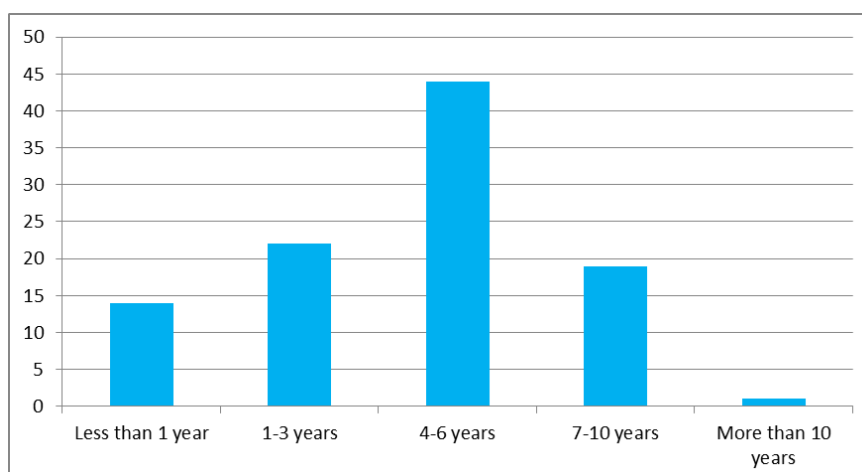
What Is Your Gender? (%)



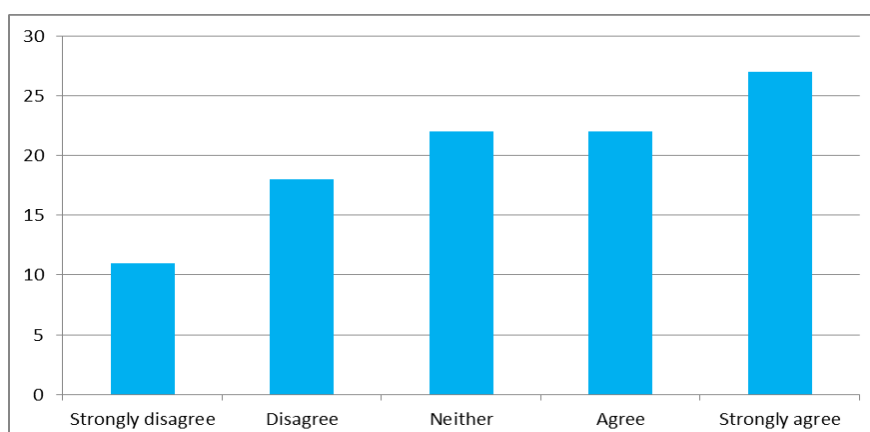
What Is Your Educational Background? (%)

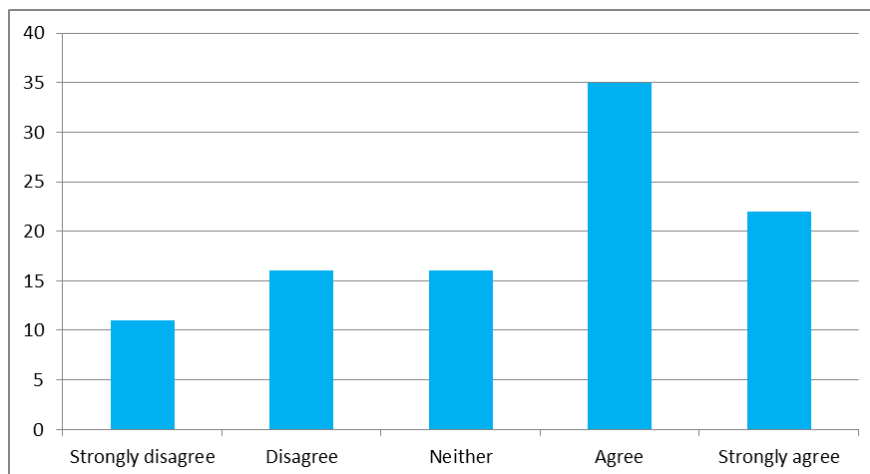
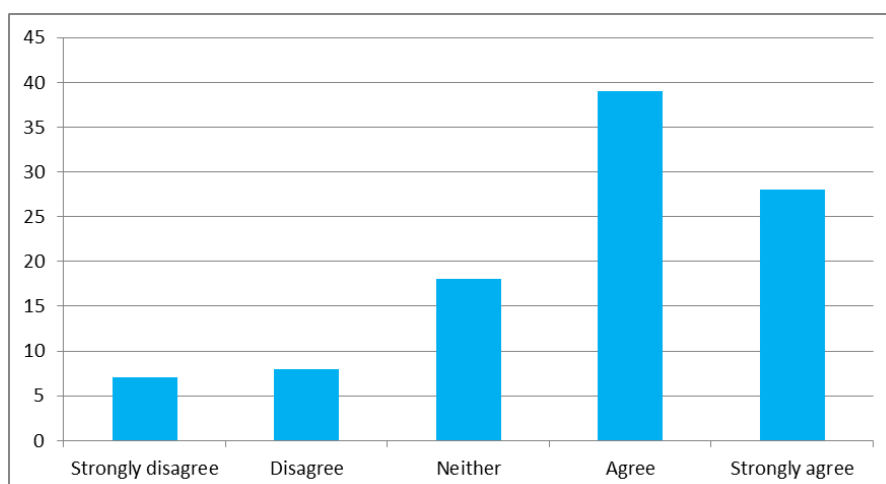
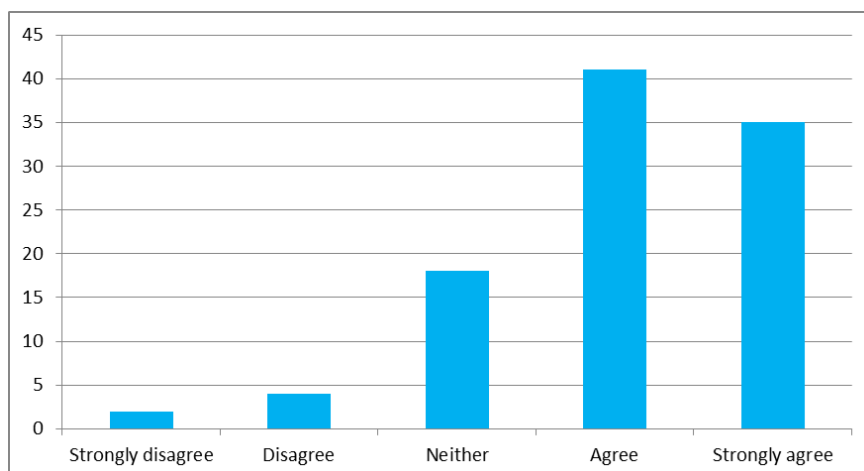


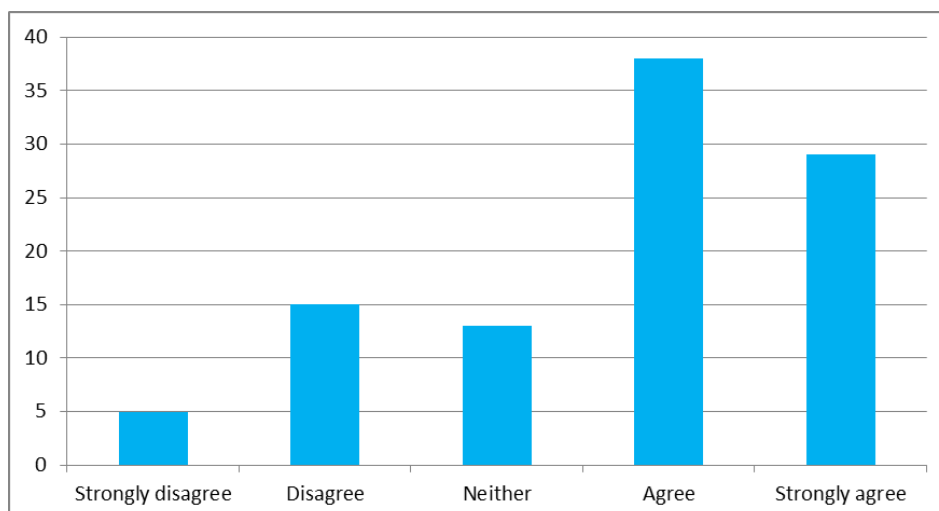
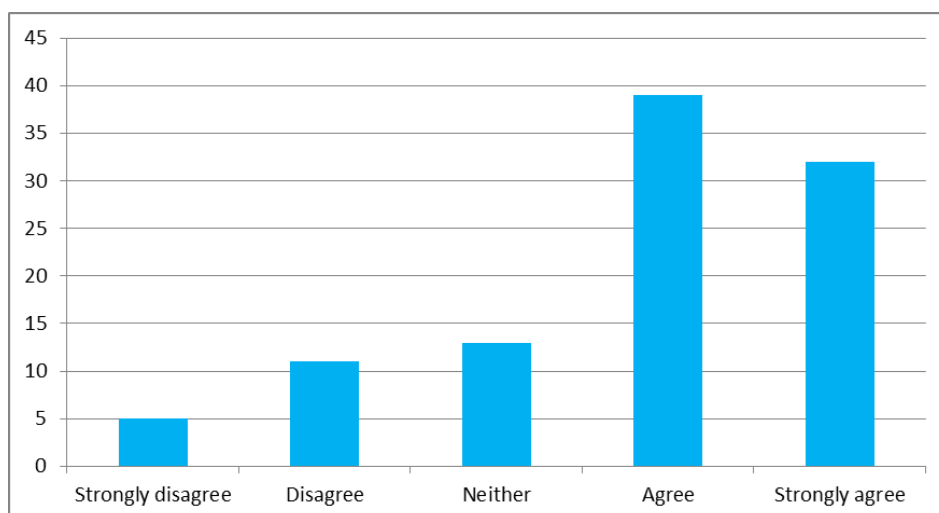
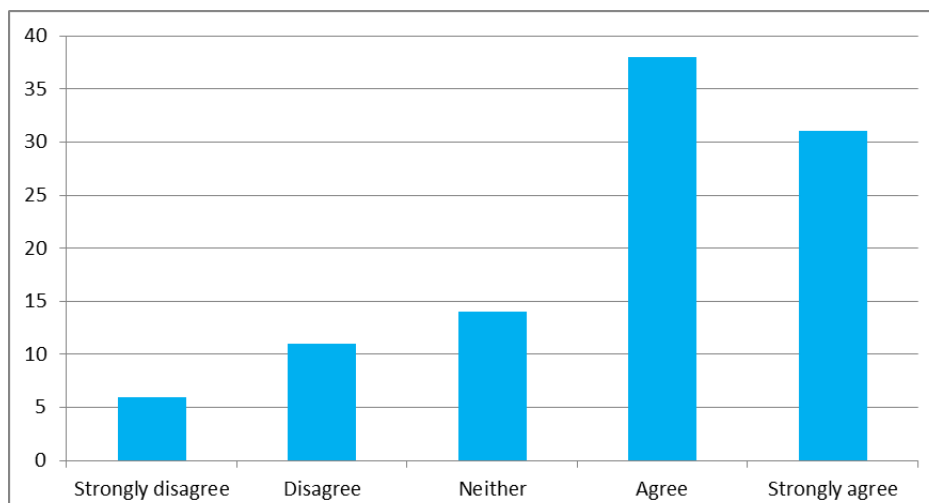
How Long Have You Been Working in the School? (%)

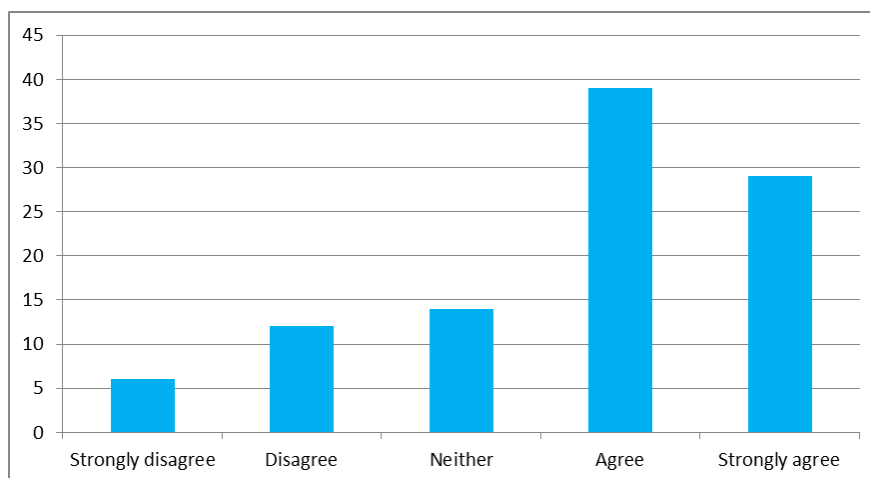
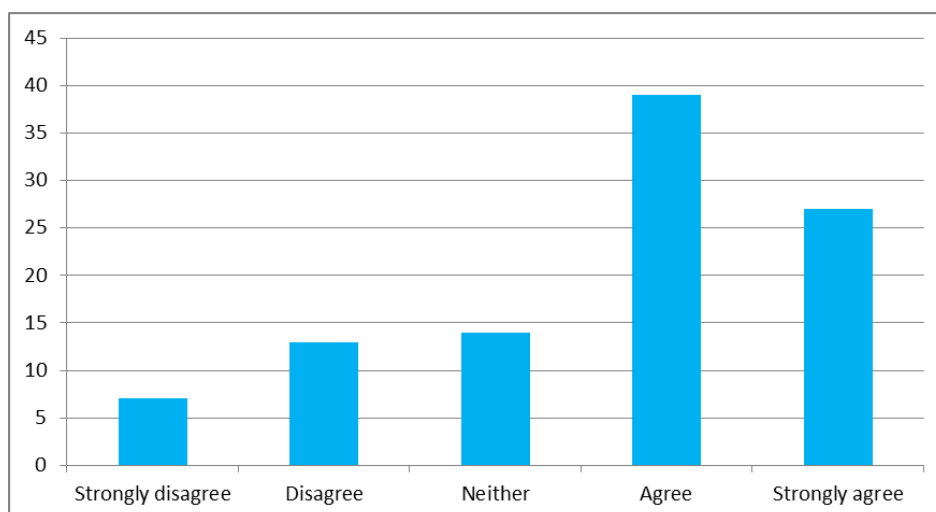


I Have a Sense of Belonging to the School (%)



I Have Access to Learning and Personal Development Opportunities (%)**Ultimate Responsibility Rests with Me as a Teacher (%)****I Receive Sufficient Monetary Reward (e.g. Pays Financial Bonuses, Incentives, etc.) (%)**

I Work in a Competitive Environment with Other Teachers (%)**I Have Access to Career Opportunities and Promotion (%)****Punishment and Penalties Are Applied to me in the Workplace (%)**

I Am Placed in Good Working Conditions (%)**I Am Highly Motivated to Demonstrate High Levels of Performance in the Workplace (%)**

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The Effect of Childhood Stress on Telomeres (A Literature Review)

Alhanof S Algazlan

Al-Motaqadimah Schools for Smart Learning, Riyadh, Kingdom of Saudi Arabia

Email: Alhanoufalgazlan@gmail.com

Abstract

Telomeres are DNA repeat structures that are bound by protein and found at the chromosomal end, they regulate the ability of cells to replicate, prevent fusion of chromosomes from forming together and prevent genetic data leakage. Although telomere shortening takes place naturally as one ages, several research studies suggest that there is a correspondence between physiological environment and length changes of telomeres. This study highlights on how childhood stress such as maternal depression, low economic status, violence, and family disruption impact the length of telomeres. Studies by the National Institute of Health confirm that exposure to childhood stress accelerates the shortening of telomeres. Additionally, this review assesses how each type of childhood stress at different developmental stages alters telomeres' length. To further understand how these factors affect telomere length, mechanisms contributing to telomere shortening have also been discussed.

Keywords: Childhood stress, Telomere length, Biological aging, Telomere length (TL), Leukocyte Telophase Length (LTL)

1. Introduction

Changes in telomeres such as shortening are very visible during early development. However later at maturity visibility will be low (Frenck et al., 1998). The physical, social, and emotional development of children during childhood directly affects their overall and how their adult life will be. Studies by Clemente et al. (2019) have demonstrated the importance of early development years where an increase in exposures to nitrogen dioxide while at pregnancy was linked to shortening of telomere in samples of blood collected from children of 5-12 years.

As body cells differentiate and divide, telomeres are yet to replicate fully due to the difficulty of the DNA polymerases to complete the multiplication of linear molecules' ends causing telomere shortening in every multiplication. Telomeres shorten in humans with age in somatic cells replicating (Kananen et al., 2010). The activity of telomerase increases in T cells of individuals suffering acute antigen exposure; however, its activity reduces with exposure to repeated antigens simulation as the cells near maturation. Rare genetic diseases such as dyskeratosis congenital reduce the body's ability to synthesize a sufficient amount of telomerase enzyme.

This leads to shortened telomeres, leading to premature death from gradual bone marrow failure and eventual exposure to infection-causing pathogens. Childhood stress, another major cause of telomere shortening, can be linked to premature deaths from a weak immune system (Willis et al., 2019). Ranking of telomeres between childhood and early adulthood was conversely related to exposure to residential traffic at the address of birth of children. (Bijnens et al., 2017). Different childhood stress affects telomere structure differently.

2. Maternal stress

According to a study by Angela et al. (2014), maternal stress during pregnancy significantly affects telomeres. The article categorizing maternal stress as a contributor to telomere structure is based on two studies assessing the link between stress during pregnancy and the telomere length of a born child. In the first study by Entringer et al., 2011, exposure to stress during the prenatal period was found to be a leading contributor to adult offspring leukocyte telomere length.

The authors evaluated maternal stress considering other variables, age, sex, postnatal early-life adversity, birth weight percentile, and BMI were controlled.

In the second study by Entringer et al. (2013), maternal psychological stress on the leukocyte telomere length of a newborn was assessed in research on 27 mother-newborn pair; the authors reported a linear, independent and significant effect on stress from pregnancy on newborn leukocyte telomere length accounting for a quarter of change in telomere length. Other factors affecting leukocyte telomere length of a newborn, especially the risk factors of the mother like age at conception and cardiovascular disease, were however not considered in the analysis (Broer et al., 2013)

3. Chronic psychological stress at childhood on telomeres

The study by Angela et al. (2014) shows that extremely high levels of psychological stress cause shorter telomeres, reduced activity of telomerase enzyme and increased oxidative stress. This was concluded from a study by Epel et al. (2004), where leukocyte telomere length was evaluated in (PBMCs), the activity of telomerase, and stress from air pollution of fifty-eight caregiving mothers for either a chronically ill child or healthy. The duration of caregiving was also significantly related to shorter leukocyte telomere length, suggesting that chronic stress was a key determinant on telomeres. A weakness of the study was that the results were from the short analysis. The size of the sample was also another weakness.

Another study by Dmajanovic et al. (2007) in Serbia compared cytokine production, peripheral blood mononuclear cells (PBMCs) composition, depressive symptoms, Leukocyte telomere length, and activity of telomerase enzymes between caregivers of control and caregivers of children suffering Alzheimer's disease. They also had a short leukocyte telomere length in peripheral blood mononuclear cells than caregivers of controls. Telomerase activity in peripheral mononuclear cells and T cells had a significantly high control.

Finally, a research study by Humphreys et al. (2012), revealed that reported shorter Leukocyte telomere length among children born to mothers with highly elevated levels of psychological stress linked to domestic violence. The study also revealed that the duration of time in a toxic relationship and bearing kids in the relationship was associated with shorted telomers.

4. Oxidative stress on telomers

The study by Rebecca et al. (2021) analyzed 20-30 ml sampled blood obtained from an umbilical cord and placental tissue directly after birth in 296 participants for telomere length showed that shortening and dysfunction of telomere were increased by oxidative stress. Infants born of participants that smoked, especially in their third trimester, showed a significant difference in telomere length than other participants. This can be attributed to the fact that the placenta has a thin membrane during the third trimester, allowing some substances to go across (Mayer et al. 2019). This includes; pro-oxidant species, nicotine found in tobacco, promethium, pro-inflammatory cytokines, and. The study suggests that entry of promethium into the circulatory system of a fetus may cause short telomeres.

Air pollution exposure by pregnant mothers leads to pro-oxidant and pro-inflammatory environments. The pro-oxidant environment is related to the shortening of telomere. Mothers that inhale promethium while pregnant risk exposing a fetus to it as its ability to pass through the placenta (Perera et al., 2018; Bov et al., 2019). Experimental evidence by Moller et al. (2014) shows air pollution expose one to oxidative stress. Studies have also shown nitrogen dioxide from gas stoves and tobacco smoking exposures by pregnant mothers were related to shortening of Telomere length in samples of blood collected from children of five to twelve years old. (Clemente et al., 2019)

Arranging of telomere length at infancy and maturity was oppositely related to exposure at birth to residential traffic. One is that its explanation of the effect of childhood stress on telomers is narrow and majors only on oxidative stress as a determinant of telomere length. Another weakness is that the participants also spent time during daily commutes where they risk more exposure to air pollution from their residential places to occupational addresses. Finally, the relevance of associations between newborn telomere length and environmental factors can be challenging to foresee, and several other factors could also influence telomeres.

5. Childhood adversities stress

The by Antti-Jussi et al. (2021) discusses childhood adversities' relationship to telomere length. It confirmed earlier results of an inverse relationship between telomere leukocyte length and childhood. Childhood adversities were assessed in three ways.

First, the loss of either parent or both parents before 16 years of age was considered adversity and a possible cause of stress.

Second, the childhood socioeconomic level of both parents was based on the level of education of the parents.

Third, questionnaires were issued to participants with yes/no answers to different questions such as; unemployment in the family, alcoholism by either parent, divorce, bullying at school, chronic illness, mental health problem, and disability. The study results proved that the length of telomere was contrarily related to age. Also, shorter leukocyte telomere length was more where the score on the adversities questionnaire was high (having a lot of yes). Childhood effect on telomere at later stages of growth of puberty and adulthood remained remarkable after adjusting psychosis, depression, alcoholism, and anxiety disorder diagnosis for the past 12 months. The weaknesses of the study were that stress alone in itself was not significant enough but emotional and behavioral responses were necessary.

A significant effect on telomere cannot be caused by one stressor (Puterman et al., 2016). The study concludes that stress during childhood may promote telomere shortening which is significant in adulthood. This is backed by Eli et al. (2015). The study suggests that stress over one's lifespan promotes accelerated aging and early disease resulting from the shortening of telomeres. The study examined 4598 individuals, both male and female in the US Health and Retirement Study. Only one adverse effect on telomere length was not corresponding. Lifetime cumulative adversity showed a prediction of 6% higher odds of short telomere length., while in adjusted models, the presence of each extra adversity predicted 11% more odds of telomeres shortening. It concludes that later adulthood and telomere length are significantly affected by childhood stress.

6. Conclusion

Stress is not a monolith, and several other external factors during childhood must be considered that may affect telomeres. The study by Angela et al. (2014) gives the most accurate and detailed explanation of childhood stress association with telomeres. Eli et al. (2015) focus more on lifetime cumulative adversity overlooking childhood stress.

For oxidative stress during childhood and its effect on telomeres, the study by Rebecca et al. (2021) gives the most compressive description.

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