PUBLIC PERCEPTION OF SUSTAINABLE, LOW ENERGY HOMES IN A SUBSIDIZED DEVELOPING COUNTRY: SAUDI ARABIA AS CASE STUDY

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ABSTRACT

Developed countries must conform to international sustainable and low energy building targets. Saudi Arabia, which has a hot climate, necessitating consumption of high levels of energy to operate domestic building air conditioning systems, has high CO2 emission levels. This study focuses on assessing the public's perception, knowledge and awareness of sustainable housing in a developing economy, using Saudi Arabia as a case study, because of the high energy demands from its domestic sector combined with high CO2 emission rates. The paper explores (a) the public's perception and awareness of low energy housing, (b) the typology of residential stock, including architectural style, (c) energy consumption patterns, and (d) the role Islamic culture plays in architectural design and cultural barriers preventing the institution of pure low energy housing. For the study, a comprehensive public survey was performed across Saudi Arabia (over 500 participants) involving participants of different ages, both genders, and varying educational levels. The results confirmed limited public awareness, and highlighted cultural barriers to sustainable, low energy housing designs. Moreover, this paper will also highlight the willingness of the public to retrofit their existing homes to enhance energy conservation.

Keywords: Sustainable housing, Energy consumption, Environmental design, Public perceptions and socio-cultural blockers.

INTRODUCTION

Interest in energy-oriented research has increased, resulting in recent concerns about energy saving as well as economy[1] . Saudi Arabia is known for the high levels of energy consumption and CO2 emission rates of is residential buildings. This energy use is a consequence of the region's hot climate, which drives high energy consumption to operate traditional air conditioning systems [2, 3]. The building sector is the largest consumer of electrical energy, thus changes to it represent a major potential contribution to reduced energy consumption [4]. Indeed, official sources, such as the Ministry of Electricity in Saudi Arabia,

have confirmed that over 50% of energy in the form of electricity is used within the domestic sector. In addition to addressing the high level of energy consumption, to reduce CO2 production it is also important to exploit available renewable energy sources, such as solar radiation and wind energy, especially in view of fluctuations in the price of crude oil and the expendable nature of fossil fuels [5]. Natural energy resources, such as solar and wind power are abundant in the Kingdom of Saudi Arabia, yet the energy used is predominantly generated (in the form of electricity), by burning fossil fuels, which causes CO2 emissions. At present, there is no utilisation of on-site renewable energy techniques (generation techniques), such as PV, to provide energy [6, 7].

Solving this problem by reducing energy demand and using natural resources instead of burning fossil fuels will contribute to savings in energy costs; increased oil income resulting from using resources other than oil to operate buildings; and reduced CO2 emissions. Many developed countries have pursued energy savings through the development of sustainable energy consumption codes, based on local climatic conditions. Thus far, there are no such codes available for Saudi Arabia, although they are an essential tool for controlling energy consumption and saving energy to supply future needs [8, 9].

To address the problem of energy saving in the domestic sector in Saudi Arabia, it is important to examine the local public perceptions and cultural barriers that prevent the establishment of sustainable dwellings. Thus, this paper will investigate the public perceptions concerning energy conservation, ascertain the extent of the problem, and clarify the cultural barriers to establishing sustainable dwellings in Saudi Arabia. To achieve this, an in-depth analysis will be conducted, using a questionnaire distributed to members of the public of different ages, with different levels of education, and residing in different cities in Saudi Arabia. The questionnaire focuses on type of dwelling, including shape, area and the behaviour of occupants, as well as on perceptions surrounding the establishment of sustainable dwellings by breaking down cultural barriers in Saudi Arabia.

METHODOLOGY

In order to achieve the goals set, the research design employed a quantitative methodology. A large body of information was sought in relation to building design, area, cultural image and respondents' perceptions. It was also essential to collect data from people in different age groups, including those with different education levels, or from different locations (cities). The details required for analysis and discussion included data relating to dwelling (area and design); current energy consumption and satisfaction level with heating, ventilation, and air conditioning (HVAC) used; data relating to cultural images, as these affect the architectural design; and data relating to people's perceptions regarding sustainable homes and their ability to retrofit their dwellings to save energy. To obtain this information, a questionnaire was designed, established and distributed to members of the public in Saudi Arabia.

Applying the above considerations, the questionnaire was divided into four main sections: (a) Determination of problems in domestic homes in Saudi Arabia resulting in high-energy consumption, such as property types and sizes, dwelling areas, number of rooms, etc. The

questions in this category can result in the identification of some issues that explain higher levels of consumption, such as property size, and large occupancy numbers leading to high energy consumption. (b) Many questions about the use of HVAC in dwellings, such as the type of cooling system, existence of natural ventilation, heating system, and period of air conditioning usage. The scale of the problem (reasons for high energy consumption) can be determined by the questions raised in the first two categories. The third category (c) contained questions designed to determine people's ability to ensure sustainable dwellings in future and to retrofit their existing dwellings, as well as the public perception regarding sustainable dwelling. Finally, (d) questions designed to identify cultural barriers, such as faith, social status or position in society, that might affect architectural design in Saudi Arabia, thereby preventing the establishment of sustainable dwellings in future. The questionnaire included all four categories, and was distributed to the public to encompass the sampling of individuals of different ages, educational levels, and from different locations across Saudi Arabia, to deliver a true picture of the situation.

The results of this study outputted were analyzed using both Microsoft Excel and SPSS tools, in order to carry out in-depth analysis and link the questions. Survey monkey can be used to analyze results; however, the selected tools allow deeper analysis.

RESULTS AND ANALYSIS

After distributing the questionnaire via SurveyMonkey using the Snowballing technique, it became apparent that one of the greatest benefits was that this method delivered a huge number of respondents offering a more accurate portrayal of the situation at present. The number of respondents who began the questionnaire was 502, of whom (80.7%) had completed and submitted the questionnaire. As mentioned, the respondents were all of different ages, different educational levels and different locations spread throughout the cities across Saudi Arabia (Table 1).

Table 1: Respondent's details and description

Characteristic Age	Percentage	Characteristic Education Level	Percentage	Characteristic Gender	Percentage
From 18 - 34	67.58%	High school	14.8%	Male	83.79%
From 35 - 49	28.09%	Diploma	9.3%		
From 50 - 64	3.21%	Bachelor's Degree	47.4%	Female	15.25%
More than 64	1.12%	Master's Degree	20.7%		
		PhD	7.7%	Rather not say	0.96%

Characteristic Location of Respondents	Percentage
Central Region	36.82%
Northern Region	12.86%
Southern Region	11.25%

Eastern Region	10.93%
Western Region	28.14%

Public perception and current problems

An in depth analysis of public perceptions, and a review of the current situation regarding high energy consumption, revealed that many factors were responsible for high energy consumption in the Saudi residential sector. These included the size of the building, the cooling system used, etc. The following paragraphs describe those factors identified as causing problems.

Typology of buildings: Many different questions were designed to identify, assess, and determine the factors that cause high energy consumption in domestic buildings in Saudi Arabia. Based on the survey output, these factors were found to relate to building size, number of additional rooms, and the number of household members in each property. Firstly, it is important to state that the majority of respondents live in houses (two-storey houses), with just under half living in flats. Many other official sources provide the same figure: [10] stated that 41.1% of properties are flats, 54.8% of properties are houses, and 4.2% fall into other categories. The results showed about half the respondents live in properties with areas of 300 to 1000m² (Fig. 1).

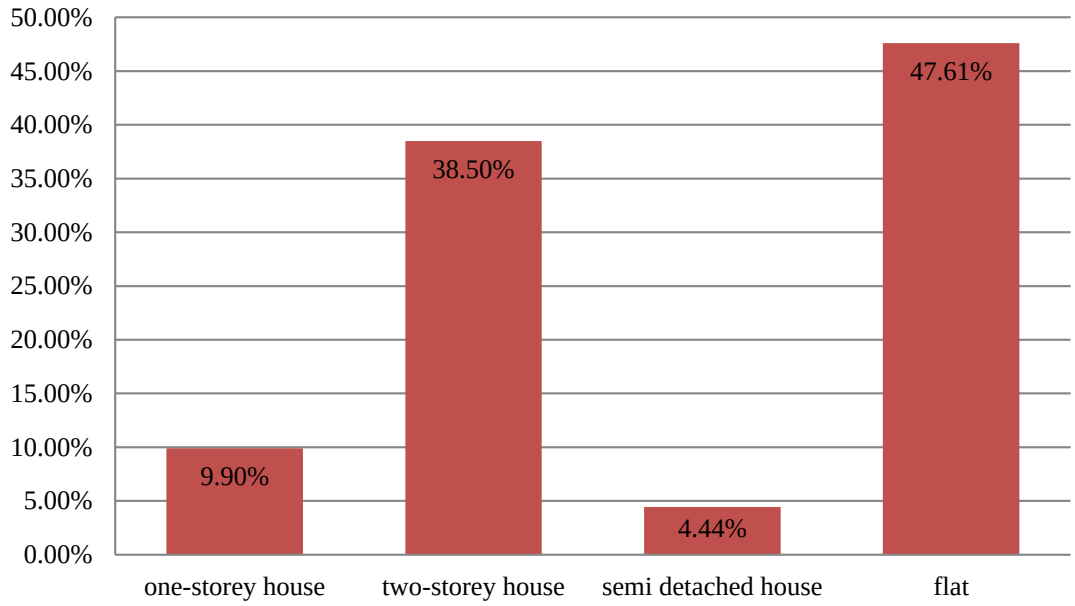


Fig. 1: typology of buildings

Cooling system used: it was found by employing the survey, that the cooling system (air conditioning) is a major problem as a source of high energy consumption, because Saudi Arabia's very hot, inhospitable environment creates the need for air conditioning, to provide internal thermal comfort. Firstly, air conditioning is used as the main cooling system, without any supporting technique, such as natural ventilation (see Figure 2).

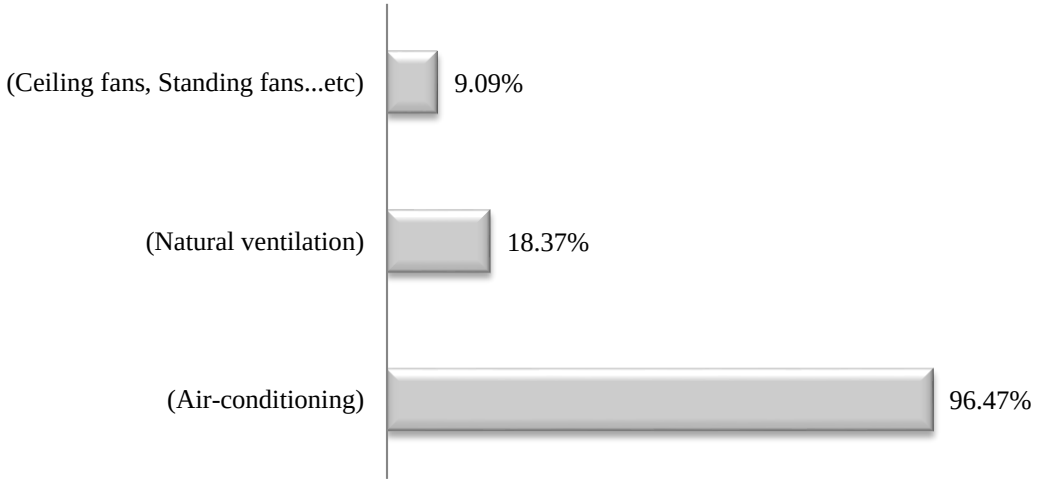
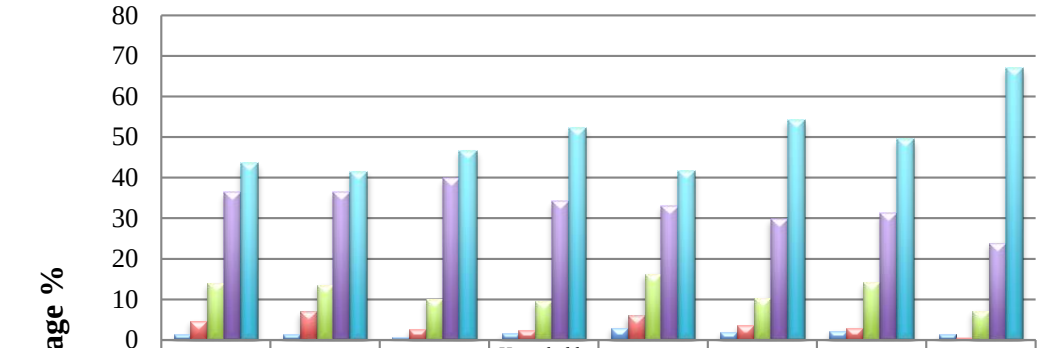


Figure 2: Cooling system used

The figure describes the techniques used for cooling systems. This part of the questionnaire was designed to allow more than one answer, because in some parts of Saudi Arabia, such as in the high mountainous regions in the south, people use ventilation in summer at night. Furthermore, about 35% of the population do not need to use a heating system, because many parts of Saudi Arabia are hot in summer and warm in winter, while the majority of cities are hot in summer and cold in winter, but with a very limited winter period. The home is occupied for a long time each day, with air conditioning used in all or most rooms. Therefore, homes are occupied for over 18 hours a day, and the air conditioning is run throughout this time during hot seasons, resulting in high energy consumption. In addition, the data revealed many occupants are unwilling to rely on only natural ventilation and/or fans during the hottest seasons. The majority, 90%, of respondents are not satisfied by using these methods alone; thus, the challenge posed appears to be to achieve the lowest possible energy consumption by improving the use of air conditioning.

Public Perception: The survey highlighted a lack of public knowledge regarding the importance of sustainable low energy housing in Saudi Arabia. Figure 3 illustrates their views regarding sustainable homes. Through an in depth analysis of public perception, and by determining the current problem associated with high energy consumption, many factors resulted in high energy consumption in the residential sector in Saudi Arabia. These factors included, among others, the size of the building, the cooling system used.

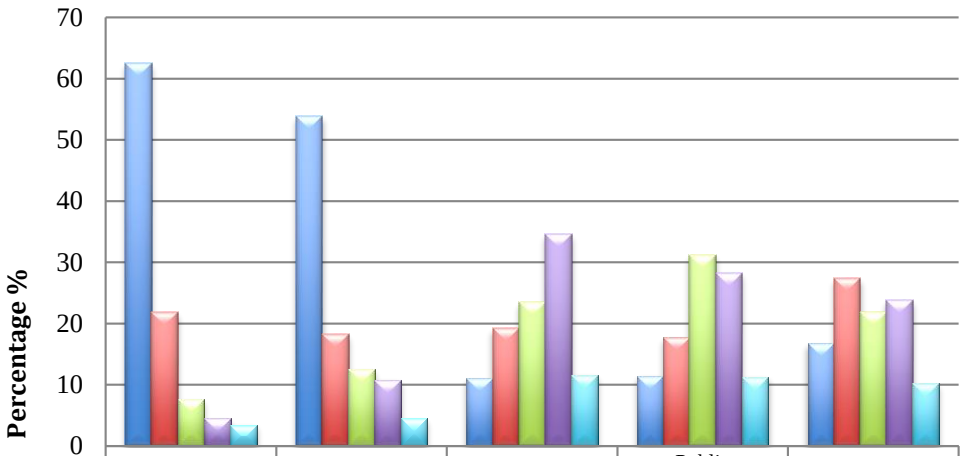


	Householders should install solar electricity generation systems, e.g PV, to reduce reliance on national electricity grid	Householders should use solar radiations for water heating to save energy	Householders should install shading devices around windows to reduce solar gains in hot seasons	Householders should replace single glazing with double or triple glazing to improve the thermal performance of their homes	Householders should install a grey water recycling system for irrigation purposes, to create more vegetation around their dwelling	Householders lack awareness of low carbon energy buildings	There is a shortage of sustainable products such as PV on the Saudi market	The government should regulate the energy market and promote sustainable buildings
Strongly disagree	1.38	1.38	0.79	1.58	2.99	1.99	2.19	1.39
Disagree	4.72	7.1	2.58	2.38	5.98	3.59	2.99	0.6
Neutral	13.98	13.61	10.12	9.5	16.33	10.36	14.14	7.17
Agree	36.42	36.49	39.88	34.26	33.07	29.88	31.27	23.9
Strongly agree	43.5	41.42	46.63	52.28	41.63	54.18	49.4	66.93

Figure 3: Public perception

Retrofitting existing housing: The survey output reflected a positive response regarding people's willingness to live in sustainable homes in the future and to retrofit their homes to save energy. First, it is important to mention, that over half of respondents were well informed about sustainable homes with less energy demands; however, this means about 42.5% of respondents had no knowledge of this option, which is a significant proportion. The respondents who know about sustainable homes had heard about them via internet websites, the media, news, television programs, background knowledge, friends, and advertisements, while others were specialists in areas related to sustainability.

Cultural Barriers: Many studies highlight the effect of culture on the home design i.e. [11-14]. Many cultural barriers were identified by the survey. Some of these barriers are rooted in the religion (Islamic culture). For example, the idea of mixing genders in the same place is contrary to Islamic culture, and domestic buildings are designed to allow the division of genders; typically providing one guest room for males and another separate one for females. Figure 4 presents the cultural barriers discovered, and the willingness of the public to compromise these to have sustainable homes.



	Public willingness to have one guest room for both genders	Public willingness to have one facility room for both genders	Public willingness to reduce bedrooms size	Public willingness to have sloped, as opposed to exclusively flat, roofs	Public willingness to have smaller and fitter for purpose houses
Strongly disagree	62.55	53.89	11.07	11.47	16.73
Disagree	21.86	18.22	19.27	17.78	27.38
Neutral	7.6	12.52	23.47	31.17	21.86
Agree	4.56	10.82	34.54	28.3	23.76
Strongly agree	3.42	4.55	11.64	11.28	10.27

Figure 4: cultural barriers discovered

In economic terms, the fact that 50% of energy is consumed by the residential sector makes understanding the public's energy use crucial [15]. This figure presents both an opportunity and a challenge, the aim being to burn less fossil fuel to support investment through sales of oil. Saudi Arabia is rich in solar radiation, and it is possible that this natural resource could be used to cover its needs. By both reducing energy demand and using natural resources to mitigate its use it will be possible to reduce the volume of fossil fuel burned, and increase income as a strategic objective.

Ecologically, many benefits proceed from the prospect of establishing environmentally friendly (sustainable) domestic buildings in Saudi Arabia. Saudi Arabia has abundant solar energy resources [16], and PV panels could be added to housing stock to reduce dependence on fossil fuel and reduce Saudi Arabia's relatively high CO2 emissions per capita, as reported in the literature [2, 17]. Therefore, any energy reduction will not reduce the financial costs of electricity, but also the environmental costs.

CONCLUSION

This study has presented the public perceptions regarding sustainable homes in Saudi Arabia, and identified key factors leading to high energy consumption, as well as touching on the cultural barriers that can prevent the establishment of sustainable homes in Saudi Arabia some of which relate to Islam. An in-depth survey was used as the main research instrument, taking into account the need to reach people in different age groups and of different educational levels to obtain a realistic image of public perceptions. The results have illustrated and identified multiple factors, which were discussed individually to provide some guidance for proposing

solutions to avoid high energy consumption and minimize CO2 emission rates as far as possible. Solutions were presented along with economic, social, and environmental benefits, and suggestions for their implementation. This study will conclude with some general recommendations for house owners and future researchers in this field.

RECOMMENDATIONS

- Existing homes should be retrofitted according to the solutions suggested in this study, to reduce energy demand and minimize CO2 emission rates;
- Install PV systems in existing housing stock, to generate electricity via solar heat instead of electricity provided from burning fossil fuel, which will reduce the cost of utility bills;
- Install smart techniques (e.g. sensors) to control and manage energy consumption in properties;
- Future homes must be designed under sustainability criteria, to ensure the lowest possible energy demand under the supervision of expertise teams;
- Raise the public awareness's of the importance of sustainable low energy housing;
- Establish controls on the built environment (residential stock) in Saudi Arabia; and
- Establish environmental assessment approaches i.e. BREEAM & LEED to rate existing homes and future homes, in terms of environmental aspects and considerations.

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CROSS-NATIONAL PATTERNS OF GENDER DIFFERENCES IN MATHEMATICS AN ANALYSIS OF EAST-EUROPEAN AND WEST-EUROPEAN COUNTRIES.

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ABSTRACT

Aim: This study examines gender differences in math achievement across 21 countries. The main aim of the study is to analyse whether there are differences in math performance between boys and girls across time and in two groups of countries: the countries of the former East Bloc and West-European countries.
Method: Nine East-European and twelve West-European countries were analysed with regard to their math achievement measured by the Programme for International Student Assessment (PISA) in 2003 and 2012. Gender gap was analysed based on *z* score and Cohen's *d*.
Results: Findings show a small and narrowing gender gap. A small but consistent advantage of boys over girls in math achievement has been noted in the majority of countries, although in a few countries females outperformed males. However, a substantial national variability has been noted (*d*= -.002 to *d*= -.201). Although in 2003 the effect sizes of gender gap in math achievement were similar in two blocs (*d*= -.112 in East-European countries and *d*= -.122 in Western countries), nine years later the East-European nations bridged the gap (*d*= .031**)** , whereas in the Western countries the gap remained at the similar level (*d*= -.118).
Conclusions: Over the course of 9 years, a significant decrease in gender gap in math performance was observed. However, more in-depth analysis of the results shows that this is not a universal trend and that the changes seem to be specific to two blocks of countries. The differences between East- and West-European countries point to socio-cultural factors (e.g. gender role perception, self-concept and stereotypes about math ability) as important variables affecting gender differences in math education. The findings are interpreted with regard to sociological theories and gender stratification hypothesis.
Keywords: culture, gender differences, mathematics achievement

INTRODUCTION

Gender gap in mathematics has been for a long time a controversial topic in educational discussions. Research shows that although the differences between boys and girls are not so visible at the early stages of education [1], they seem to be more profound at later stages [2] which may have important career consequences. Females are less likely to enroll for advanced

mathematics courses in high school and college which leads to their underrepresentation in STEM disciplines such as engineering and the physical sciences [3, 4]. Research into gender gap identifies numerous factors that account for the differences in math performance between boys and girls [5]. The growing popularity of international large scale assessments such as PISA and TIMMS allows to investigate new cultural and social variables influencing math performance across time and in numerous countries, such as educational policies or political factors. Although much research has been done with regard to the differences between the East and West [e.g. 6], there is scarcity of studies analyzing whether political systems such as communism and democracy may have had effect on gender roles and gender differences in math performance. The purpose of this study is to address this research gap by comparing gender differences in the West- and East-European countries in PISA.

1.1.Gender differences in mathematics performance

Although gender gap in math performance has not been fully bridged, research shows that the differences in achievement are decreasing. Whereas studies conducted in the 1960s and 1970s on big samples of American students pointed to substantial differences favouring males [4], more recent analyses report smaller discrepancies between two genders; however, the effect depends to a large extent on student's age and sampled population [7]. A well-known meta-analysis by Hyde, Fennema and Lamon [2] showed that although girls demonstrated on average a slight superiority in elementary school and middle school (d = -.02), differences favouring men emerged at later stages (high school and college) (d = .29 and d = .32). The differences in the extent of discrepancies between boys and girls over the years as well as apparent closing of gender gap drew attention to important social and cultural factors affecting it.

In 2010, Else-Quest, Hyde and Linn [8] meta-analysed the results of TIMSS 2003 and PISA 2003 testing whether the gender gap observed 20 years earlier is still visible in mathematics performance. The international data from 69 nations were compared. The results revealed very small mean effect sizes in mathematics achievement (d < .15), however, national effect sizes showed considerable variability (d = - .42 to .40). The results of these and other studies [7] suggest that gender gap is not necessarily a direct result of biological differences between boys and girls which predispose males to achieve higher in STEM-related subjects (an extensive discussion in [5]) but points to micro-level factors such as family, peer and teachers' influences as well as macro-level variables such as political system, educational policies and cultural context [7].

1.2.Gender differences in post-Communist countries

The cold-war division into the Western world, led by the US, and the East Bloc, under the Soviet influence, was definitely one of the most important political events of the 20th century which has had a tremendous impact on the modern world. The Iron Curtain divided Europe (and the rest of the world) not only politically and economically but also ideologically and culturally, leading to significant differences in values, work organization as well as political and socioeconomic development between the blocs of countries. Whereas the Western countries enjoyed democracy, free market and civic liberties, the East Bloc countries focused on uniformity, redistribution of wealth and socialist view on equality. Ideological differences

had a powerful influence on almost all life domains, including employment, education and gender roles. Due to ideological underpinnings, socialist view of gender equality and economic necessities leading to so called "work obligation", women in the Communist countries were more likely to be professionally active, study at universities and work in occupations and sectors typically perceived as masculine [9, 10].

The analysis of job market in the Soviet Empire shows that women held many professional positions, while men predominated in sectors requiring manual work (skilled and unskilled workers) [10]. The relatively high emancipation of women can be explained with gendered educational tracking after the primary school when many more boys than girls were directed to vocational schools. As a result, girls consisted two thirds of students in general secondary schools which led to universities [10]. Furthermore, due to on-going military and cosmic competition between the US and the USSR (e.g. Space Race), much attention was placed on education in such domains as engineering, mathematics and science [11, 12].

A good illustration of the differences between the East and West Bloc in female involvement in STEM sector is a high disproportion in the number of women taking part in space programmes [12] and mathematical competitions. One of such events is the International Mathematical Olympiad (IMO), an annual team competition at which representatives from more than 90 countries compete in numerous math tasks [13]. First started in 1959, the competition is one of the oldest international science Olympiads. Due to its long history and worldwide coverage, it gives opportunity to investigate temporal and cultural underpinnings of math performance across time and in numerous countries.

Although there are still many more men than women taking part in the competition, interesting differences between the countries of former East and West Bloc can be observed [4]. Firstly, there were visibly more female representatives from communist countries; secondly, at some years women constituted more than 20% of Russian and Serbian teams (compared to 12% in the UK and Canada, the countries with the highest proportion of female participation in the West). Furthermore, the results of East and West Germany are especially telling in this matter. Whereas in the German Democratic Republic women consisted 6% of IMO teams, West Germany had zero female representatives over the period of three decades.

The analysis of female participation at IMO shows also that gender proportions vary dramatically across times and countries. All these differences suggest that gender differences in math achievement are more likely to be a result of external factors rather than some biological differences. It has to be borne in mind, however, that the participants of the IMO can neither be regarded as good representatives of their countries, nor the skills manifested by these exceptionally math-skilled students can be generalized over the whole population. Be that as it may, the analysis of the percentages of female students on IMO teams gives interesting information regarding cultural differences among nations, also with regard to the differences between the nations of the former East Bloc and Western countries. The aim of our research is to investigate whether these differences are still present among general population of students. Furthermore, we will test possible changes across time. In order to do that we will look on the results of large scale assessments in two time periods (2003 and 2012).

Hypotheses:

1.a) Gender gap in mathematics performance will be still present.

b) Boys will have higher mathematics results than girls.

2. East Bloc countries will show smaller gender gap in comparison to Western countries.

3. Gender gap will be closing over the years 2003 – 2012.

METHODOLOGY

2.1. Data

The data used for this work comes from PISA 2003 and 2012 mathematics assessment. PISA, Program for International Student Assessment, is an international large scale assessment first developed by the Organization for Economic Cooperation and Development in 2000 [14]. The purpose of the programme is to evaluate education systems worldwide by testing the skills and knowledge of 15-year-old students. PISA assessments pertain to three domains: mathematics, reading and science literacy. Conducted every 3 years, each edition focuses on one of the three core subject areas in depth (a major). Two other subjects are also tested but they are considered as minor for a particular year. As mathematics has been the major element tested in 2003 and 2012, these particular years have been selected for the study. Reading and science literacy were the secondary foci.

2.2. Investigated countries

The total number of countries participating worldwide in PISA 2003 is 40 and 65 in PISA 2012. However, as the aim of the analysis is to research whether there are differences in mathematics performance between the former countries of the West and East Bloc, only a subset of all countries has been selected. The selection of countries follows the methodology adopted by Mirazchiyski, Caro and Sandoval-Hernández (2014) [15] who analysed the differences in the levels of expected civic participation in the countries of former East and West Bloc (9 post-Communist and 13 established democracies). Due to the fact that not all of these countries participated in 2003 and 2012 editions of PISA, the final analysis covered 17 countries in 2003 and 21 countries in 2012. Table 1 presents the list of countries analysed in the study along with the number of participants in each year and country.

Table 1

Number of participants in each of the countries.

		2003	2012
East countries	Bulgaria (BGR)	---	1 658
	Czech Republic (CZE)	6 159	1 697
	Estonia (EST)	---	1 585
	Latvia (LVA)	4 592	1 384
	Lithuania (LTU)	---	1 520
	Poland (POL)	4 377	1 508
	Russian Federation (RUS)	5 914	1 719
	Slovak Republic (SVK)	7 216	1 486
	Slovenia SVN	---	1 844
West Countries	Austria (AUT)	4 545	1 552
	Belgium (Flemish) (BEL)	8 552	2 661
	Denmark (DNK)	4 033	2 388
	England (GBR)	9 294	4 155
	Finland (FIN)	5 718	2 807
	Greece (GRC)	4 193	1 662
	Ireland (IRL)	3 811	1 644
	Italy (ITA)	11 484	10 224
	Norway (NOR)	3 927	1 494
	Spain (ESP)	10 697	8 229
	Sweden (SWE)	4 543	1 499
	Switzerland (CHE)	8 283	3 676
	TOTAL	**10 7338**	**56 392**

2.3. Data Analysis

The five sets of plausible values for total math score were used in order to obtain correct population parameter estimates. A SPSS *macro* program provided by the PISA 2003 data analysis manual was used to produce direct estimates of the mean gender difference and the standard error of the difference [14]. In the first step, the means for girls and boys in all countries in question were analysed. In the second step, the gender gap between boys and girls in overall math achievement was measured. A *z* statistic was used to indicate the statistical significance of the mean difference for each comparison. A *z* score was significant if it was below -1.96 or above 1.96. Cohen's *d* was used to describe the effect sizes of gender differences [16] .

RESULTS

Table 2 presents the means and standard deviations in math performance of boys and girls in 2003 and 2012 PISA assessments in the selected countries. Table 3 shows gender gap in the results (negative values show higher performance of boys over girls).

Overall, the mean math achievement in the East-European countries remained on a similar level (M = 491.287, SD = 91.685 in 2003 and M = 489.975, SD = 89.874 in 2012), whereas it showed a drop of 6.383 in the Western countries (M = 502.635, SD = 92.960 in 2003 and M = 496.252 , SD = 90.166 in 2012).

A small but consistent male advantage was noticed in all countries in 2003. Nine years later, male dominance was less visible and a few countries (Bulgaria, Latvia, Russia, Finland, Sweden) noted even a slight female advantage (*d* = .018 to .047). Overall, math achievement of girls in the East-European countries improved over the years (ΔM = 2.448) and boys decreased (ΔM = -5.071). In the Western countries, the results of girls and boys noted a drop of 6 points (ΔM_{girls} = -6.029 and ΔM_{boys} = -6.736).

Table 2

Math achievement performance in PISA 2003 and PISA 2012 (Means, SD)

		2003				**2012**			
		GIRLS		**BOYS**		**GIRLS**		**BOYS**	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
East countries	Bulgaria (BGR)	---	---	---	---	440.013	90.091	437.551	97.318
	Czech Republic (CZE)	508.869	93.924	523.842	97.303	492.903	92.811	504.710	96.566
	Estonia (EST)	---	---	---	---	517.930	78.220	523.214	83.470
	Latvia (LVA)	482.026	84.168	484.839	91.757	492.521	78.976	488.655	84.579
	Lithuania (LTU)	---	---	---	---	478.736	85.850	478.909	92.211
	Poland (POL)	487.451	84.616	493.041	95.474	515.533	86.377	519.564	94.322
	Russian Federation (RUS)	463.382	87.804	473.499	96.284	482.944	85.606	481.394	87.118
	Slovak Republic (SVK)	488.629	90.599	507.290	94.924	476.712	97.365	486.134	103.698
	Slovenia SVN	---	---	---	---	499.387	89.938	502.748	93.217
	MEAN	**486.071**	**88.222**	**496.502**	**95.148**	**488.520**	**87.248**	**491.431**	**92.500**
West Countries	Austria (AUT)	501.816	88.721	509.390	97.097	494.462	89.114	516.682	94.437
	Belgium (Flemish) (BEL)	525.370	104.674	532.882	114.341	508.935	98.816	520.081	105.281
	Denmark (DNK)	506.150	91.129	522.728	90.748	493.029	80.772	506.953	82.813
	England (GBR)	505.140	90.911	511.803	93.645	487.815	94.096	500.295	94.536
	Finland (FIN)	540.597	79.395	548.002	87.620	520.185	80.669	517.391	89.434
	Greece (GRC)	435.551	88.634	454.952	98.107	448.984	81.636	457.039	93.473
	Ireland (IRL)	495.376	83.527	510.184	86.297	493.705	82.346	509.035	86.012
	Italy (ITA)	457.091	89.685	474.916	100.964	475.794	87.228	494.199	96.833
	Norway (NOR)	492.049	87.773	498.271	95.939	488.293	88.192	490.399	92.585
	Spain (ESP)	480.744	84.403	489.606	92.270	475.965	83.226	492.422	91.172
	Sweden (SWE)	505.778	92.484	512.308	96.838	479.629	87.599	476.916	95.630
	Switzerland (CHE)	517.951	95.442	534.578	100.387	524.473	91.736	537.369	96.344
	MEAN	**496.968**	**89.731**	**508.302**	**96.188**	**490.939**	**87.119**	**501.565**	**93.212**

East-European countries. In, 2003, the effect size of gender gap was small, between *d* = -.032 to *d*= -.157 in the East-European countries. Three countries (the Czech Republic, Russia and the Slovak Republic) showed significant differences between boys and girls in math achievement (z_{Czech} = -2.945, < .005, z_{Russia} = -2.323, p < .005 and z_{Slovak} =-5.110, p< .005).

Nine years later, in all mentioned countries apart from Russia, gender gap remained significant (z_{Czech}= -2.573, p<0.005 and z_{Slovak}= -2.098, p<0.005). Russia, on the other hand, did not only bridge the differences but girls overtook boys (overall change in gender gap of 11.667 points).

Western countries. In 2003, the effect size of gender gap ranged between *d*= - .068 and *d*= -.208 for particular countries. Significant gender differences were visible in eight countries, i.e. Denmark, Finland, Greece, Ireland, Italy, Spain, Sweden and Switzerland ($z_{Denmark}$ = -5.172, $z_{Finland}$ = -2.770, z_{Greece} = -5.346, $z_{Ireland}$ = -3.537, z_{Italy} =-3.029, z_{Spain} = -2.970, z_{Sweden}= -1.997, $z_{Switzerland}$ = -3.414, p< .005). In all countries a small male advantage was visible. In 2012, the effect sizes ranged between *d*= -.023 and *d* = -.200. Over the period of nine years, the gap was bridged in two countries (Finland and Sweden), however, it widened in such countries as Austria, Belgium, England ($z_{Austria}$ = -4.517, p < .005, $z_{Belgium}$ = -3.256, p < .005, $z_{England}$ = -2.668, p <.005). The gap remained significant also in Denmark, Greece, Ireland, Italy, Spain and Switzerland.

Table 3
Gender gap in math achievement in PISA 2003 and PISA 2012.

		2003				2012			
		Gender Gap	**SD**	**z**	**Cohen's d**	**Gender Gap**	**SD**	**z**	**Cohen's d**
East countries	Bulgaria (BGR)	----	----	---	---	2.461	4.099	.600	.026
	Czech Republic (CZE)	-14.974	5.085	-2.945 (*)	-.157	-11.807 ▼	4.590	-2.573 (*)	-.125
	Estonia (EST)					-5.284	2.636	-2.005 (*)	-.065
	Latvia (LVA)	-2.813	3.970	-0.709	-.032	3.866 ▲	3.626	1.066	.047
	Lithuania (LTU)					-0.174	2.416	-.072	-.002
	Poland (POL)	-5.590	3.140	-1.780	-.062	-4.031 ▼	3.419	-1.179	-.045
	Russian Federation (RUS)	-10.117	4.356	-2.323 (*)	-.110	1.550 ▼	3.019	.514	.018
	Slovak Republic (SVK)	-18.661	3.652	-5.110 (*)	-.201	-9.422 ▼	4.491	-2.098 (*)	-.094
	Slovenia SVN					-3.361	3.119	-1.077	-.037
	MEAN	**-10.431**	**4.041**	**-2.582 (*)**	**-.112**	**-2.911** ▼	**3.491**	**-.834**	**-.031**
West Countries	Austria (AUT)	-7.574	4.405	-1.720	-.082	-22.220 ▲	4.919	-4.517 (*)	-.242
	Belgium (Flemish) (BEL)	-7.511	4.811	-1.561	-.069	-11.147 ▲	3.423	-3.256 (*)	-.109
	Denmark (DNK)	-16.577	3.205	-5.172 (*)	-.182	-13.924 ▼	2.334	-5.965 (*)	-.170
	England (GBR)	-6.663	4.902	-1.359	-.072	-12.480 ▲	4.678	-2.668 (*)	-.132
	Finland (FIN)	-7.405	2.673	-2.770 (*)	-.089	2.795 ▼	2.866	.975	.033
	Greece (GRC)	-19.401	3.629	-5.346 (*)	-.208	-8.054 ▼	3.213	-2.506 (*)	-.092
	Ireland (IRL)	-14.808	4.187	-3.537 (*)	-.174	-15.330 ▲	3.792	-3.537 (*)	-.182
	Italy (ITA)	-17.825	5.886	-3.029 (*)	-.187	-18.405 ▲	2.485	-3.029 (*)	-.200
	Norway (NOR)	-6.222	3.206	-1.941	-.068	-2.106 ▼	3.026	-.696	-.023
	Spain (ESP)	-8.861	2.983	-2.970 (*)	-.100	-16.458 ▲	2.215	-7.431 (*)	-.189
	Sweden (SWE)	-6.530	3.270	-1.997 (*)	-.069	2.712 ▼	2.982	.910	.030
	Switzerland (CHE)	-16.627	4.870	-3.414 (*)	-.170	-12.896 ▼	2.709	-4.760 (*)	-.137
	MEAN	**-11.334**	**4.002**	**-2.832 (*)**	**-.122**	**-10.626** ▲	**3.220**	**-3.300 (*)**	**-.118**

* p <.005

CONCLUSION AND FUTURE WORK

The study showed a few interesting findings. Firstly, although gender gap is closing, it is still present in the majority of countries in question. Secondly, a slight male advantage is visible in mathematics achievement, however, this tendency is slowly changing. Although the magnitude of gender differences indicated by the effect sizes is fairly small (less than .2.), it is worth remembering that even slight gender differences may have some important practical consequences, for instance in female and male representation in math-related domains such as engineering and physical sciences [6].

The changes in the differences between boys and girls show relevant changes across time. In 2003, a small but consistent male advantage in mathematics achievement was noticed in all countries. Nine years later, a few countries (Bulgaria, Latvia, Russia, Finland, Sweden) noted a slight female advantage. Interestingly, whereas the math achievement of girls followed general tendency of a particular bloc of countries (i.e. it improved in the East-European countries and slightly decreased in the Western countries), the math achievement of boys followed a negative trend in both groups of countries in question.

The hypothesis about the differences between East-European and Western countries has been only partially confirmed. The first assessment of 2003 showed similar percentage of countries with the gender gap in math performance, i.e. in 3 out of 5 East-European countries (60%) and 8 out of 12 Western countries (66%), there were significant differences between boys and girls in math achievement. However, the PISA assessment of 2012 showed more substantial differences between the two blocs of countries. Firstly, whereas the average gender gap in the East-European dropped by 7.52 point, in the West it fell only by 0.708 point.

Furthermore, the differences between two blocs of countries are visible not only in reference to the magnitude of the gender gap but also with regard to the number of countries in each bloc with statistically significant gender differences. Whereas in the East-European countries, the majority of nations has bridged the gender gap by 2012 (only three out of nine Eastern countries, i.e. 33%, demonstrated significant male advantage), the number of Western countries with a significant gender difference has actually risen. In the West, nine out of twelve countries (75%) displayed significant advantage of boys over girls. Austria and Spain are the two countries, in which the gap rose particularly much, by 14.646 and 7.597 points respectively. Furthermore, although math results in the countries of the former East Bloc are on average lower than in the West, the new democracies managed to overcome gender differences in mathematics performance, whereas such an improvement has not been observed in the West (with the exception of the Scandinavian countries: Finland, Norway and Sweden).

It remains, however, unclear whether the differences between two sets of countries can be explained by ideology and differences in gender roles in both systems. Had the differences been related to ideological differences and the Soviet notion of equality, one would expect no gender gap in 2003 in the countries of the former East Bloc and possibly the results similar to those of the Western countries in 2012 (due to westernization processes). This, however, was not the case. Although the hypothesis can be only partially confirmed, the results suggest that the differences are more likely to be attributed to socio-cultural differences.

The results confirm the previous meta-analytic findings of Hyde, Fennema and Lamon [2] and Else-Quest, Hyde and Linn [8] which suggest that the gender gap in math achievement

is progressively closing. However, as the analysis of the results from PISA 2012 shows, it has not been yet fully bridged and there is still a big variability between nations. The results can be interpreted in reference to gender similarities hypothesis, which assumes that males and females are similar on most, but not all, psychological variables [7, 8]. The differences between countries, however, suggest the influence of country-specific factors affecting differences in math results.

The differences in the performance may be also interpreted with gender stratification hypothesis according to which gender gap in school achievement can be attributed to gender inequities in educational and economic opportunities of a particular country or culture [8, 17, 18]. This sociological hypothesis, proposed by Baker and Jones [17] (1993), posits that in patriarchal cultures, females are less successful in math because they are given less opportunities by the society and hence they do not perceive themselves as likely to succeed. Such beliefs are said to be instilled in girls due to numerous socialization processes (teachers, parents, friends). The hypothesis is consistent with cognitive social learning theory [19] as well as studies on stereotype threat which indicate that stereotypes about gender roles and mathematics make girls feel anxious and less confident which leads to worse mathematics achievement [20, 21].

Big variability in gender gap among nations as well as significant changes over a relatively short period of time suggest that differences in math performance can be attributed to systemic and cultural reasons. The example of Russia, Latvia, Finland and Sweden are especially telling as these countries did not only eradicate gender gap but a slight female advantage has been noticed. However, as the study was exploratory in nature, it is difficult to hypothesize about possible causal relationships between socio-cultural variables and achievement in mathematics. The division in the new and old democracies seems to offer new explanations, however, more in-depth studies are needed.

In the future research, it would be interesting to extend the analyses with data from other countries and years. In order to test the possible relationship between the Communist ideology of gender equality and mathematics results, it would be advantageous to compare the gender gap in the 1990s when the possible ideological influence was probably stronger. Additionally, such variables as Gender Gap Index, Gender Inequality Index, Relative Status of Women and possibly GDP should be tested in order to analyse in more detail socio-economic factors that might explain the gender differences in math achievement between various countries.

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IMPACT OF THE GLOBAL FINANCIAL CRISIS ON CONSUMER BEHAVIOUR

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ABSTRACT

Consumer behavior is influenced by both internal characteristics and external factors that represent the environment in which the individual behavior takes place. The recent Global Financial Crisis (GFC) is one such environmental influence that has had a strong impact on the behavior of consumers. There has been much research undertaken into the impact of the GFC. The majority of studies are revealing that this crisis has had a severe impact on the spending patterns of consumers. Whilst the GFC can be seen predominantly as an external influence, the psychological influence on consumers is also paramount. The GFC has forced consumers to question their beliefs and attitudes towards purchasing. For companies, long-term strategies may be the key to future success. The marketing company that can treat and track the profound psychological changes in consumer behavior may fare well as we move into post-recession times.

KNOWLEDGE, ATTITUDES AND PRACTICES OF FEMALE STUDENTS REGARDING EMERGENCY CONTRACEPTION AT MIDLANDS STATE UNIVERSITY, ZIMBABWE

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ABSTRACT

Background: Unintended pregnancies constitute a most serious public health challenge to women to an extent that they end sometimes in illegal abortions resulting in adverse consequences. However the introduction of emergency contraception has served as the last chance for women to avoid unintended pregnancies, though in countries like Zimbabwe the cause for underutilisation of emergency contraception has been hardly investigated.

Purpose: The main purpose of this study was to assess the knowledge, attitude and practice of female student regarding emergency contraception among in preventing unintended pregnancy.

Methodology: A quantitative approach using descriptive cross sectional survey design was conducted among 319 stratified random sampled female university students of Midland State University, Zimbabwe. Self-administered closed ended questionnaire was used to collect the data. To ensure validity, the development of the instrument was guided by a wide range of literature and the inputs of experts. The instrument was test-retested for reliability and the responses will be comparing using Cronbach's alpha which yielded high reliability alpha (α) value of 0.84. Data was coded and entered into a computer using Microsoft Excel 2010 and analysed using Statistical Package for Social Scientists (SPSS) version 22.0. Descriptive statistics were used to analyse data in the form of cross tabulation and the results were presented in table, graphs and pie charts.

Results: The results indicated that apart from all sources of information about EC, mass media has shown to be the most famous. Although female students knows about EC, the knowledge about effective level and correct use of EC poor. The attitudes of female students at MSU are unfavourable for EC as they gave reasons like EC promotes promiscuity and it can pose risk. The practice of EC at MSU is low with only 47% of respondents said they have once use EC.

Conclusion and recommendation: The study concluded the lack of actual knowledge about EC which has directly influence attitudes and practices. The study concluded that that there MSU female students has fair knowledge about EC which has resulted in negative and attitudes towards EC with few EC practices. The study therefore recommends the adoption and use of Health Belief Model approach in promoting the young to use EC to prevent unwanted pregnancies**.**

Key words (emergency contraception, knowledge, attitude, practice, female students)

THE COGNITIVE ECONOMY AS AN APPROACH FOR DEVELOPING THE COMPETITIVE ABILITIES OF THE FACULTIES OF EDUCATION

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ABSTRACT

The study amied at recognizing the reality of the cognitive economy of faculties of education and the effect of its dimensions on developing their competitive capacities ,using the perspective method .

Two questionnaires were prepared, The first of them was applied on a sample of staff members at the faculties of education as it reached (117) in order to recognize the reality of the cognitive economy of faculties of education and the effect of its dimensions on developing their competitive capacities . The second questionnaire was applied on the same previous sample in order to recognize the requirements of the cognitive economy at the faculty to increase its competitive ability.

The study came down to several results, most of which The sample individuals as whole indicated that the requirements of the cognitive economy at the faculty that increase its competitive ability were represented at evolving information technology and telecoms with the curriculum and the service and research programs , enabling staff members to participate in the activities of information mobility of human principals between universities, giving students the technological skills concerning the international markets and sharing in the unions of the pioneering international universities in the field of information technology telecoms and put at the end of the study a suggested proposal which has aims, fundamentals, mechanisms and guarantees to achieve the cognitive economy as an Approach for developing the competitive abilities of the faculties of education.

Keywords:The Cognitive Economy , The Competitive Abilities

INSTABILITY FACTORS OF YOUTH EMPLOYMENT IN RUSSIA

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ABSTRACT

The paper presents an analysis of the factors of instability of today's youth employment in Russia. Using the results of the Comprehensive Survey of the Living Conditions of the Population of Russia, conducted by the Federal State Statistics Service (Rosstat) in 2011, we compare the employment differences for young people aged 15-19 and 20-24 years by the organizational and legal status of the employer, forms of ownership of the companies, working schedule and type of contract. We find that the employment instability factors in different age groups of youth are different. We show the peculiarities of youth employment on the basis of fixed-term employment contracts and without official registration, involving irregular working time, part-time working week, and different number of hours worked, as well as work on weekends and holidays. We also analyze the degree of youth skills mismatch.

Keywords: youth, employment, profession, forms of ownership, working schedule, instability

1. INTRODUCTION

The most important task of the social and economic policy of the state is to create conditions for effective youth employment through technological modernization of the economy, development of the social, production, financial and information infrastructure and implementation of measures aimed at improving the competitiveness of young people on the labor market. The youth labor market is a segment of the Russian economy, which has specific features that should be taken into account when developing and implementing programs to promote job placement and employment. Providing youth employment is a serious problem in most countries. The global financial and economic crisis has aggravated the situation with youth employment by increasing the rate and duration of unemployment among the young people aged 15-24 years compared with the adult population. Youth employment is not always socially protected. Young people aged 15-24 years are the most vulnerable on the labor market. The rate of economic activity of young people aged 20-24 years fell from 79.4% (1992) to 60.1% (2013), and that of young people aged 15-19 years - from 31.1% to 9.0% over the same period. The employment rate for the 15-19-year-olds dropped over the same period almost three times (from 24.7% to 6.7%), and for those aged 20-24 years – from 71.7% to 52.5% (Labor and Employment…, 2013).

Our objective here is to analyze the currently existing factors of stability and instability of employment of young people aged 15-19 and 20-24 years in Russia. For this purpose we have fulfilled the following tasks:

- examined the dependence between the forms of ownership of the companies employing young people and the stability (instability) of employment;
- investigated the effects of the working schedule and conditions on the stability of employment of young people aged 15-19 and 20-24 years;
- identified the proportion of the young people aged 15-29 years, whose working duties mismatch the skills they acquired during education.

The object of our study is the young people of 15-24 years of age, who, at the time of the questionnaire survey, had paid employment or other gainful occupation. The paper is organized as follows. In the first section we state the research tasks and explain the relevance of the youth employment problem. In the second section we discuss the research methodology, database and the sample. The third section presents the results of the empirical studies. We have analyzed how the conditions of employment of young people aged 15-24 years, including the organizational and legal status of the employer, forms of ownership of the companies employing the young people, and contract relations, affect the stability of employment. We have also identified the peculiarities of the young people's working schedule: whether they have a full or shorter working week, the number of hours they work per week, and whether they work on weekends and holidays. Finally, we have analyzed the degree, to which the young people's current working duties match the skills they acquired during education. Our findings and recommendations are contained in the concluding section.

2. RESEARCH METHODOLOGY

2.1.Theoretical background.Problems with youth employment are due, on the one hand, to the lack of work experience, low level of qualification and lack of vocational education, and on the other hand, to the high demands and claims of the young people who have recently undergone training and are dreaming of economic independence. Young people of 15-24 years of age are more likely than adults to have jobs mismatching their skills and to work on the basis of fixed-term contracts and part-time. Youth employment crisis has significant social consequences manifesting themselves in aggravating intergenerational relations and growing inequality among the young people in terms of access to decent work and development opportunities, and produces negative impact on the demographic situation due to the postponement of starting a family and having children until achieving financial independence.In addition, during the period under review Russia has experienced an expansion of employment in the informal sector, which serves as a shock absorber of the employment decline in the formal sector, providing a chance for employment and income to those who lost their jobs. The vulnerability of young people on the labor market is much fuelled by segmentation of the degree of social protection of workers' employment. A high degree of social protection is mostly secured at large and medium-sized companies with the status of a legal entity, whose workers enjoy advantages in the form of higher wages and a wide range of benefits and social guarantees. At the same time, there are companies with a low degree of

social guarantees and employment protection in different sectors of the economy that employ young people with weak competitive positions on the labor market. All these factors do objectively cause the employment instability to rise.The socio-cultural paradigm of studying age relations stems from the idea that each individual arranges his life through internalization of the age-specific social standards and expectations existing in the society [Middle age…, 1968]. Age-specific standards and expectations are believed to be a part of the culture and a reflection of the age stratification of the society. According to the stratification paradigm, people are divided into "senior" and "junior" depending on the availability of certain resources and opportunities determining the individuals' status and pointing at the differences in their rights and obligations [Eisenstadt, 1956]. In the last decades much attention is paid to the concept of vulnerability of youth. Authors argued, that the contemporary society is the 'risk society'[Beck,1992] and risk is a chronic and everpresent phenomenon, so youth is the social group that more than others exposed to the probability of being affected by risk factors. This issue roots from a theory of changed lives within a new modernity [Rieleand Gorur, 2015].Highlighting a significant deterioration in the labour market conditions faced by young people.Standing argues that contemporary conditions have led to the establishment of a new class: the precariat [Standing, 2011].

2.2.The Data and the Sample.The age boundaries of youth as a special social group are not strictly defined: they vary from country to country and depend on the research purposes. The International Labor Organization (ILO) uses the 15-24 age boundaries for youth, which enables to select a group of people on the labor market who face problems specific for this age. In the social context, youth is considered a period in life, when the individual transits from dependent childhood to independent adulthood. In this period, young people realize their involvement in the society and interdependence with other members of the community.The information base of our study is the results of the Comprehensive Survey of the Living Conditions of the Population of Russia conducted by Rosstat in 2011, the sample including 19 879 people, 14 116 (71.0%) and 5 763 (29.0%) of which are respectively urban and rural residents [Comprehensive Survey…, 2011]. For the purposes of our study we formed a subsample comprising 2 683 people aged 15-24 years, including 1 103 people aged 15-19 years (41.1%) and 1 580 people of 20-24 years of age (58.9%). 925 of them did have paid employment or other gainful occupation at the time of the questionnaire survey (34.8% of the respondents aged 15-24 years), while the rest 1 730 people had no paid employment. Then we divided the totality of our 15-24 aged respondents into two groups: (1) people aged 15-19 years and (2) 20-24 year olds. Such typological grouping is due to a certain periodization of the life cycle of individuals associated with major events in their lives. At the age of 15-19 years, young people finish school and decide upon getting vocational education. Employment at this stage is usually part-time and requiring no professional training. At the age of 20-24 years, having received vocational education, individuals enter the professional labor market, claiming for high-skilled jobs. Employment in this period is rather a means to gain professional experience, competence and economic independence. Moreover, it is in this very period of life that women often get married, give birth to children and have to temporarily give up working. Those, who did not start a family after receiving vocational education, continue to stay with their parents. Age is the simplest criterion for inclusion of individuals in the social group of young people, especially in the context of studying the issues related to education and employment. Individuals belong

to the category of "young people", when they are at the age when they get education and first employment. Difficulties with employment of graduates increase the age of first employment. At the same time, the low accessibility of vocational education for certain social groups pushes the young people into the labor market at an earlier age.

3. RESULTS

3.1. Analysis of the influence of ownership forms on employment stability. Employment reflects the system of relations on the people's participation in economic activities to generate income and professional fulfillment. The structure of employment currently existing in Russia, on the one hand, reflects the structure of the economy with its poor diversification that limits the employment opportunities for a part of the university and college graduates. On the other hand, the youth labor market is much affected by the degree of accessibility of vocational education for different social-demographic groups and strata of the population. Obviously, young people with a low level of education and no work experience have the poorest chances for employment. They are not effective competitors on the labor market, if their skills do not meet the requirements of new jobs. Employers consider them potential employees only when there are no other candidates. Youth employment is a model of individual development, contributing to the accumulation of knowledge, feelings, sensations and experience [Burrell& Morgan, 1979]. According to the Rosstat's survey, most of the young people, who at the time of the survey did have paid employment, were employed by organizations and companies having the status of legal entities. According to the legislation of the Russian Federation, a legal entity is an organization established and registered in conformity with the law that owns separate property and is liable for its obligations with this property and responsible for the activities it performs. The status of a legal entity is the main organizational and legal form for the vast majority of economic entities in Russia. For instance, the available data shows that companies with the status of legal entities employ 74.5% of young people of 25-29 years of age, 69.9% of those aged 20-24 years and 62.8% of young people aged 15-19 years (Table 1). Young people prefer to be employed by legal entities mostly because of the greater social protection of employment they offer.

Table 1.

Structure of youth employment by organizational and legal status of the employer, %.

Organizational and legal status of the employer	**15-19**	**20-24**	**25-29**
Legal entity	62.8	69.9	74.5
Individual entrepreneur	31.4	27.0	22.3
Self-employed	5.8	3.1	3.2

Source: Comprehensive Survey of the Living Conditions of the Population of RF (Rosstat, 2011).

Individual entrepreneur is a person registered in conformity with the law and engaged in entrepreneurial activities without establishing a legal entity. Individual entrepreneurs and various types of self-employment usually practice more flexible forms of employment. For this

reason the proportion of the young people aged 15-19 years employed by individual entrepreneurs (31.4%) is higher than that of the 25-29 aged (22.3%). According to the survey, self-employed are 5.8% of young people aged 15-19 years and 3.1% of those aged 20-24 years. Employment of young workers at companies of different forms of ownership and economic activity determines the features of their educational and working behavior. Each company offers different opportunities and imposes different constraints for youth employment and professional education. Companies and organizations of public and municipal forms of ownership operating in the Russian economy employ 19.2 million people (28.4%). The 40.7 million people (60.0%) are employed in the private sector. The structure of youth employment is somewhat different. The desire to have a stable and protected employment explains the higher proportion of the young people working for companies and organization of public or municipal ownership. The proportion of the young people at the age of 25-29 years working for companies of public or municipal ownership is noticeably greater: 57.4% versus 39.2% of those employed at private companies. For young people aged 20-24 years the proportions of the employed at public and private companies are almost equal, constituting 48.9% and 44.0%, respectively. The proportion of the 15-19-year-olds working for public or municipal companies is 10% higher than those employed in the private sector (Table 2).

Table 2.

Structure of youth employment by ownership of companies and organizations,%.

Ownership of companies and organizations	**15-19**	**20-24**	**25-29**
Public or municipal	51.0	48.9	57.4
Private	41.2	44.0	39.2
Other	7.9	7.1	3.4

Source: Comprehensive Survey of the Living Conditions of the Population of RF (Rosstat, 2011).

Private companies in the public opinion are often associated with the risk of failure to stick to the labor legislation, violation of contractual arrangements and lower social protection of the workers. Hired workers are those who work under a written contract or an oral agreement with the company's leadership regarding the conditions of their work, for which they are paid. The vast majority of young people aged 15-24 years are hired workers who get paid. Among the young people aged 15-19 and 20-24 years the respective proportions of such workers are 91.2% and 98.2%. Sometimes young people are engaged in helping with the businesses belonging to their relatives – 7.4%of the 15-19-year-olds and 0.7% of those aged 20-24 years. Modern-day Russian young people are rarely employed as owners (co-owners) of businesses: slightly more than one percent of the respondents aged 15-24 years are owners (co-owners) of businesses. Contractual provisions are an important feature of employment stability. A limited term of the contract and non-transparent employment relationships make the employment additionally uncertain and socially unprotected and limit the access to benefits for the worker. Temporary contracts are often seen as transitional to a more stable employment for those whose competitive positions on the labor market are weak. The majority of employed young people

aged 15-29 years are working on the basis of indefinite-term employment contracts. The available data shows that the proportion of those working on the basis of indefinite-term employment contracts grows with the age. To illustrate this, working under indefinite-term employment contracts are 69.6% of the respondents aged 15-19 years, while for the 25-29 aged the proportion is 80.0% (Table 3).Young people aged 15-19 years are more often than those aged 20-24 and 25-29 years employed on the basis of fixed-term employment contracts, the respective proportions being 15.9%, 11.4% and 12.2%. The data also shows that 11.6% of the young people at the age of 15-19 years and 11.6% of those aged 20-24 years are working on the basis of verbal agreements without registering their employment officially (vulnerable employment). However, among the people aged 25-29 years the proportion of those working on the basis of verbal agreements is twice as low (6.5%). Working at home on the basis of an employment contract is uncommon for modern-day young Russians.

Table 3.

Structure of youth employment by type of contract, %.

Type of contract	**15-19**	**20-24**	**25-29**
Indefinite-term employment contract	69.6	76.4	80.0
Fixed-term employment contract	15.9	11.4	12.2
Verbal agreement without registration	11.6	11.6	6.5
Other contract	2.9	0.6	1.4

Source: Comprehensive Survey of the Living Conditions of the Population of RF (Rosstat, 2011).

The modern-day Russian young people are inclined to have a stable employment preferring to work for legal entities of public or municipal ownership. Most of the young people aged 15-24 years are workers hired for payment, but among the people aged 15-19 years the proportion of those who help with their relatives' businesses is quite high. Workers aged 15-24 years are less socially protected than the 25-29 aged. For instance, about 27.5% of the young people of 15-19 years of age have unstable employment (fixed-term or verbal employment contracts); while for those aged 20-24 years the proportion is 23.0%. Moreover, almost every fifth of the young people aged 25-29 years is working on the basis of a fixed-term employment contract or without official registration.

3.2. Analysis of the influence of the working schedule on employment stability.Employment stability also depends on the working schedule. Part-time employment or a shorter workweek is a token of instability of the employment relationship and of the risks of losing the skills or being fired. Working more than 40 hours a week means that the worker is unprotected from the employer's unlawful demands. Working overtime is most often an initiative of the employer, which the worker has to accept for fear of losing the job. Normal working schedule is important for the workers' health, good performance and high productivity. It sets the duration of their work and combines the periods they work and have rest breaks. Young people's working schedules differ depending on the age (Table 4).

Table 4.

Structure of youth employment by type of working schedule, %.

Type of working schedule	**15-19**	**20-24**
Full time/fool workweek	66.2	90.5
Part-time/shorter workweek	15.4	3.7
Flexible working schedule	18.5	5.8

Source: Comprehensive Survey of the Living Conditions of the Population of RF (Rosstat, 2011).

According to the available data, about 8.2% of the people aged 20-24 years are employed less than 20 hours per working week, while for those aged 15-19 years the proportion is 30.4%. More than a half of the young respondents are employed from 20 to 40 hours per working week (51.9% and 63.1% of those aged 15-19 and 20-24 years, respectively). However, young people aged 20-24 years are much more often employed overtime (more than 41 hours per week) than those aged 15-19 years, the respective proportions being 28.7% and 17.7%. Part-time employment may signifying the infringement of the rights of 15-24 aged workers who have accepted these terms due to the lack of work experience. But it can also be voluntary, because of the need to combine work and education (Table 5).

Table 5.

Structure of youth employment by number of hours worked, %

Number of hours worked per week	**15-19**	**20-24**
Less than 20 hours per working week	30.4	8.2
21-40 hours per working week	51.9	63.1
More than 41 hours per working week	17.7	28.7

Source: Comprehensive Survey of the Living Conditions of the Population of RF (Rosstat, 2011).

In order to find out how the process of education affects the number of hours worked per week, we examined the working schedule of the young people aged 15-24 years, who at the time of the survey were both employed and getting education. The proportion of those who work and get vocational education decreases with the age. Interestingly, the proportion of the 15-19-year-olds working up to 20 hours per week is higher for those combining work and education: 41.9% compared with 30.4% for those who only work. However, overtime employment among the 15-19-year-olds almost does not depend on whether they are getting education. In the group of the employed of 20-24 years of age the situation is somewhat different. The structure of employment by the number of hours worked per week in this group practically does not depend on education (Table 6). So, the available data suggests that the number of hours worked per week in the age group 15-19 years depends on education, while for those aged 20-24 years this kind of dependence is not observed.

Table 6.

Number of hours worked per week depending on the age

Number of hours worked per week	**15-19 years**		**20-24 years**	
	Working	**Working and studying**	**Working**	**Working and studying**
Less than 20 hours	30.4	41.9	8.2	6.9
From 21 to 40 hours	51.9	39.5	63.1	66.1
More than 41 hours	17.7	18.6	28.7	27.0

Source: Comprehensive Survey of the Living Conditions of the Population of RF (Rosstat, 2011).

A more detailed analysis of overtime employment suggests the following. Firstly, men are more often employed overtime, and their proportion grows with the age. For instance, employed overtime are about 57.1% of men aged 15-19 years, while for the 20-24-year-olds the proportion is noticeably higher, constituting 64.2%. The proportion of women working overtime is lower, probably because they are engaged in family duties and raising small children. Secondly, among the young people aged 15-19 years, working more than 41 hours per working week are mostly those who do not have an officially certified profession (57.1%), while in the age group 20-24 years, employed overtime are more often those who do have a profession (73.7%). In other words, the 15-19-year-olds who are employed overtime are usually engaged in low-skilled labor, while those of 20-24 years of age have skilled jobs. Thirdly, overtime employment in the age group 20-24 years is more typical for companies with the status of legal entities (61.7%) than for individual entrepreneurs (32.9%). Among the young people aged 15-19 years, a half of the employed overtime work for legal entities and 42.9% - for individual entrepreneurs. An important feature of the working schedule is work on weekends and holidays. The labor legislation of Russia establishes a 40-hour working week with two days off. However, in some fields of activity, like trade or catering, they practice sticking to a flexible schedule, working for several days in succession for more than 8 hours a day and then having a few days off. This kind of a working schedule is usually used in sectors employing a considerable part of youth labor. For instance, a working schedule of the kind is agreed upon with 41.7% and 34.2% of young people aged 20-24 and 15-19 years, respectively. About 20% of the young respondents note that they used to work on weekends and holidays for other reasons.Perhaps, it was either some part-time work, or performing temporarily the duties of absent colleagues, or some overtime work.So, the working schedule of those aged 15-24 years is such that, on the one hand, they usually work part-time and a shorter workweek because of combining work with education, and on the other hand, they often work overtime, on weekends and holidays, i.e. their working schedule is non-standard.

3.3. The degree of youth skills mismatch. According to the survey of competence of workers conducted in the OECD countries, a substantial proportion of young people in the countries surveyed have a skill proficiency that is too high for the jobs they occupy, or are employed at jobs that mismatch the specialty they have received(OECD Employment …., 2014). This mismatch causes considerable wage differences compared to those whose jobs match the skills

they have acquired (Promoting better ….., 2014). The problem of youth skills mismatch is still relevant for the regions of Russia. On the one hand, the mismatch is due to the low demand for professions available on the local labor market and also to the fact that the professional or personal qualities of potential workers sometimes mismatch the employers' requirements. Unfortunately, some vocational education institutions still train specialists who are not always in demand on the local labor market. On the other hand, the employment and professional preferences of young people sometimes change in the course of their education or after graduation. It should be kept in mind that the process of professional self-determination not necessarily ends with the graduation from the university or college. Already in the course of education one might find that he/she has chosen a wrong profession. This causes imbalances on the labor market, which manifest themselves, firstly, in the shortages of skilled specialists that employers experience acutely, secondly, in the skills mismatching job requirements, and thirdly, in the employment mismatching the skills acquired. As the employers' requirements regarding the level of training of young people are getting more strict, owing to technological developments, there should be established a system of continuing vocational education with the participation of not only vocational education institutions, but also employers. In this case, professional retraining or further training might help adapt the skills and competences to the new jobs. According to the Rosstat's survey, the jobs of only 36.5% of those aged 20-24 years match their skills, and in the age group 15-19 years the proportion of those whose jobs fully match their skills is even lower, constituting 15.5% (Table7). The proportion of the young people whose jobs match their skills increases with the age. For example, among the 25-29-year-olds, the proportion of those whose jobs match their skills is 41.4%, reaching a maximum of 43.5% among workers of 31-45 years of age. The proportions of the young people whose working duties are close to the skills they acquired during education are approximately the same for young people aged 15-19 and 20-24 years (Table7). However, it is important to note that the jobs of 70.4% and 49.9% of those respectively aged 15-19 and 20-24 years mismatch their skills. One of the explanations for this considerable skills mismatch among the 15-19-year-olds is that many of them lack vocational education. At the same time, every second of the 20-24-year-olds performs working duties that also mismatch their skills, and it is a cause of serious concern.

Table 7.

Structure of youth employment by the degree of skills mismatch, %

Degree of skills mismatch	**15-19**	**20-24**
Complete match	15.5	36.5
Partial match	14.1	13.6
Complete mismatch	70.4	49.9

Source: Comprehensive Survey of the Living Conditions of the Population of RF (Rosstat, 2011).

These disproportions between the skills acquired during vocational education and the jobs mismatching them can be to a certain extent overcome through additional education for a new profession. The survey shows that only 34.3% of the respondents have undergone retraining

for their current jobs. It is worth mentioning that getting retrained are more often those at the age of 25-29 years (35.1%) and 20-24 years (30.9%). Young people aged 15-19 years are less likely to get trained or retrained (27.6%). Although professional retraining increases the efficiency of using the human capital, in real life it often happens that young people are not interested in professional advancement and do not wish to invest in additional vocational education. The reasons lie both in the inefficiency of some systems of retraining and regional retraining courses and in the low availability of vocational education services for young people. Despite the fact that employers are interested in staff development, not all of them are eager to spend money on setting up corporate retraining systems, since the costs seem too high [Heckman,2009]. Aside from wages, the costs of hiring personnel include spending on training and retraining for the employees to meet the demands and profile of the company. Still, employers are reluctant to provide such training to young people because of the propensity of the latter to change jobs. Technological modernization, the introduction of information technologies and innovative transformations in the economy require employing high-skilled specialists with the necessary competencies for the job. Meanwhile, the professional qualification structure of graduates does not always meet the needs of the labor market. Additional training is available not to everyone, and furthermore, the proportion of those who do not consider it necessary to undergo further training, improve their skills, change the profession or acquire new knowledge is high. The survey shows that about 68.9% of the respondents aged 20-24 years and 53.6% of those aged 15-19 years believe they are skilled and qualified enough to cope with more challenging working duties than the ones they perform now. So, the employment of some young people mismatches the skills they have acquired during training. Not all employers consider it necessary to spend their funds on providing special training or retraining for the young specialists. Only every third worker aged 15-24 years notes to have undergone special training for the current job. At the same time, almost 70.0% of those aged 20-24 years believe they have the skills and competencies to perform a more challenging work. Young people decide whether to invest in their human capital by considering their expected revenues, budget constraints and personal preferences.

CONCLUSIONS

Our study shows that the factors of employment instability for the young people of 15-24 years of age do exist in Russia. Because of the lack of work experience, young people have to accept part-time employment with late, shadow or in-kind wages. Violation of contractual obligations and “opaque” employment conditions are quite common for youth employment. At any age, young people prefer to be employed by companies or organizations with the status of legal entities, since they offer greater social protection. But in reality, some young people work for individual entrepreneurs, whose employment bears higher risks of violation of the labor legislation, failure to fulfill the contractual obligations and lower levels of social protection. About 43.0% of young people aged 15-24 years are employed in the private sector. Only 69.6% and 76.4% of young people aged 15-19 and 20-24 years, respectively, are employed on the basis of indefinite-term contracts. The 15.9% of those aged 15-19 years and 11.4% of those aged 20-24 years have fixed-term employment contracts. Alarmingly, every eighth of the 15-24-year-olds is employed without official registration, on the basis of a verbal agreement.

Young people's working schedules are such that, on the one hand, they are often employed part-time or have shorter workweeks because of combining work with education, and on the other hand, overtime employment or that on weekends and holidays, i.e. employment with non-standard working schedules, is often practiced. The level of education plays an important role, since investing in human capital augments the young people's competitive advantages on the labor market. The willingness for additional training, which reflects the need for continuing education as a professional lifestyle, is no less important for shaping an efficient employment structure. The jobs of most of the employed aged 15-24 years mismatch the skills they have acquired, the proportions constituting 49.9% and 70.4% for the 20-24 and 15-19-year-olds, respectively. Our findings suggest that the public employment policy should be complemented by some additional instruments that would offer new opportunities in the fields of education and employment and help improve the access to high-tech jobs. Such instruments might also be helpful in increasing the young people's participation in the life of the regional community and contribute to the consolidation of mutual solidarity between the entire community and its younger generations.

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SOCIAL MEDIA IN SPORT COACHING: KNOWLEDGE, ATTITUDE AND USE OF INFORMATION AND COMMUNICATION TECHNOLOGY IN SERVICE DELIVERY AMONG TERTIARY INSTITUTION COACHES IN SOUTHWEST, NIGERIA

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ABSTRACT

Social media is undoubtedly making significant impact across the globe. Interconnectivity and social links are gaining ground every day. Apart from chatting for entertainment, social media is being used for educational and professional development. It is not clear if coaches in tertiary institutions have started using social media for their service delivery. This study therefore examined their knowledge, attitude and use of information and communication technology in sport coaching. Four research questions guided this study and 250 coaches in tertiary institutions in South West Nigeria participated in the study. It adopted survey design making use of questionnaire as an instrument for data collection with reliability coefficient of 0.79. In addition, focus group discussion was used to elicit responses from the participants. Data collected were subjected to analysis using descriptive and inferential statistics of t-test and ANOVA at 0.05 level of significance. The results of the study showed a diverse response of the coaches regarding the usability of ICT for the coaching athletes (t=1.65, p>0.05). There was a significant difference between respondents' knowledge and their attitudes to Social Media in sport coaching $F_{cal.}$ =2.468, Df=248, p>0,05). It was revealed that the coaches in southwest Nigeria had a positive attitude to the use of ICT for coaching (83.1%) in tertiary institutions and majority ((78.2%) use ICT for sport coaching. Coaches to inculcate in athletes moral behavior that will impact on their attitude to social media and sport coaching while institutions, government and sport philanthropists should develop spirit of investment in sport

Keywords: Attitude and knowledge, Information and communication technology, Service delivery.

INTRODUCTION

The entire universe had been transformed to a global village through Information and Communication Technology (ICT). Countries all over the world are at different stages of integrating ICT to everyday practices including learning, teaching and coaching. There is urgent need for developing countries to liberate teacher and coaches from old media and methods of teaching and learning by embracing new method of technology (Ajayi, 2002). Teaching, learning and coaching world over had gone beyond the teacher standing in front of a group of students disseminating information to them without their adequate participation and contributions. With the aid of ICT, teachers and coaches can take their students and athletes beyond the usual classroom

setting, ensure their adequate participation in teaching-learning process and create a virtual environment for them to explore and experiment.

Coaching is a useful way of developing people's skills and abilities, and of boosting performance. It can also help deal with issues and challenges before they become major problems. A coaching session will typically take place as a conversation between the coach and the person being coached, and it focuses on helping the coachee discover answers for themselves. After all, people are much more likely to engage with solutions that they have come up with themselves, rather than those that are forced upon them. Most formal and professional coaching is carried out by qualified people who work with clients to improve their effectiveness and performance, and help them achieve their full potential. Coaches can be hired by coaches, or by their organizations. Coaching on this basis works best when everyone clearly understands the reason for hiring a coach, and when they jointly set the expectations for what they want to achieve through coaching (Lachance, 2009).

The most important piece of equipment that lies at the heart of the whole ICT process is the computer. According to Kornfeind, (2011), the computer and the software that it runs is an essential element in the new societal paradigm and it is a key to success for the modern sports administrator. It is the piece of equipment that allows the sports coaches to maximize the return on scarce resources whether this is people, facilities and equipment or finances (Over, & Sharp, 2008). In turn, it is also perhaps the single most important tool to insure the extended reach of sport and recreational programming and with it, the whole idea of inclusion in these activities of the greatest number of participants

Information and Communication Technology (ICT) plays an increasingly important role in the gradation of the coaching profession. Our empirical research targets this area, specifically, questions about the knowledge, attitude and use of ICT in sport coaching. The empirical research method was to analyze the specific forms and methods of use of information technology (video channels, social networks, electronic databases, websites, computer programs, smart phones, etc.) in formal training of coaches. Coaches do not use ICT in their direct coaching too often during training or a match, while particularly at the top level usually work on a computer with video.

Buckley & Anderson (2006) begins with the assumption that all game participation represents an opportunity for learning. People can learn many complicated behaviours, attitudes, expectations, beliefs and perceptual schemata through observation and participation in social media. Game play situations are called learning encounters and the learning that takes place is influenced by the interaction of person (e.g., attitudes, goals, emotions, traits) and situation variables. These learning encounters influence both the subsequent internal state of the player (their arousal, emotions and cognitions) and also their appraisal of the environment and thus subsequent decisions and behavior. Enough research has been carried out that several reviews of the literature on violent video games and behavior have been conducted (Anderson & Bushman,

2001; Dill & Dill, 1998; Griffiths, 1999; Sherry, 2001) and found that learning through video and computer games has a lot of advantages which could be exploited by coaches to improve performance of their athletes.

Various ICT facilities are used in teaching learning-process. Some facilities that had been identified by Bryers (2004), Bandele (2006) and Ajayi (2007) include radio, television, optical fibres, computer, digital multimedia, satellite equipment, internet, overhead projector, slides, fax among others. It is essential to understand that ICT is divided into three major groups of information technology, communication technology and networking technology. The third group belongs to the social media which is the main concern of this paper and it appears that coaches have insufficient knowledge and right attitude to the effective use of social media for coaching in Nigerian higher institutions. The use of ICT offers wide array of choices and innovative ways that is mostly absent in the traditional classroom settings (Bahurudin, et. al., 2001). The new Information and Communication Technology is having revolutionary impact on educational methodology and coaching globally among which are using performance analysis software and hardware, using ICT to record and analyse performance, using ICT to track participation, involvement and improvement in physical activity as well as access to select and interpret information (Ololube, 2006). To this end, Nigerian coaches cannot afford to lag behind to adapt to the new era of technology for the effectiveness of their profession. Bandele (2006) indicates that computer application in the classroom can take various forms such as Computer Aided Instruction (CAI), Computer Assisted Learning (CAL) and Computer Managed Learning (CML), simulations, tutorials, drill and practice and demonstrations. It must be emphasized that effective use of any of the methods will greatly depend on the knowledge and attitude of the coach.

The importance of ICT in coaching is numerous. Apart from the fact that ICT enhances unrestricted access to coaches to information and development in various sports, it provides coaches with efficient and effective tools to take care of individual athletes' individual differences (Olorundare, 2006). It also makes learning interesting, easier and creates fun.

In education much research is done about the attitude and behaviour of teachers with regard to the use of ICT in education (Kral, 2004; Ingenluyff, et al, 2005; Weistra, 2005) but not about the knowledge that coaches have about coaching with ICT. Nowadays knowledge is an important asset in organizations, especially in those organizations that are in an important change process such as higher institutions. By many authors (Hislop 2005, Davenport 2000, Sulanski 2003), the current society is described as a knowledge society where there is a growing need for knowledge workers and knowledge-intensive organizations. Knowledge to Davenport (2002) "is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knower. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices and norms. According to Brown (2005) the key to survival in changing times is learning to learn and to share knowledge.

Fullan (2001) states the irony in life:"Schools are in the business of teaching, yet they are terrible at learning from each other".

Attitude is "a learned evaluative response, directed at specific objects, which is relatively enduring and influences behaviour in a generally motivating way" (Lippa 1990). Davis, Bagozzi and Warshaw cited in Weistra (2005) describe attitude as an individual's positive or negative feelings about performing the target behaviour. Today, coaches have to adopt new skills to learn how to implement ICT in coaching According to Fullan (2001) people can react enthusiastic, disappointed or even hostile to change and experience two kinds of problems when they don't feel happy; the social-psychological fear of change, and the lack of technical know-how or skills to make the change work. Fullan argues that changing the context in coaching will also change behaviour of the coaches and the willingness to learn new skills. For this reason, questions are asked with regard to the attitude of coaches and their involvement in this change process. The use of ICT by coaches depends on how they judge the importance of functions of ICT in their chosen career. Schoonenboom et al, (2004), in a survey among teachers in higher education in the Netherlands, showed that teachers find administrative and organizational functions important. Teachers in 2003 attached little value to communication and course information, to the functions of collaborative group work, to the offering of material and assignments by means of ICT and the use of a discussion board.

This study therefore investigated Social Media in Sport Coaching: Knowledge, Attitude and Use of Information and Communication Technology in Service Delivery among Tertiary Institution Coaches in Southwest, Nigeria.

The three research questions that guided the study are:

1. Is there any significant difference in the respondents' attitude towards ICT coaching on the basis of gender and experience?

2. What is the level of knowledge, attitude and use of ICT among Tertiary Institutions Coaches in Southwest Nigeria?
3. .Is there any significant difference in the perception of males and females coaches on the use of Social Media in coaching for service delivery?

The study adopted a descriptive research design of the survey type. The population consisted of all the coaches in the Federal Universities in Southwest Nigeria and a sample of two hundred and fifty coaches were drawn from ten universities using stratified and simple random sampling techniques. A self-designed questionnaire with correlation coefficient of 0.72 was used to collect data for the study. Frequency counts, percentages and t-test statistics were used to analyze data collected at 0.05 level of significance.

Table 1

Description of Respondents across Gender in percentages

	Frequency	Percent Valid	Percent Cum	Percent Valid
Female	75	30.0	30.0	30.0
Male	175	70.0	70.0	100.0
Total	250	100.0	100.0	

Table 1 revealed that from the 250 respondents used in the study, 75 (30%) are females and 175 (70%) are males.

Table 2

Description of Respondents coaching experiences in percentages

Range	Frequency	Percent valid	Mean	S.D.
Below 2 yrs	15	6.0		
2 – 6 yrs	18	7.2		
7 – 11 yrs	122	48.8		
12 – 16 yrs	85	34.0		
16 - 20yrs	20	8.0	**12.34**	**3.51**

From table 2, respondent across coaching experience was presented. The table showed that majority 207 (82.8%) of the respondents had been in the coaching job for between 7-16 years. The implication is that Social Media in sport coaching is not new to majority of the coaches

Table 3

Respondents Knowledge, Attitude and Use of to Social Media by Coaches for sport coaching in percentages

S/N	Statements	Most like me	More like me	Just like me	Not like me
1	I know what ICT is all about	46.1	33.7	12.4	7.9
2	Integrating ICT to improve sport coaching is too difficult for me	13.5	20.2	19.1	47.2
3	Using ICT to improve sport coaching is creating more problems for me as a coach	11.2	16.9	13.5	58.4
4	I use ICT tools during training for sport coaching	36.6	41.6	16.0	5.6
5	It is a very difficult task for me using ICT tools for sport coaching	47.2	29.3	20.2	3.4
6	Using ICT tools for my coaching makes the my work easier	52.8	38.2	6.7	2.2
7.	ICT will assist athletes performed better	47.2	40.4	11.2	1.1
8	It is good to use ICT tools for coaching athletes	48.3	39.3	9.0	3.4
9	I did not like using ICT tools for coaching	19.1	9.0	12.4	59.6
10	My athletes perform better if trained with ICT tools	41.6	34.8	18.0	5.6
11	Using ICT tools in sport saves time	58.4	24.7	12.4	4.5

12	Use of ICT should not be incorporated in sport	11.2	28.1	28.1	32.6
13	I felt my university should provide ICT tools for coaches and athletes use	34.8	31.5	16.9	16.9
14	I don't believe using ICT tools will produce world class athletes	12.4	16.9	6.7	64.0

From table 3, the result showed that tertiary institutions coaches in Southwe Nigeria were highly knowledgeable in ICT (79.8%). Moreover, it was revealed that the coaches in southwest Nigeria had a positive attitude to the use of ICT for coaching (83.1%) in tertiary institutions and majority ((78.2%) use ICT for sport coaching. The table also revealed that Majority 210 (84%) of the participants agreed that social media could be used for coaching and improve performance in sport.

Table 4
One way ANOVA Analysis showing Respondents' Knowledge and Attitudes in Sport coaching for service delivery

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1136.194	21	47.341	2.468	.000
Within Groups	4449.938	229	19.181		
Total	5586.132	250			

- Significant at 0.05

Table 4 revealed the relationship between knowledge and attitude of respondents towards ICT in sport coaching The ANOVA table shows that there is a significant difference between respondents' knowledge and their attitudes to sport coaching using Social Media with p- value (0.000) less than 0.05 significant level and also $F_{cal.}$ (2.468) greater than $F_{tab.}$. The study revealed that coaches have different perspectives about ICT in sport coaching for service delivery. This may be as a result of differences in experiences and gender. The result is similar to the views of Jegede as quoted by Awosiyan (2010) that ICT exposure among students across the country will increase proficiency in service delivery.

Table 5
Perception of Male and Female Coaches Towards use of Social Media for Sport Coaching Service Delivery

Gender	N	Mean	SD	DF	t-cal	t-crit	P
Male	175	29.07	4.27	248	1.65	1.96	0.22**1**
Female	75	28.07		4.95			

- Significant at 0.05

Table 5 revealed the t-test analysis of the perception of male and female coaches towards the use of social media for sport coaching service delivery in Southwest Nigeria. The result on table 5 shows that calculated t-value of 1.65 is less than the t – critical value of 1.960 at 0.05 levels; of significance thereby revealing a no-significant difference in the perception of males and females coaches on the use of ICT in coaching for service delivery. Based on this finding, the result revealed that the perception of both males and females coaches is the same with respect to use of Social media in coaching.

The findings revealed and implied that both gender supports the use of ICT in order to coach effectively. This finding supports that of Ayo, Akinyemi, Adebiyi and Ekong (2007) who proposed a model for e-examination in Nigeria. The findings revealed that the system has the potentials to eliminate some of the problems that are associated with the traditional methods of sport coaching whereby the coaches has to be physically present.

In summary, the study investigated Social Media in Sport Coaching: Knowledge, Attitude and Use of Information and Communication Technology for Service Delivery Among tertiary Institutions in Southwest Nigeria. The result of the study revealed that there is no significant difference between the perception of the male and female coaches concerning the use of ICT for service delivery in sport coaching. This shows that both male and female agreed that the use of ICT in sport coaching will enhance service delivery in coaching among tertiary institutions in southwest Nigeria. Moreover, it was shown from the result that there is a significant relationship between coaches' high knowledge of and attitude to the use of ICT in sport coaching.

This result showed that there will be marked improvement in sport coaching if social media is used. The study revealed that coaches have different perspectives about ICT in sport coaching for service delivery. In view of the result from this study, the preparation for tomorrow's challenges should not exclude the sport sector as improvement in this sector will bring the country to limelight among the comity of states. It is important for coaches to inculcate in athletes moral behavior that will impact on their attitude to social media and sport coaching. Our Sport men and women should

be encouraged to avail themselves with the opportunity the use of social media will offer to improve them while all our institutions should develop the spirit of investment in sport in our institutions. This will facilitate the use of information and communication technology in the region. The present gap in terms of computer literacy and perception about social media should be filled by inculcating positive attitude towards technological innovation across the states of the Federation and Africa at large while funds be made available to institutions to improve the current facilities and develop new infrastructures..

In the light of this study, the opinions of coaches on the use of social media and electronic devices in sport coaching do not differ from one another across the sub-region. There is positive disposition towards the innovation.

Government and other sport philanthropists across the nation should adopt this noble means of coaching of sport men and women by funding sport as it is being practiced in more technologically developed countries.

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DOES DIVIDEND POLICY IMPACT STOCK MARKET PRICES? - EVIDENCE FROM OMAN

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ABSTRACT

This research aims to investigate and examine the influence of dividend policy on stock prices of 28 industrial sector companies listed on Muscat Securities Market (MSM) in Oman, during the five year period of 2009 to 2013. A panel data approach has been used to examine and explain the effect of dividend policy on stock market prices using five determinants dividend yield, retention ratio, earnings per share, return on shareholders' equity and net profit after tax. The finding of the research establishes a significant positive relationship between earnings per share, return on equity and stock price. Variables dividend yield and retention ratio are positively associated with stock price but their influence is not statistically significant. Lastly the fifth determinant Profit after Tax has negative relation with Stock Price and its impact is also not significant.

Key words: dividend Policy, stock price, panel data approach, Oman

JEL Classification: G 35, G38, M41

POSITIVE EDUCATION: PROMOTING SUBJECTIVE WELL-BEING IN SCHOOL ENVIRONMENTS

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ABSTRACT

Positive Education is a growing area of inquiry in educational research that seeks to integrate positive psychology elements with educational practices to promote subjective well-being and improve the mental health of school children. However, claims regarding the benefits of positive education exceed the existing evidence on the effectiveness of such programs, and critics have emphasized the need for more rigorous research and stronger empirical evidence of the feasibility and effectiveness of positive psychology school-based interventions.

The present study evaluated the effects of a positive psychology based program on subjective well-being and academic functioning of school students from several middle schools in the center of Israel. 1262 seventh- to ninth-grade students participated in a one year intervention program and were compared to 1255 students in 35 control classrooms. In a two-year longitudinal repeated measures design, the study assessed pre- to post-test modifications in the targeted factors. The findings showed significant decreases in anxiety and depression symptoms among the intervention participants. In addition, the intervention strengthened self-esteem, self-efficacy, school engagement and academic achievements. These results demonstrate the potential benefits of evidence-based positive-psychology interventions for promoting adolescents' subjective well-being The Maytiv positive psychology based program has served over 5000 teachers and 50,000 children and adolescents in the educational system of Israel.

CORRESPONDENCE BETWEEN RECEIVED EDUCATION AND LABOUR MARKET NEEDS –PERCEPTION OF ADULTS

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ABSTRACT

The aim of this research was to study a correspondence between received education and Labour Market needs from the perspective of adults. Relevance of education to Labour Market needs is one of the important issues worldwide. The research covers Tbilisi, the capital of Georgia. It includes 350 surveyed adults and 10 in-depth interviews.

The research shows that the vast majority of respondents (80%) had received higher education. The leading areas of the respondents' main fields of study were the social sciences, engineering and healthcare. Motivation for learning was closely linked to the perception of the benefits of education and satisfaction level obtained through learning. The research showed that the respondents' were satisfied with their education (57%) and profession (42%).

One of the factors related to employment is labour market demand for certain professions. More than 1/2 respondents thought that their profession was demanded on the labour market; the same feeling had the unemployed population and students too who had finished their education but could not find job at the time of research; the unemployment rate among the surveyed participants was quite high (18.0%). As respondents pointed out they did not have access to any reliable information about labour market demand but relied on their own opinion or impressions of their close friends and relatives.

The research provides insight in adults' perception about the correspondence between their education and LM needs; it also provides recommendations about importance of providing adults with relevant information about the labour market demands and tendencies for planning their educational activities.

Keywords: education, Labour Market Needs

DETECTING THE ASPECTS OF RE-PURCHASING ONLINE BEHAVIOR USING HIERARCHICAL REGRESSION

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ABSTRACT

This research aims at studying the online buying behavior of Kuwaiti Internet users. It further looks into the various factors which contribute in making online buying decisions. In addition it looked into the current status of online stores of companies in Kuwait and range of products and services offered by them for online buying. An insight into the status of e-commerce revolution in the region is also included to assess its growth in countries with similar cultural background. to look at the quick changes in the environment of the internet, carefully that make a competitive business landscape for online repurchases. It creates challenges and opportunities for businesses and also to examine the elements that can affect the intentions of online consumers to repay the service and product. The purpose of the present study is supplying a literature that can help of online stakeholder. On top of that, the results reinforce many existing literature in the context of the online shopping factors effect on customer repurchase. It prepares for in advance functional information for controlling businesses particularly in online shopping factors effect on customer repurchase. The finding of this study is able to help to businessman in developing their internet and online shopping as well.

Keywords Online Purchasing, SEM, Online Behavior, Regression analysis, OCE Model.

SOCIOLOGICAL ANALYSIS ON PRISONERS: WITH SPRCIAL REFERENCE TO PRISONERS OF DEATH PENALTY AND LIFE IMPRISONMENT IN SRI LANKA

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ABSTRACT

Crimes are becoming a one of big social problems in Sri Lanka. Crimes can be seen as simply way as an activity that against for the society or public law. There are offences in minor crimes and grave crimes including murder, rape, trafficking, robbery, excise, narcotic, kidnapping and so on. There are various forms of punishment such as bailing, fining, and prisoning for several years, life imprisonment and death penalty. There are 23 prison institutions in Sri Lanka including 03 closed prisoners and 20 remand prisons. There are 10 work camps, 02 open prison camps, 01 training school for youth offenders and 02 correctional centers for youth offenders.

Capital punishment is legal in Sri Lanka as many other countries as India, Japan, Bangladesh, Iran and Iraq so on. When compared unconvicted prisoners from 2006-2010 there is an increase. It was 89190 in 2006 and it was 100191 in 2010. There were 28732 of convicted prisoners and it was 32128 in 2010. There were 165 Death sentences in 2006 and it was 96 in 2010. There are 540 individuals had been sentenced to death. The death penalty has not been implemented in Sri Lanka since 1976.

Research problem: What are the main causes for getting capital punishment and life imprisonment?

Research questions: What are the feelings of prisoners as waiting for death?'

Objective: Objectives of the study were identifying prisoners' point of view on their punishment and root causes for their offence.

Research Methodology: This was a basic research. Case studies were conducted to identify the research problem and data were collected using formal interviews. Research area was Welikada prison. Stratified sampling method in probability samplings was used. Sample size was 20 cases from death penalty and life in prison prisoners and 20 from other convicted prisoners.

There were organized crimes and instantaneous crimes against human and property. Findings revealed causes and feelings them as offenders. Death penalty and life imprisonment were been punished especially for drug selling and murders. The end of life imprisonment decided by nature; but the date of death penalty will be decided by the president of the state. Still there is no decision on implementing the death penalty in Sri Lanka. These both categories of prisoners need if implementing death penalty or freedom. Some of them need to convert death sentence to life imprisonment. They are physically and mentally damaged after their imprisonment. Lack of hope and as well as lack of welfare and rehabilitation programs they suffered their lives in the prison.

Key words: death penalty, expectations, life imprisonment, rehabilitation

FEMALE EMPLOYMENT IN HOTELS IN THE KINGDOM OF SAUDI ARABIA AND THE UNITED ARAB EMIRATES: BARRIERS, ENABLERS AND REAL-LIFE EXPERIENCES OF WORK

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ABSTRACT

The main study aim is to explore barriers to work, enablers for work and real-life work experiences of women employed in the hotel sector in the Kingdom of Saudi Arabia (KSA) and United Arab Emirates (UAE). The research used primary data collected through a dedicated survey and in-depth interviews during fieldwork conducted in KSA and UAE. The study sampled 385 female employees working in hotels and 45 subsequently participated in one-to-one and small group interviews. The sample of women working in KSA and UAE in a wide range of roles included home nationals, expatriates, Arabs and non-Arabs with and without caring responsibilities for children or adults, the research contrasts their experiences and explores the similarities and differences between these very different groups of women. A consideration was whether women with caring responsibilities face particular issues and difficulties in finding and maintaining employment, and what kinds of policies/practices might support them. The analysis found women with caring responsibilities were more likely to report problems with work-life balance. In line with this finding, these women, and women in KSA more generally, were more likely be positive about flexible employment practices, perceiving them as a way to ease employment constraints. The research also found that regardless of country and nationality, women with children appeared to suffer an earnings penalty. However, while nationals in KSA appear to have better career progression prospects, they seem generally less satisfied in their work. The research highlights, even within the Arab cultural cluster, barriers to employment and job satisfaction vary greatly, depending on the country, whether women are nationals or expatriates or have caring responsibilities.

INQUIRY-BASED TECHING: A DIFFICULT APPROACH FOR SCIENCE TEACHERS TO IMPLEMENT?

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ABSTRACT

Inquiry-based teaching been barely adopted by secondary school science teachers, inspite of decades for research and curriculum design and implementation. This paper aimed at contributing to the documentation of the use of inquiry in Physical Science classrooms. In this case study, the data from the four participants about their classroom practice was gathered using qualitative research methods of observation protocol and individual interviews. All participants were purposively selected from four schools of the Limpopo Province of South Africa where they teach Physical science in grades 10 -12.

Qualitative analysis of results showed that the majority of these teachers held fairly limited views of inquiry making them use teacher-centered approaches. Elements and essential features of inquiry were observed in less than half their lessons. The remaining teacher used a combination of both traditional classroom activities and inquiry-based activities with more abilities to do inquiry and essential features of inquiry in their lessons, leading to a guided type of inquiry. This study documents that even the experienced teachers struggle to enact inquiry-based teaching and therefore recommends professional development programmes (PDPs) that will enrich teachers' knowledge of inquiry.

Keywords: inquiry teaching, science goals, nature of science, professional development

SUICIDE IDEATION AMONG ADOLESCENTS
A case study of 5 secondary schools in Kampala district

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ABSTRACT

Suicidal ideation is often an indicator of mental health problems and a major risk factor for suicide. Suicide among young people (adolescents) is an increasing global concern. Every year almost one million people die from suicide globally. (Epwene Samuel, 2013). It is among the three (3) leading causes of death among those aged 15 – 44 years in some countries, and the 2nd leading cause of death in the 10 – 24 years age group. In Kampala, the pick age of suicide is in the 17-23. While results indicate higher rate of suicidal ideation in females, on a yearly basis accounting for the death of more than 100 young people in Kampala district alone.

Suicide rates among young people has been increasing to the extent that they are now the highest group in many countries both developed and developing countries.

Adolescence or the teen age is a developmental stage during which several of the mental health disorders of adulthood appear.

This paper sees to establish factors responsible for increasing suicidal ideation and tendencies, mitigating measures to be used by school administration to identify interventions for the "at risk" teenagers.

Precipitating factors for suicide in the young adolescents were assessed using a modified version of the European par suicide interview schedule (EPSIS I)