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Dedication

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

Academic Journal of Research and Scientific Publishing

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Libyan EFL Students' Listening Comprehension Problems in Listening to Connected Speech

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Abstract:

Listening skill is one of the challenging skills in a foreign language learning context where exposure to native connected speech is restricted. EFL learners encounter various listening comprehension issues which affect their mastering of the targeted language. Therefore, this study investigates the listening comprehension issues in listening to connected speech among a group of Libyan EFL learners. It examined the learners' perception on the problems they encounter during listening to connected speech, with the goal of improving their perceptual and listening comprehension skills in the future. Data was collected from a total of 62 Libyan intermediate level learners using a Listening Comprehension Processing Problems Questionnaire. The difficulty levels experienced by the participants while listening to connected discourse ranged from moderate to high. These challenges occurred in all the three categories of listening comprehension; utilisation, perception, and parsing. Additionally, a strong positive and significant correlation was detected between the three categories of listening processing problems. The study also has pedagogical implications. These findings could be used by teachers, researchers, syllabus designers, and material developers to address the challenges associated with listening comprehension among EFL learners, and how including connected speech in the learning and teaching materials became an excessive necessity.

Keywords: EFL language teaching, EFL language learning, Connected speech, Listening comprehension problems, Listening skills

1. Introduction:

Connected speech is a natural human phenomenon. It is related to human beings as users of language, regardless of what the language is. For example, words when pronounced individually will be different than when they are pronounced collectively. If a string of words are pronounced as separate entities, they will sound unnatural—as if the words were uttered by a machine—whereas if the words pronounced together as a connected speech, they will seem more natural and will have a more direct relation to human beings (Roach, 2010). As a defining feature of human speech, connected speech processes (CSPs), perhaps more so than other features of pronunciation, are closely linked to intelligibility in listening comprehension (Alameen, 2014).

Listening is the most problematic skill for foreign language learners. This can be attributed to many factors; the nature of listening skill itself, the absence of perceptual saliency in connected speech, and lacking of exposure to native speakers' speech. Regarding listening perception and comprehension, Kohler (1966) stated that speech perception can either be purely auditory, in the case of pitch and loudness, or it can be the listener's re-interpretation, in which upon perceiving an auditory signal he reconstructs the articulatory movements he would have performed as a speaker—for the latter, perception is then auditory-articulatory. Therefore, perceptual saliency makes speech more comprehensible and understood by learners (Henrichsen, 1984). Connected speech, on the other hand, is a cause of reduced saliency in which the speech may come across as less comprehensible. Reduced saliency caused by connected speech can have a great impact on learning English in general, and on the learners' perception of speech and listening comprehension in particular. Consequently, it is assumed that a decrease in perceptual saliency will affect listeners who have less exposure to connected speech to a greater degree than those who have more knowledge about CSPs (Henrichsen, 1984; Ito, 2001).

Anderson (2000) proposed a model of language comprehension by dividing comprehension into three phases. The first phase involves perceptual processes by which the acoustic or written forms are encoded. The next phase, parsing, entails the transformation of words into a mental illustration of the collective meaning of the such words. In the third phase (utilisation), the mental illustration generated in the second phase is utilised by the comprehenders. The three phases of listening comprehension are inter-related despite being partly ordered in time.

Moreover, issues associated with listening comprehension might occur in any of phases (Anderson, 2005; Goh, 2000; Vandergrift, 2003). This cognitive framework of language comprehension has been adopted by many researchers (for example, Goh, 2000; Zhang, 2008; Nowrouzi, et.al, 2015) in order to identify and examine the listening difficulties that confront ESL learners.

Studies looking for the reasons beyond listening problems among EFL/ESL learners are not abundant. Hasan (2000) reported that " not recognising words, missing parts of the text, problems arising from rapid speech rate and unclear pronunciation" were the challenging aspects of listening difficulties. Meanwhile, Goh (2000) investigated the listening comprehension issues among Chinese ESL learners and identified 10 listening problems upon analysing three forms of self-reported data. The main listening problem was listening diaries, followed by oral reports from interviews conducted among small groups, and instant retrospective verbalisation. Anderson (1995) proposed a cognitive framework for cognitive framework of language comprehension in which half of the listening issues were associated with the perception stage of listening, while three and two other problems were related with parsing and utilisation, respectively.

A previous study involving EFL learners from Iran employed the Listening LCPQ to evaluate the problems associated with listening comprehension (Nowrouzi, Sim Tam, Zareian, and Nimehchisalem, 2015). Resultantly, the learners demonstrated moderate to high difficulty levels all three components of the listening comprehension model developed by Anderson (1995). Furthermore, most of the problems reported among the Iranian learners were during the perception phase.

Libyan learners of English among other EFL Arab learners encounter various listening comprehension issues. Hence, this research was designed to investigate listening comprehension problems among Libyan EFL learners. The core aspect explored in this study was the issues faced by learners' during the phases of listening comprehension while listening to connected speech. Also, this study aims to investigate whether there is a relationship between the three components of listening comprehension problems. In order to achieve these objectives, the following research questions were presented:

1. What is the level of Libyan EFL learners' listening comprehension problems during the perceptual stage while listening to connected speech?

2. What is the level of Libyan EFL learners' listening comprehension problems during the parsing stage while listening to connected speech?

3. What is the level of Libyan EFL learners' listening comprehension problems during the utilisation stage while listening to connected speech?

4. Is there a relationship between the three components of listening comprehension problems: perception, parsing, and utilisation in learners' listening to connected speech?

1.1. Significance of the Study

Based on the results of the study, some implications for language teachers, researchers, syllabus designers, and material developers are presented. Learners' needs were taken into consideration during discussing the the problems learners encounter during listening to native connected speech.   These implications reflected one fact which is the necessity and the excessive need for teaching and learning materials that include the connected speech as part of the syllabus for all language classes.

2. Conceptual Framework

2.1. The Three Phases of Learners' Listening Comprehension Problems

Foreign language learners have many problems during their listening to native speakers speech. This could be attributed to the nature of speech which is pronounced connectively when utterances are produced continuously in casual speech. Researchers have classified the problems learners encounter during their listening to the foreign language into three categories. Earlier researchers viewed listening comprehension issues as encompassing all the challenges that might arise during the perception, parsing and utilisation phases (Anderson, 1995; Goh, 2000, Vandergrift, 2003).

2.2. Perception

A major problem for speech recognition is segmentation of the objects to be recognised. The identification of the phonemes constituting a spoken word elicits a segmentation problem.

This problem arises due to the discrete nature of phonemes regarding the manner in which letters appear on a printed page, whereas speech is continuous. In other words, segmentation problem during the perception phase is synonymous to identifying a written or unprinted message in which one letter runs into another. In addition, the ways in which various speakers produce the same phonemes differ as found in the case of writing (Anderson, 2000).

Another speech perception issue described by Anderson (2000) entails an event referred to as coarticulation (overlapping of different phonemes). This event reflects additional challenges in segmenting phonemes. In other words, the the context of the other phonemes determines the actual sound generated for a phoneme. Rost (2005) argued that the most significant issues experienced by listeners of second language are observed in recognising words. According to the researcher, "the recognition of word boundaries might be affected due to inconsistent and unreliable cues in connected speech and the listener might need to understood an extensive range of conventions". Likewise, Field (2003, p. 329) suggested diverse challenges in recognising words including "reduction, elision, assimilation, cliticisation, and resyllabification".

Apart form listeners' inability to differentiate the words and sound in a course of speech, the challenges in comprehending stress, intonation and different accents also contribute to perception problems (Ur, 1984). While listening to "idioms, slangs, and reduced forms, difficulties may also be encountered by second or foreign language learners, especially those that are predominantly exposed to formal language (Brown, 2001, p. 253).

2.3. Parsing

Language is structured based on a set of rules inform an individual regarding the transition from a specific string of words to an interpretation of it's meaning. Numerous rules encoding the diverse linguistic patterns in a language are acquired during learning to comprehend a language. These linguistic patterns are usually connected to the meaning interpretations (Anderson, 2000).

Therefore, the problems that learners may encounter during the parsing phase include syntactic and semantic problems.

The failure in developing a mental illustration from words heard, completely forgetting what was heard, and not comprehending the succeeding parts of input due to initial issues are some of the syntactic problems (Goh, 2000).

Distracting learners with the connotation of specific words that might be redundant is a well-known source of semantic problems. Hence, learners miss the subsequent parts of the message due to the combination of superficial processing and problems relating to short-term memory such as limited processing capacity (Goh, 1999).

2.4. Utilisation

Upon parsing and mapping a sentence into a symbol of its meaning, the listener is expected to perform an action. The speaker expects the listener to make a response by answering a question or obeying a command or even do something for statements rather than just registering the sentence (Anderson, 2000).

The challenges encountered by L2 learners during the utilisation phase are predominantly associated with pragmatics as the meaning is context-specific. In the words of Thomas (1995) and as cited by Taguchi (2008) "An individual's ability to relay meaning socially and appropriately, either implicit or explicit, and based on a specific context is known as pragmatic competence". According to Taguchi (2008), individuals can only achieve pragmatical competency when they are linguistically competent and possess the ability to utilise linguistic resources appropriately and evaluate contextual information as per the context. The failure of listeners to realise the intended meaning of words while focusing only on comprehending the meaning of such words lead to pragmatic problems. Meanwhile, the inability to comprehend the transition of ideas in a linked speech elicits discoursal problems. For instance, learners experience discoursal problems when they are unable to recognise the general organisation of the ideas in a text.

There is a relationship between the practical use of language and the last stage of the cognitive process.

"It entails the capability to control or regulate the multifaceted interaction of language, language users, and the context in which the language is employed" (Kasper, 1992; Mey, 1993; as cited in Taguchi, 2008, p. 424).

In connected speech, language refers to how sounds are connected and other 'suprasegmental features'. Connected speech is affected mainly by the language user's personal way of speaking. Roach (2010) mentioned the unreliability of features of connected speech which are affected by the speaker's way of speaking. Connected speech is also affected by the context of language. Connected speech features can be very common and widely spread in some contexts but not in others. They are common in casual informal speech between friends and members of family, but they will be more restricted in formal occasions. Thus, the learners will have to use their lingustic competence, which include using their knowledge about the phonemic features of connected speech, to interpret meaning and using it appropriately according to the context.

3. Method

Data collection was performed using a survey method in order to execute the research objectives.

3.1. Participants

A total of 62 Libyan intermediate level EFLs participated in this study. The participants were in the third year of university education and specialized in English. They were selected from Sabratha university, Libya. Most of them are female (90%) with average age between 19 to 21.

3.2. Instrument

A questionnaire was used as an instrument for collecting data. It was adapted the Listening Comprehension Processing Problems Questionnaire (LCPQ) (Nowrouzi, et. al 2014). The listening problems were explored by adopting Anderson's (1995) language comprehension model, which comprised of three phases or stages. Previous studies which used Anderson's (1995) model of language comprehension for evaluating English learners' listening problems using different methods of data collection indicate adequateness and appropriateness of the Anderson's cognitive processing model as a reflective measurement model. For this study, the validity and reliability of the instrument was checked by a panel of experts (n = 3).

Also, the questionnaire was translated into Arabic to ensure that the learners can fully understand the questionnaire items. Students received the questionnaire in English with Arabic translation underneath each sentence. The translation was checked by an Arabic linguist who is also a native speaker of Arabic for accuracy and clarity.

A total of 38 items were included in the final instrument, and they were presented using a five-point Likert scale in which 1 reflects "never" while 5 indicates "always". Problems relating to the perception phase were addressed by the first 18 items. For instance, an item focused on the difficulty in recognising every word of incoming connected speech. Meanwhile, parsing problems were measured by items 19 to 29. A typical example of an item in this section of the instrument was "the difficulty in deducing the meaning of a long-connected speech text. Lastly, the problems associated with the utilisation phase were assessed in the last eight items (item 31-38). An example is the failure to have an overall understanding of the connected speech upon first listening. Cronbach alpha for the questionnaire was 0.924, which shows that it has an acceptable internal reliability.

Apart from the aforementioned problems observed during the three phases, age, gender, aptitude, beliefs regarding oneself as a learner (e.g., self-efficacy and self-concepts relating to the causes and possible solutions to specific listening issues), and learning styles are other factors that might impact learners' listening ability of an L2 (Vandergrift et al., 2006). These kinds of demographic information have been used in the instruments of other studies (Goh, 1997, 2000; Zhang, 2001; Zhang & Goh, 2006; Vandergrift, 2006) and were also taken into account in the present study.

3.3. Data Collection

The questionnaire was conducted to 62 learners in order to examine their listening comprehension problems. At the beginning, before distributing the questionnaire to the students, a listening test was conducted in order to get their responses based on a real listening test. The teachers briefed the students about the aims and purpose of the study. The LCPQ was presented to students that were willing to take part in the research, and they were informed to fill it up.

3.4. Data Analysis

All the retrieved data were subjected to SPSS version 16 for analysis. All the data were summarised using descriptive statistics including mean, standard deviation, frequency and percentage. The 33rd percentile was employed as the cut-off point for moderate and low levels of listening problems. Meanwhile, the cut-off between high and moderate levels of listening issues was based on the 67th percentile. Thus, listener's' listening problems were classified as "low" when a mean score of 1.65 is obtained, "moderate" for mean scores ranging from 1.66 to 3.35, and "high" for mean scores of 3.36 and above.

4. Results

Results from this study are presented based on the three phases of listening comprehension issues: perception, parsing, and utilisation. Each of this category of problems are discussed relative to the present research objectives.

The findings of questionnaire on listening problems, as presented in Table 1, show that the overall mean is affected by each item mean. Hence, of the 38 listening processing problems, the learners reflected moderate difficulty levels regarding listening to English texts, which were concurrently very close to high difficulty levels (Table 1).

Table (1)

The EFL Learners' Level of Listening Problems

Problem	Total Mean	Std. deviation	Level
Perception	3.1429	.73711	moderate
Parsing	3.2485	.82181	moderate
Utilisation	3.2115	.85777	moderate
All Problems	3.2010	.75339	moderate

Perception Problems

The item 1 to item 18 are presented in Table 2, indicating the descriptive analysis (mean and standard deviation) of the levels of perception problems faced by the students. These problems are presented in the table according to their level of difficulty (from higher to lower).

Table (2)

Mean Value of Perception Problems Items Ordered From High Level to Lower

Item	Mean	SD	Level
18-I feel nervous and worried when I do not understand the connected speech.	3.94	1.279	high
3-I have difficulty in recognising sounds due to fast speaking.	3.56	1.034	high
12-There are too many new words and expressions in the connected speech	3.55	1.097	high
4-It is challenging for me to identify the **connected speech** when the speaker's pause is relatively short or not long enough	3.50	.971	high
5-Speech-related problems such as assimilation, linking, omission, and reduction are among the reasons why it is difficult for me to recognise sounds.	3.45	1.250	high
14-While thinking on how to comprehend the meaning of most recent utterances, I tend to neglect the next statement or sentence.	3.37	1.258	high
1-It is difficult for me to recognise each word of an incoming **connected speech.**	3.27	.944	moderate
17-My focus is lost, especially when the speech comprises various parts of connected speech.	3.23	1.108	moderate
8-I cannot recognise the words with similar sounds (Mistaking one Word for another).	3.18	1.222	moderate

7-The way the words are pronounced makes it challenging for me to recognise the words.	3.10	1.339	moderate
9-Despite knowing some words during writing, I experience difficulty in telling where a word ends and the onset of another when listening to a chain of **connected speech**.	3.02	1.208	moderate
16-I lose my concentration when I find difficulty to recognise when a word finishes and when another word begins in the connected speech.	2.95	1.384	moderate
13-I am unable to recognise so many sounds and words.	2.95	1.179	moderate
6-The speakers' intonation and accent also contributes to my challenges in recognising connected sounds.	2.92	1.201	moderate
11-My response to words that I know is relatively slow when listening to a stream of connected speech.	2.81	1.239	moderate
2-It is difficult for me to recognise the signals indicating the speaker's movement from from one word to another.	2.73	1.333	moderate
10-I Miss the beginning of the text in the connected speech	2.68	1.265	moderate
15-I do not pay attention to speaker's **connected speech.**	2.37	1.271	moderate

The table presented the items of perception problems and ordered them from high to lower. Thus, from the above table we can see that the learners have encountered high or moderate levels of difficulty in listening to connected speech during perception phase: a challenge in identifying sounds because of speaking rapidly, difficulty in recognising the words having similar sounds (Confusing one Word for another), challenge in recognising sounds due to assimilation, linking, reduction, and omission in speech, difficulty in recognising the signals, meaning the inability to understand that the speaker is transiting from one word to another, and not paying attention.

Parsing Problems

The 11 parsing problems (items 19-29) in the questionnaire are presented in the table according to their difficulty levels (from higher to lower). The students' descriptive statistics and levels of parsing problems are presented in Table 3.

Table (3)

Mean Value of Parsing Problems Items Ordered from High Level to Lower

Item	Mean	SD	Level
26-I find it difficult to understand the **connected speech** when the topic is unfamiliar	3.79	1.217	high
23-It is difficult for me to keep track with the sequence of a connected speech, especially when the sentence is complex and long.	3.69	1.295	high
22-Listening to a long connected speech makes me feel fatigued and distracted.	3.65	1.073	high
27- I find it challenging to comprehend several new information in a short time when listening to a connected speech	3.63	1.163	high
21-I find it difficult to interpret the meaning of a long **connected speech** text.	3.32	1.225	moderate
28-It is difficult to comprehend the next part of the connected speech due to the earlier issues I encountered with the sentence.	3.31	1.177	moderate
25- I find it challenging to comprehend a word with multiple meaning.	2.98	1.194	moderate
19 -I forget quickly connected words or phrases just heard.	2.97	1.145	moderate
29- Once I have issue in comprehending the connected speech, I stop listening to it.	2.82	1.531	moderate

24- I cannot chunk streams of speech.	2.79	1.189	moderate
20-I do not understand the meaning of sentences in the connected speech	2.77	1.137	moderate

Table 3 depicts that for parsing sentences in connected speech, learners recorded moderate to high levels of listening difficulties. These problems are presented from high to lower include sentential level problems: difficulty in following the sequence of connected speech when the sentences are too long, difficulty in understanding the meaning of sentences in connected speech. Inability to chunk streams of speech, and too much information to process.

Utilisation Problems

The nine utilisation problems (items 30-38) in the questionnaire are presented in the table according to their level of difficulty (from higher to lower). These items are related to understanding the intended message of the connected speech, getting all the details in speech, and understanding the connected speech texts that include jargons and idioms.

Table (4)

Mean Value of Utilisation Problems Items Ordered from High Level to Lower

Item	Mean	SD	Level
30- I find it challenging to comprehend texts in a **connected speech** having numerous unfamiliar expressions including idioms and jargons.	3.60	1.123	high
32-Right from the initial listening, I experience difficulty to have an overall understanding of the connected speech.	3.47	1.183	high
36- I find it challenging to grap all the details and facts in the connected speech	3.32	1.128	moderate

35-The key idea in the message confuses me.	3.19	1.212	moderate
34 - It is challenging for me to comprehend the order of ideas in a connected speech	3.18	1.079	moderate
37- It is challenging for me to grap the connection between supporting ideas	3.16	1.059	moderate
38-I find it difficult to understand the meaning of the **connected speech** without seeing the speaker's body language.	3.12	1.316	moderate
31-It is difficult for me to understand the intended or underlying message of the complete text of a **connected speech.**	2.94	1.279	moderate
33-It is challenging for me to address colloquial speech and slang.	2.92	1.178	moderate

Table (4) presented the learners' problems with utilisation phase of listening comprehension ordered from high to lower. They encounter high levels of difficulty in understanding connected speech texts that have many jargons and idioms and in getting the general understanding of connected speech from the first listening. Nonetheless, learners experience a moderate level of issues in getting the underlying or intended message, the order of ideas, and comprehending the connotation of the connected speech without visualising the body language of the speaker.

Finally, in order to answer research question no. 4, correlation analysis of data was used:

Table (5)

Correlations Using Pearson Coefficient

	Perception Problems	Parsing Problems	Utilisation Problems
Perception Problems Pearson Correlation	1	.789	.800
		.000	.000
Sig.(2-tailed)		62	62
N			

Parsing Problems Pearson Correlation	.789	1	.841
	.000		.000
Sig.(2-tailed)	62	62	62
N			
Utilisation Problems Pearson Correlation	.800	.842	1
	.000	.000	
Sig.(2-tailed)	62	62	62
N			

The above table (5) showed the correlation analysis of data, using Pearson correlation coefficient. It shows very strong positive significant relationship between the three components of listening comprehension processing problems.

5. Discussion

The current findings are nearly identical to those of previous studies. Nowrouzi et al. (2015) reported the presence of perception, parsing and ultiisation listening problems among their studied participants. Likewise, Goh (2000) documented that perception phase accounted for half of listening comprehension problems exhibited by their participants, followed by parsing and utilisation phases accounting for three and two other listening comprehension issues, respectively.

Moreover, the participants in Hassan (2000) study encountered difficulties in perception and parsing. He reported that high speech rate was the most difficult problem learners encountered. Similarly, the results of this study showed that leaners have high level of difficulty *"in recognising sounds due to fast speaking"*. This could be attributed to the nature of native speakers' speech who tend to produce utterances connectively and with high-speed rate. Their casual spontaneous speech causes problems to learners who assumed that words should be pronounced as they appear on the page. They believe that the words should be separated by blank spaces. However, this is not the way that native speakers converse (Wong, 1987).

Further, another issue relating to perception problems is the high difficulty level experienced by the learners in this study being the "*sound-recognition difficulties arising from problems in assimilation, linking, reduction, and omission in speech*".

 Features of connected speech such as assimilation, linking, elision, and vowel reduction cause difficulty for foreign language learners (Field, 2003).

In terms of parsing problems, learners exhibited high level of difficulty in following the sequence of connected speech when sentences are too long and complex. These problems could be attributed to the learners' inability to chunk the structure of sentences, and to divide (a sentence) into grammatical parts and identify the parts and their relations to each other.

The learners participating in this research demonstrated high levels of difficulty in terms of utilisation problems, especially "*in comprehending texts in connected speech as there were several unfamiliar expressions comprising idioms and jargons*", and "*in reaching an overall comprehension of the connected speech right from the first time the learner listens to the speech.* These problems could be attributed to lacking the cultural knowledge beyond the language, and they can be resolved by making learners more familiar with the contextual information. "Being linguistically competent and possessing the ability to use linguistic resources judiciously and evaluate contextual information are prerequisites for an individual to be pragmatically competent" (Taguchi, 2008, p. 425).

6. Conclusion

The listening comprehension problems questionnaire was conducted to collect data regarding listening comprehension problems from Libyan EFL learners of English. The three phases of listening (perception, parsing, and utilisation) were employed in classifying the listening comprehension problems. Perception problems showed apparent difficulties, such as; inability to recognise sounds due to high-speed rate of speech, lacking enough pauses, and the presence of some connected speech features. The results of the study exhibited listening problems in all three categories of listening comprehension. Also, the results of this study showed that there is a strong positive significant relationship between the three components of listening processing problems. Therefore, teachers should focus equally on resolving the listening problems regarding

perception, parsing, and utilisation. The study has pedagogical implications. Material developers, syllabus designers, and FL teachers could make great usefulness of the implications provided by the results of this study, in order to get ride of the listening comprehension problems of EFL learners.

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Appendix

LISTENING COMPREHENSION PROCESSING PROBLEMS   QUESTIONNAIRE

استبيان مشكلات معالجة الإدراك والاستماع

This questionnaire contains 2 main sections. Please read the questions carefully before answering.

يحتوي هذا الاستبيان على قسمين رئيسيين. يرجى قراءة الأسئلة بعناية قبل الإجابة .

<div style="border:1px solid black;">

Section 1: Background Information

القسم 1: معلومات أساسية

</div>

Instruction: *Please tick your choice of answer in the box or space provided.*

التعليمات: يرجى تحديد اختيارك للإجابة في المربع أو المساحة المتوفرة .

1. Gender

الجنس -

☐ Male   ☐ Female

ذكر   أنثى

2. Age

العمر

☐ Less than 19 -19 أقل من   ☐ 20

☐ 19   ☐ 21 and above   فما فوق-21

3. Qualification

المؤهل العملي

☐ Secondary school

الثانوية العامة

☐ Bachelor's degree

درجة البكالوريوس

☐ Master's degree

درجة الماجستير

4. Specialization

التخصص

☐ Language

لغات

☐ Medicine

علوم طبية

☐ Engineering

علوم هندسية

☐ Others, please specify

………………...

أخرى حددها

5. Your goal for taking English courses

هدفك من حضور دورات اللغة الانجليزية

☐ Improve your English

لتحسين مهاراتي اللغوية

☐ To get a job promotion

للحصول على ترقية في العمل

☐ Others, please specify ………………………………………

☐ Pursue graduate studies

لاستكمال دراستي العليا

☐ Secure a new job

للبحث عن عمل جديد

أخرى حددها من فضلك

Section 2: General Information

القسم الثاني: معلومات عامة

Instruction: *Connected speech is the casual natural speech we hear in our everyday life. This section intends to find out about your listening problems related to connected speech in English. Please read the following statements carefully and tick the appropriate response which best describes the degree of frequency you experience for each problem.*

التعليمات: الكلام المتصل هو الكلام الطبيعي غير الرسمي الذي نسمعه في حياتنا اليومية. يهدف هذا القسم إلى التعرف على مشكلات الاستماع المتعلقة بالكلام المتصل باللغة الإنجليزية. يرجى قراءة العبارات التالية بعناية وتحديد الإجابة المناسبة التي تصف على أفضل وجه درجة التكرار التي تواجهها لكل مشكلة.

Perception Problems مشاكل ادراكية ومعرفية	**Degree of Frequency درجة التكرار**				
Statement العبارة	Never اطلاقا	Rarely نادراً	Sometimes احياناً	Usually عادةً	Always دائماً
1. I find it difficult to recognize every single word of an incoming connected speech. أجد صعوبة في إدراك كل كلمة أسمعها في الكلام المرتبط.					
2. I find it difficult to recognize the signals which indicate that the speaker is moving from one word to another. أجد صعوبة في إدراك المؤشرات التي تشير الى أن المتحدث انتقل من كلمة الى أخرى.					
3. I have difficulty in recognizing sounds due to the person speaking fast. أجد صعوبة في إدراك الأصوات نتيجة الى طريقة المتحدث السريعة في الكلام					

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4. I find it difficult to recognize a connected speech when the speaker does not pause long enough. أجد صعوبة في إدراك الكلام المرتبط عندما لا يتوقف لا المتحدث عن الكلام بالشكل الكافي					
5. I have difficulty in recognizing sounds due to linking, assimilation, reduction, and omission in a speech. أجد صعوبة في إدراك الأصوات نتيجة الى ارتباط أوتداخل أو تقنين أو حذف الأصوات في الحديث					
6. I have difficulty in recognizing connected sounds due to speakers' accent and intonation. أجد صعوبة في إدراك الأصوات المرتبطة نتيجة لهجة ونغمة صوت المتحدث.					
7. I find it difficult to recognize words I know because of the way they are pronounced. أجد صعوبة في إدراك كلمات أعرفها بسبب طريقة نطقها					
8. I cannot recognize words with similar sounds (mistaking one word for another). لا أستطيع تمييز الكلمات ذات الأصوات المتشابهة (أخطأ في أستعمال واحدة بدل الأخرى)					
9. There are words that I would normally know in writing, but when I hear them in a stream of connected speech, I find it difficult to tell where one word finishes and another begins. هنالك بعض الكلمات التي أعرفها في سياقها الكتابي، لكنني حين أسمعها عبر مجرى الكلام المرتبط أجد صعوبة في معرفة أين تنتهي كلمة وأين تبدأ الأخرى					

10. I miss the beginning part of a connected speech. أضيع الجزء الأستهلالي أو بداية الحديث المرتبط					
11. I do not respond quickly enough to words that I know in a stream of connected speech. لا أستجيب بسرعة كافية لكلمات أعرفهاعبر مجرى الكلام المرتبط.					
12. There are too many new words and expressions in a connected speech. هناك العديد من الكلمات والتعابير الجديدة في الكلام المرتبط.					
13. I am unable to recognize so many sounds and words in a connected speech. لست قادرا على إدراك العديد من الأصوات والكلمات في الكلام المرتبط					
14. I tend to neglect the next part when thinking about the meaning of utterances I have just heard. أميل الى تجاهل الجزء التالي من الحديث عندما أفكر في معنى الكلام الذي سمعته للتو					
15. I do not pay attention to a speaker's connected speech. لا ألقي بالا للكلام المرتبط للمتحدث					
16. I lose my concentration when I find difficulty in recognizing when a word finishes and when another word begins in a connected speech. أفقد تركيزي عندما أجد صعوبة في إدراك متى انتهت كلمة وبدأت الأخرى في الكلام المرتبط.					
17. I lose my concentration when a speech contains different aspects of connected speech.					

	Never	Rarely	Sometimes	Usually	Always
أفقد تركيزي عندما يحتوي الحديث على عدة أنواع أو عناصر من الكلام المرتبط.					
18. I feel nervous and worried when I do not understand a connected speech. أشعر بالعصبية والقلق عندما لا أفهم الكلام المرتبط.					

Parsing Problems مشاكل تفسيرية	Degree of Frequency درجة التكرار				
Statement العبارة	Never اطلاقا	Rarely نادرا	Sometimes أحيانا	Usually عادة	Always دائما
19. I forget quickly connected words or phrases I have just heard. أنسى الكلمات أو شبه الجملة (في شكلها المرتبط) عندما أكون قد أستمعت اليها في التو.					
20. I do not understand the meaning of sentences in a connected speech لا أفهم معنى الجمل في الكلام المرتبط					
21. I find it difficult to interpret the meaning of a long connected speech. أجد صعوبة في تفسير معنى الكلام المرتبط عندما يكون طويلا.					
22. I feel fatigue and distracted when I listen to a long connected speech. أشعر بالتعب وتشتت الذهن عندما أستمع الى كلام مرتبط وطويل.					
23. I find it difficult to follow the sequence of a connected speech when the sentences are too long and complex. أجد صعوبة في تتبع التسلسل في الكلام المرتبط عندما يحوي جمل طويلة ومعقدة					

Statement / العبارة					
24. I cannot chunk streams of speech. لا أستطيع تقسيم (تقطيع) مجريات الحديث.					
25. I do not understand words that have more than one meaning. لا أفهم الكلمات التي لها أكثر من معنى واحد.					
26. I find it difficult to understand connected speech when the topic is unfamiliar. أجد صعوبة في فهم الكلام المرتبط عندما يكون موضوع الحديث غير مألوف أو شائع بالنسبة لي					
27. I have difficulty in understanding a lot of new information in a short time while listening to connected speech. أجد صعوبة في فهم الكثير من المعلومات الجديدة في وقت قصير عند الاستماع الى الكلام المرتبط.					
28. I do not understand the next part of a connected speech because of problems I encounter earlier in that speech. لا أفهم الجزء التالي من الكلام المرتبط بسبب المشاكل التي أواجهها في بداية ذالك الحديث					
29. I stop listening when I have problems in understanding the connected speech. أتوقف عن الأستماع عندما يكون لدي مشاكل في فهم الكلام المرتبط.					

مشاكل في الاستخدام Utilization Problems	درجة التكرار Degree of Frequency				
Statement العبارة	Never اطلاقا	Rarely نادرا	Sometimes أحيانا	Usually عادة	Always دائما
30. I find it difficult to understand a connected					

speech in which there are many unfamiliar expressions including jargons and idioms. أجد صعوبة في فهم الكلام المرتبط الذي يحتوي على العديد من التعابير غير المألوفة كالأمثال والمفردات التخصصية.					
31. I do not understand the intended message of an entire connected speech. لا أفهم مجمل الرسالة المقصودة من الكلام المرتبط عند الأستماع اليه.					
32. I find it difficult to get a general understanding of connected speech from the first listening. أجد صعوبة في الحصول على فهم عام للكلام المرتبط عند الأستماع اليه للمرة الأولى.					
33. I find it difficult to deal with colloquial speech and slangs. أجد صعوبة في التعامل مع التعابير العامية والحديث بالعامية					
34. I find it difficult to get the order of ideas in a connected speech أجد صعوبة في ايجاد نسق معين للأفكار عند الأستماع للكلام المرتبط.					
35. I feel confused about the key ideas in the message of a connected speech. أشعر بالتشويش حول الأفكار الرئيسية للرسالة التي يحويها الكلام المرتبط.					
36. I find it difficult to get all the details in a connected speech. أجد صعوبة في الحصول على كل التفاصيل التي يحويها الكلام المرتبط.					

37. I find it difficult to get the relationship between supporting ideas in a connected speech. أجد صعوبة في ايجاد العلاقة التي تربط الأفكار الداعمة في الكلام المرتبط					
38. I find it difficult to understand the meaning of a connected speech without seeing the speaker's body language. أجد صعوبة في فهم معنى الكلام المرتبط حين لا أرى لغة المتحدث الجسدية.					

Thank you very much for your cooperation.

The Saudi Information System Law and its Effectiveness (A Study of the Degree to Which Major Saudi Organizations Apply the Best Practices of Information Systems)

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Abstract:

Information Security Law is the body of legal rules, codes, and standards that require companies to protect that information and the information systems that process it from unauthorized access. The government's development, issuance, and maintenance of law requirements help to ensure that standards are met, which, in turn, supports the country's safety, productivity, and economic development. The purpose of this paper is to assess the adequacy of the current Saudi laws and regulations related to information security and the extent to which information security laws impacted companies' application of information security best practices.

The Saudi laws related to information security were studied and compared with the American information security regulations in the first part of the research. Then the experimental setting was used to perform the search by designing an electronic questionnaire to reveal the impact of Saudi information security laws on the reality of information security in companies. The questionnaire consists of 3 general questions and 11 questions regarding corporate practices that support the application of information security laws. The questionnaire was distributed to a random sample of information security workers in a number of major Saudi companies, and forty participants responded, and the largest proportion of respondents were executives, and the respondents' years of experience ranged between 1 and 40 years. It is concluded from the research that having stricter and flawless information security laws provides a strong foundation for corporate policies, and a safe investment environment.

Keywords: Information System, Saudi Law, Effectiveness, Saudi organizations, Best practices

1. Introduction

The significant development of information technology has facilitated human life and many information sources and services in real-time. However, personal and confidential information has become increasingly likely to penetrate security. Electronic intrusions and data theft can cause problems for individuals and large and significant losses for companies and institutions. In addition, they may extend to damaging the security of the national economy. Today, most companies constantly operate online. Their internal systems are used in environments that are already or easily connected to the internet, resulting in greater exposure to attack at any time. When companies are exposed to the risk of data theft and hacking, this may hurt their customers rather than the companies themselves. Occasionally, the theft of data from large companies, which directly disables their work, affects national and economic security because; information security is paramount for accurate financial reporting and timely and relevant managerial accounting reports for decision-making. (Gordon et al, 2003) An example of these attacks is the denial of service (DoS), which has lately been used to harm companies' operations and entire nations. (Czosseck et al, 2013) Some of the economic damage resulting from poor information security is associated with the costs incurred by companies in cyber-attacks. The costs associated with cyber-attacks can be divided into direct and indirect costs. Direct costs include the expenses incurred for restoring a computer system to its original, pre-attack state. Recovery from an attack will typically require extra spending on labor and materials. (Cashell, et al, 2004) Therefore, implementing information security legislation contributes to a more reliable business environment, enabling a stable economy. (Whitman & Mattord, 2010) Regulation and compliance are vital aspects of any national information technology framework regarding policy development. Therefore, protecting information and data is a shared federal responsibility for all classes in the community and reducing illegal behaviors. Government regulations must apply dissuasive and robust policies for information security. Therefore, governments should develop and update their laws and regulations, which ensure institutions' commitment to the best standards of information security and the interests of the public. This paper discusses the adequacy of the current Saudi laws and regulations related to information security and how information security laws impact companies' application of information security best practices. To achieve these goals, this paper is structured in two parts.

The first part reviews Saudi laws related to information security and compares them with the U.S. information security regulations, which stimulate companies to improve their information security.

In light of the first part's results, an electronic questionnaire was designed to determine the impact of Saudi information security laws on the reality of information security within companies.

1.2. Research objectives

The research seeks to achieve the following objectives:

- Assessing the adequacy of current Saudi laws and regulations related to information security for companies

- The impact of information security laws on the implementation of companies

- Review of Saudi laws related to information security and compare them with US information security regulations

- How information security laws in Saudi Arabia affect companies' practices

1.3. Research significance

Due to the great development in information technology, this led to the emergence of intrusion, electronic piracy and data theft, which causes problems for individuals and great losses for companies and institutions, in addition to harming the security of the national economy.

Therefore, the implementation of information security legislation contributes to economic prosperity and a more reliable business environment.

Therefore, government regulations must implement deterrent and strong information security policies and develop and update their laws and regulations related to information security. From this point of view, the importance of the research is in discussing the adequacy of the current Saudi laws and regulations related to information security and how information security laws affect companies' implementation of best information security practices

2. Laws and Regulations Related To Information Security in Saudi Arabia

In Saudi Arabia, several laws regulate certain aspects of information security. The following sections present KSA laws that apply to information security.

2.1 The Telecommunications Act (Royal Decree No. (M/12), / 03 June 2001).

According to the Saudi Telecommunications Law, intercepted information cannot be disclosed during its transmission. By the law, "it is essential to maintain strict confidentiality and privacy of telephone calls and information received or transmitted through public communication networks. Violators of such restrictions may be subject to a fine(5,000,000 Saudi Riyals) if they disclose, listen to, or record it. Further, the Telecommunications Act prohibits telecom and internet providers from disclosing information concerning their subscribers to third parties or allowing individuals access to their communications.

2.2 E-Government Implementation Rules 27/3/2006

Based on The Council of Ministers Resolution No. 40 dated 02/27/1427 H corresponding to 27/3/2006, concerning the adoption of controls to guide the implementation of e-government in government agencies, the following controls are relevant to the topic of this paper:

- Each government entity should electronically rely on information and data from relevant agencies, and the amount of information and data it needs to provide in applications and forms should be minimized.

- In most cases, no information or data will be requested from applicants unless necessary; and if it is to be used to deliver the service to the applicant.

- Each government entity must instruct its employees to comply with confidentiality and privacy protection standards.

- Information and data relevant to government service applicants shall be reviewed only by authorized personnel. In order to guarantee this right to the service user/beneficiary, the government authorities shall take all appropriate steps (Ministry of Communications and Information Technology, 2006).

2.3 The Anti-Cyber Crime Law (Royal Decree No. M/17, 1428 / 26 March 2007)

In an attempt to combat cybercrime by identifying such crimes and determining their punishment, this law has been enacted. According to KSA's Anti-Cybercrime Law, any person found guilty of:

- Accessing another's computer with the intent to delete, destroy, modify, or re-distribute its information.
- Interrupts the transmission of data through a computer or network.

The Anti-Cyber Crime law provides a good basis for prosecution of those who attack, steal, or damage networks or computers. However, it does not address prevention, education, or collaboration.

2.4 Credit Information Law (Royal Decree NO. M/37, 8 July 2008):

The purpose of this law is to establish general principles and controls for collecting, exchanging, and protecting consumer credit data (information and data on consumers regarding credit transactions, including loans, installment purchases, leases, credit sales, credit cards, and payment commitments for such transactions). Company members, government entities, and private companies that maintain credit information are subject to this law (National Center for Documents and Archives, 2008).

2.5 Penal Law on Dissemination and Disclosure of Classified Information and Documents (Royal Decree NO.M/35, 12/4/2011)

Public employees or those of the like, even after leaving their positions, should not divulge or divulge classified information or documents that they obtain or are privy to by virtue of their position, if such dissemination or disclosure remains restricted. The punishment for these acts is imprisonment for a period not exceeding twenty years or a fine not exceeding one million riyals (Penal Law on Dissemination and Disclosure of Classified Information and Documents, 2011).

After reviewing the Saudi laws, we note that Saudi laws related to information security are dispersed among several government sectors, which makes it difficult for practitioners to distribute security information cooperatively.

The laws are mainly directed at individuals and there is rarely a law, which requires companies to apply national or international standards to ensure information security.

3. U.S. Information security laws

The U.S. is one of the leading countries that regulate information security issues. Next, we will examine several U.S. laws that have a significant impact on businesses when they implement best practices of information security. To my knowledge, these laws do not exist concerning Saudi Arabian information security.

3.1 Security breach notification statutes

These are laws requiring an organization that loses control of an individual's "personal information" to disclose that loss to those concerned. As of October 2010, 46 states, including the District of Columbia, Puerto Rico, and the U.S. Virgin Islands, have such laws. These laws were originally designed to protect consumers against identity theft by requiring data custodians to notify individuals when they lost control of information that could facilitate identity theft (Thaw, 2011).

3.2 The Gramm-Leach-Bliley Financial Modernization Act of 1999 ("GLBA")

Specifies requirements for the safeguarding of financial institutions. These safeguards require that: To ensure that the financial institutions within the jurisdiction of each agency or authority are adequately protected in administrative, technical, and physical ways, each agency or authority shall establish appropriate standards. (1) To keep customer information secure and confidential; (2) To guard against any threats or hazards which would threaten the security or integrity of such information; and (3) To protect against unauthorized access to or use of such information or records that might cause considerable harm or inconvenience to customers (Thaw, 2011).

3.3 Gramm-Leach-Bliley Financial Modernization Act ("GLBA")

Gramm-Leach-Bliley Act requires financial institutions, which offer products and services to consumers, such as loans, financial advice or insurance, to explain their information-sharing policies to their customers and to protect sensitive information (Federal Trade Commission, 1999).

3.4 Massachusetts Standards for the Protection of Personal Information of Commonwealth

Residents this regulation establishes minimum standards that must be met to ensure that both paper and electronic records that contain personal information are protected. These regulations are intended to ensure that consumer information is secure and confidential in a manner in keeping with industry standards and to safeguard against anticipated threats to the integrity, security, and security of such information, as well as protect against unauthorized access to or use of that information which may result in considerable harm or inconvenience for consumers.

The law states that personal information must be encrypted when stored on portable devices or transmitted wirelessly or on public networks. According to additional requirements, businesses need to employ up-to-date firewall protection to safeguard their data from the outside world and limit access to or transmission of data to authorized users only, in accordance with established policies. (Thaw, 2011) In addition, the act contains the duty to Protect and Standards for Protecting Personal Information and Computer System Security Requirements (The Official Website of the Attorney General of Massachusetts, 2010).

4. Methodology

This section describes in detail the experimental setup used to conduct the research within this work.

How Do The KSA Information Security Laws Affect Companies' Application To Information Security Best Practices?

After reviewing the laws that support information security in Saudi Arabia, an electronic questionnaire was built to detect the impact of the Saudi information security laws on the reality of information security in companies. The questionnaire was composed of 3 general questions and 11 questions regarding the practices of companies that support the application of the laws on information security. The questionnaire was distributed to a random sample of employees involved in information security at several major Saudi companies. Seventy-five questionnaires were sent via email and Twitter to those responsible for information security in several major Saudi companies within a variety of vital sectors. Forty participants responded from the following sectors:
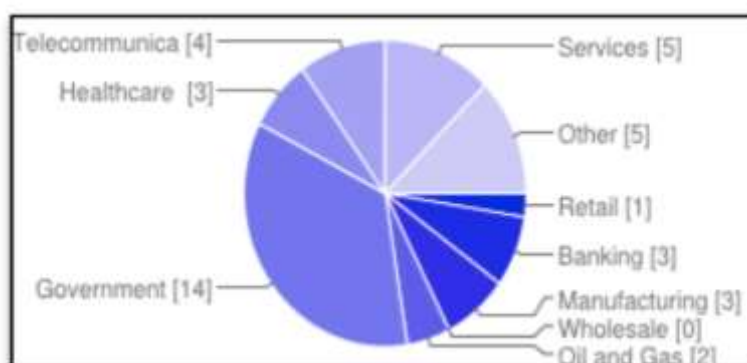
Figure (1): distribution of respondents by sector

The largest proportion of respondents were executive managers. The following chart shows the distribution in terms of the jobs held by participants. The years of respondents' experience ranged between 1 and 40 years.
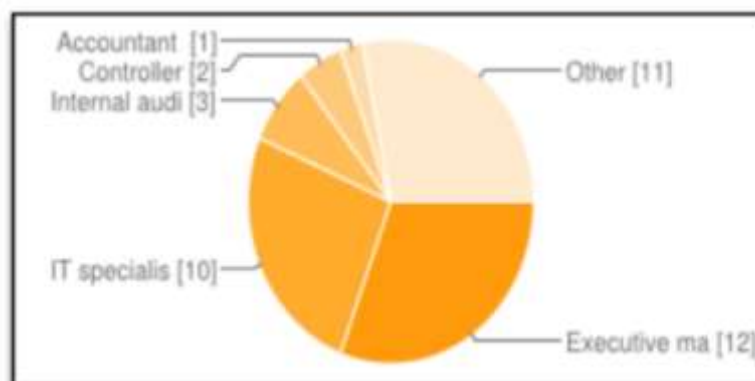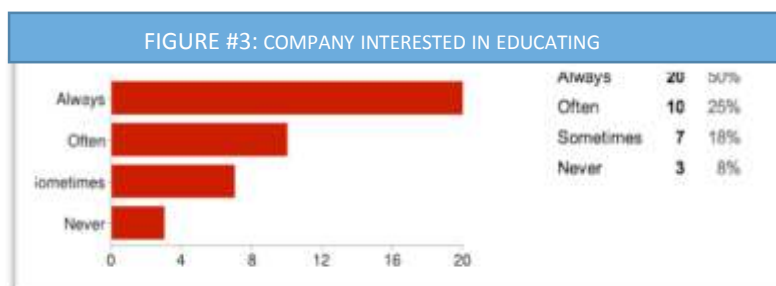

**Figure. (2): Distribution of respondents' jobs.**

5. Results and Discussion

1- Do the information security practitioners within your organization endeavor to understand the current Saudi IS legal environment?
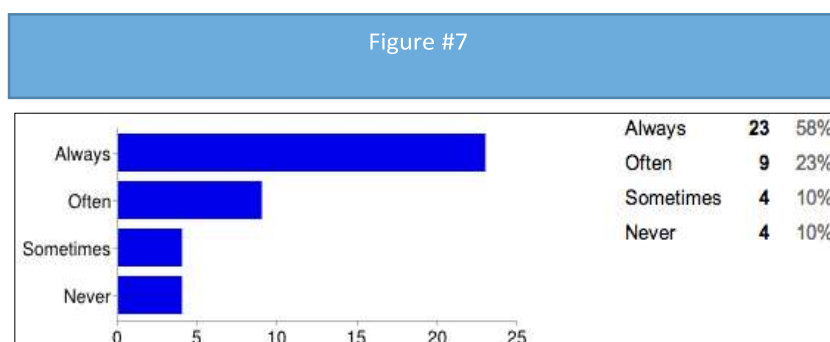

FIGURE #3: COMPANY INTERESTED IN EDUCATING

Always	20	50%
Often	10	25%
Sometimes	7	18%
Never	3	8%

2- Do the information security practitioners within your organization endeavor to stay current with regards to Saudi IS laws and regulations?
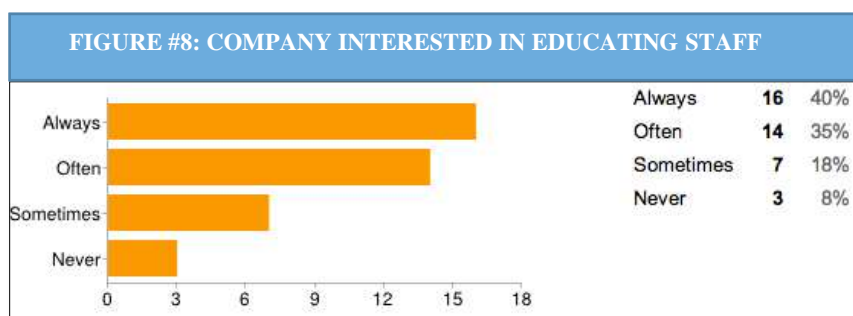
FIGURE #5: STAFF STAY CURRENT WITH SAUDI IS

Always	17	44%
Often	17	44%
Sometimes	4	10%
Never	1	3%
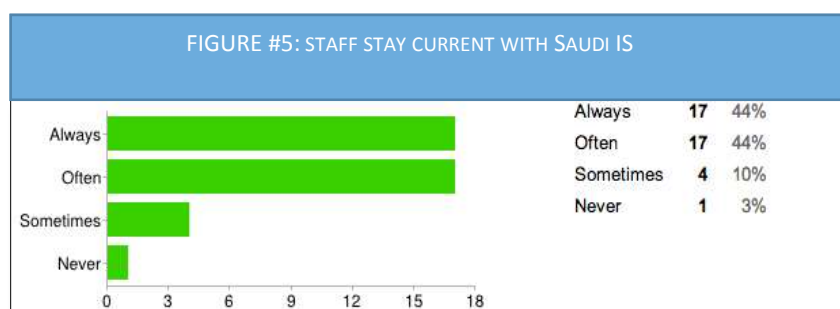
3- Do the security practitioners in your organization endeavour to identify emerging issues?

FIGURE #6: COMPANY STAFF IDENTIFY EMERGING ISSUES

Always	13	33%
Often	11	28%
Sometimes	14	36%
Never	1	3%
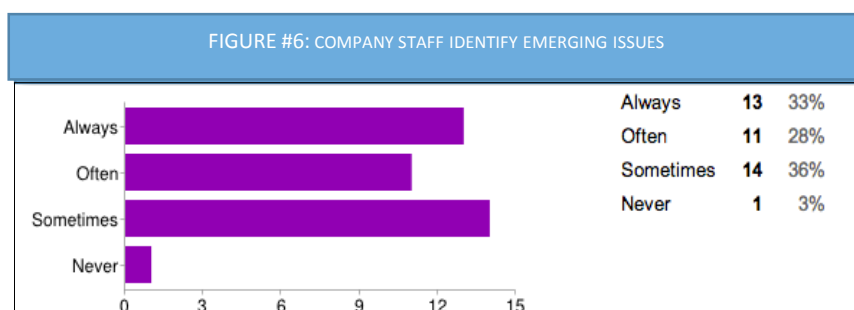
4- Does the security policy in your companysupport the Saudi information security laws?

Figure #7

|		
Always	23	58%
Often	9	23%
Sometimes	4	10%
Never	4	10%

5- Do information security officials in your company endeavour to educate employees about laws which carry sanctions and the responsibilityof both the company and the employee? (i.e. distributing awareness leaflets, awareness emailsand awareness lectures).

FIGURE #8: COMPANY INTERESTED IN EDUCATING STAFF

|		
Always	16	40%
Often	14	35%
Sometimes	7	18%
Never	3	8%

6- Are the information security officials within the company insuring that employees know what constitutes acceptable behavior; and do they know about the consequences of illegal or unethical actions.
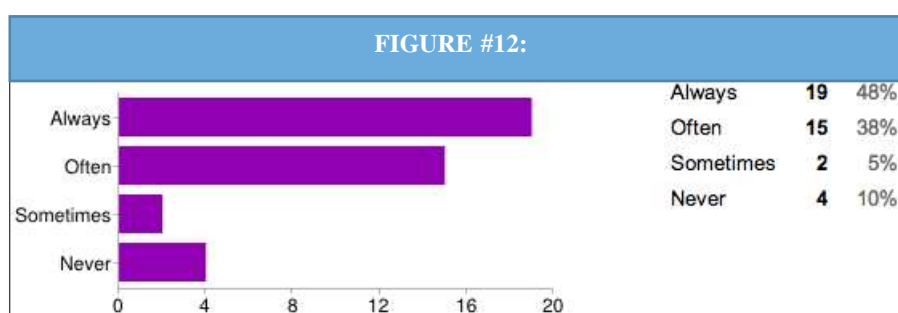

FIGURE #9

Always		
Often	11	28%
Sometimes	8	20%
Never	8	20%
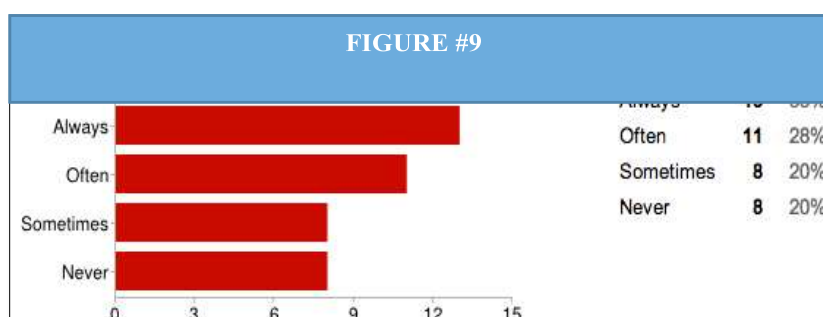
7- Does the company use technology to control employee access to information as necessary (suchas a firewall) to protect confidential and personal data from criminal action?


FIGURE #10

Always	28	70%
Often	7	18%
Sometimes	3	8%
Never	2	5%
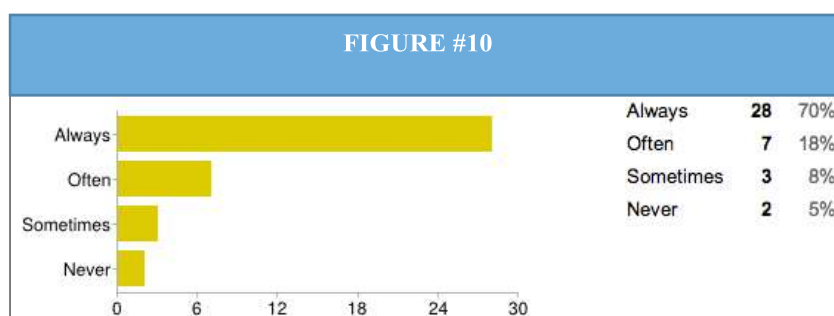
8- Does the company makes a valid effort to protectothers and continually maintain that effort?

FIGURE #11		
Always	13	33%
Often	13	33%
Sometimes	12	30%
Never	2	5%
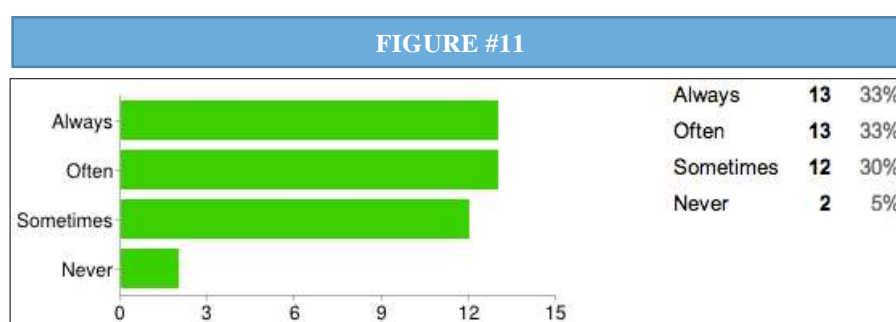
9- Does the company monitor the commitment ofemployees in the information security laws?

FIGURE #12:		
Always	19	48%
Often	15	38%
Sometimes	2	5%
Never	4	10%

10- Does the company implement strict penalties against employees who break laws? (i.e. publishingconfidential information, listening or recording data intercepted during transmission?

FIGURE #13:		
Always	19	49%
Often	10	26%
Sometimes	2	5%
Never	8	21%
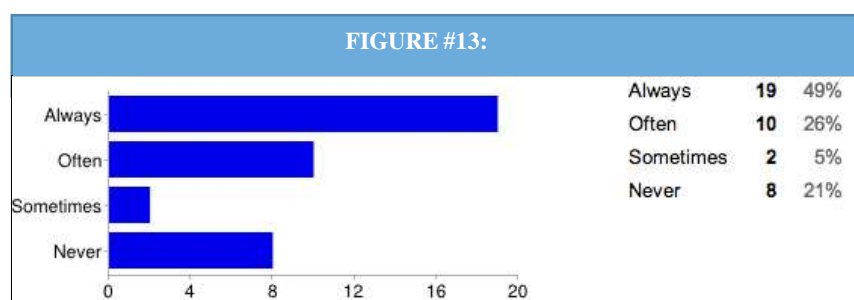
5.1. Key Findings From the Survey Include the Following:

 • Educating employees about the laws of information security and privacy protection are important issues. This is because people are one of the greatest threats to information security and are the weakest link in a security chain.

Policy, education and training, awareness, and technology should be employed appropriately to

prevent people from accidentally or intentionally damaging or losing information. (Whitman & Mattord, 2010) Therefore laws are gaining importance by applying their people and commitment to them. Thus awareness about the laws and their application through companies' security policies is a key role for the Department of Information Security within companies (Guide for the Roles and Responsibilities of an Information Security Officer Within State Government, 2008). The survey results showed that the majority of respondents confirmed that their companies were interested in educating and sensitizing their employees to information security laws. This result was evident through the participants' answers to Question 1, where half of the sample responded that the company was always interested in educating its employees. One-third of the sample often answered (see Figure. 2).

The answers to the sixth Question confirmed that the company officials made an effort to educate their employees, with 80% of the sample providing an answer of always and often (see Figure. 8).

• Usually, all individuals and institutions endeavor to follow the law and avoid breaching the laws for fear of punishment and therefore take responsibility. This is evident from the respondents' responses to Questions 2, 3, and 4, which confirm that 80% of the respondents were keen to understand the legal environment within Saudi Arabia (see Figure. 4) In answer to Question. 3 90% followed the updates regarding the laws of information security (see Figure. 5). In addition, 60% were keen to follow up on legal issues (Figure. 6).

• Whatever the efforts of legislators to develop laws and policies, these laws are deterrents only if the availability of the three conditions: Fear of penalty, probability of being caught, and probability of a penalty, are being administered. (Whitman & Mattord, 2010) Therefore, monitoring the performance of employees and the application of sanctions against violators is an integral part of law enforcement. Participants' responses in the survey reflected there to be a problem in the control and the application of sanctions against violators, as seen from the answers to Question number 7, whereby 40% of officials were unsure whether their employees applied the laws. Answers to Question 11 indicated that 25% of respondents believed that employees were safe from punishment in the event of penetration by the law. This should be treated seriously because it reduces the importance of the laws and their role in maintaining security.

• In Question 5, 90% of the participants stressed that the company's policy supported the laws of Saudi Arabia, and this is to be expected because local laws are one of the sources of security

policy for companies. Therefore, government regulations play a role in corporate practices and their employees. Whereas the prospect of being sued for damages when confidential information is stolen or destroyed is a major incentive for companies to improve their information security. Lower liability would also reduce the incentive to invest in security. (Cashell, et al, 2004).

• Observed from the foregoing that the companies claim that they applied the laws of information security in Saudi Arabia is shown by the responses of respondents. However, we find that the level of information security in Saudi Arabia is low. This is what Drashalgthber and Sabeeh confirmed; the study reported that the level of information security in Saudi Arabia is less than required (Alghathbar, 2012).

This may be due to the weakness of the legal structure related to information security that does not require companies to apply standards and the minimum requirements for information security.

6. Suggestions

A number of suggestions, which may have a positive impact for improving the environment for information security, have been provided:

 - The speed of development and the application of the document to the National Information Security.

 - Motivating companies to apply the best practices of information security through rewards Certified Companies applying information security standards.

 - Building a national database to share information about best practices for information security and the potential dangers and the experiences of companies in responding to electronic attacks.

7. Conclusion

It has been demonstrated that the laws of information security provide a strong foundation for company policies. These are derived from security laws, and the IS laws reflect the practices of security companies, for either the better or worse, because where a greater stringent legal environmentfree of gaps exists, the practices of security companies will be improved. This in turn provides a safe environment for investment.

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Effect of Artichoke Extract on Hypercholesterolemic Status of Bile Duct Ligation Rat Model

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Abstract

Objective: Dietary plants have gained great attention, because they can play important role in enhancement of health and wellbeing. The purpose of our study was to look into the effect of artichoke extract on hypercholesterolemic status of bile duct ligation rat model.

Materials and Methods: In this study we used 21 Wistar albino rats. They randomly assigned into three groups; Group 1 (control group) underwent laparotomy alone and the common bile duct was only exposed and no drug was applied. Group 2 (BDL group) was subjected only to bile duct ligation (BDL) and no drug was applied. Group 3 (BDL +Ac) received a daily dose of 1.5 g/kg/per os of artichoke extract starting 24 hours after BDL. After 7 days of treatment, the animals were sacrificed, the blood samples were taken and total cholesterol (TC), low-density lipoprotein cholesterol (LDL-C) and high-density lipoprotein cholesterol (HDL-C) levels were analysed.

Results: TC decreased in BDL+ Ac group compared to BDL group (44.42±21.19, 61.2±11.3). The LDL-C decreased in BDL+ Ac group compared to BDL group (28,5±10,05, 38,4±3,91) with a statistical significance (p<0,05). HDL decreased in BDL group and in BDL+ Ac group compared to the control group; however, it indicated no statistically significant difference (p>0,05).

Conclusion: In this research, artichoke extract application may improve hypercholesterolemic status of bile duct ligation. Further studies with larger volume are required to support our promising results.

Keywords: Hypercholesterolemia, Artichoke, Cholestasis, Bile duct ligation, Rat.

1. Introduction

The risk of hyperlipidaemia in humans has increased in recent years as a result of stationary life with decrease in physical activity, and an increase in consumption of animal products. Hyperlipidaemia is a lipid metabolic disorder characterized by hypercholesterolemia, which may or may not be accompanied with elevated serum triglyceride levels (de Castro & Calder, 2018) (Linden et al., 2016)

The term hypercholesterolemia refers to an increase in cholesterol levels in the blood, and it is regarded as a major risk factor for the development of atherosclerosis and cardiovascular disease (Dongiovanni & Valenti, 2017). It can also cause a stroke and brain damage (Roger et al., 2011) (Clark, 1986). Hypercholesterolemia can result from a variety of causes, including both primary and secondary diseases. One of the secondary reasons is obstructive biliary cholestasis. Increased hepatic cholesterogenesis during cholestasis has been attributed to a variety of theories. Cholestasis may interfere with the cellular level negative feedback inhibition of cholesterol formation (Navi & Segal, 2009). On the other hand, Cholestatic hypercholesterolemia has been linked to a reduction in the supply of lymphatic lipoproteins rather than a failure of this feedback inhibition (Kattermann & Creutzfeldt, 1970).

Guidelines for hyperlipidaemia management recommend a treatment strategy that includes changes in lifestyle as well as medication based on the identification of groups at high, medium, or low risk of major cardiovascular events (Weis & Dietschy, 1971). There are also certain natural compounds, like artichoke leaf extract, which are traditionally used to lower cholesterol levels in the blood (Sabatine, 2016) (Urizar & Moore, 2003). The artichoke plant, it is a Mediterranean vegetable belongs to the Asteraceae family with incredible sensory characteristics and a high nutrient content. The artichoke's edible head (flower) is particularly high in bioactive phenolic components, fiber, minerals and inulin.

Furthermore, because artichoke leaves contain a considerable amount of phenolic compounds, they have traditionally used as a diuretic, liver-protecting, choleretic and fat-reducing agent (Lattanzio et al., 2009).

Various agents and different approaches have been previously studies for their effect on hypercholesterolemia. We aimed in this study is to investigate the effects of artichoke extract on hypercholesterolemia following bile duct ligation.

2. Materials and Methods

2.1. Animals

After obtaining the approval of Gazi University Animal Experiments Local Ethics Committee. This experimental study was carried out at Gazi University's Faculty of Pharmacy's Experimental Animal Care and Research Unit. All the procedures were performed according to accepted standards of Guide for the Care and Use of Laboratory Animals. In this study were used 21 healthy male Wistar Albino rats, 6-8 weeks old and weighing 250-300g. The animals were kept in a room with a temperature of 21-24°C, a humidity of 54-55%, 12 hours light/dark cycle, ad libitum feeding, and free access to water. Before the experimental model, all animals in this study were randomly divided into three groups, with seven rats in each group; control group (n=7, Group C), bile duct ligation group (n=7, Group BDL), and BDL+ artichoke extract group (n=7, Group BDL+ Ac).

2.2. Experimental Model and Treatment Protocol

The animals were anesthetized (with 10 mg/kg/ip xylazine and 50 mg/kg/ip ketamine). After that, they were placed in the supine position, and the abdominal wall was shaved and sterilized with povidone iodine. The bile duct was exposed by making an upper median incision of the abdomen, and two ligatures were performed with 3/0 polyglactin suture material, one from the proximal and the other from the distal region. The bile duct was then cut between these two ligatures. Group C (Control) underwent laparotomy alone and the bile duct was manipulated without ligation. After these procedures, muscle and skin were sutured with 3/0 polyglactin suture material and wound care of the incision site was performed. After 24h from the surgical procedures, control group and BDL group animals were given distilled water by gavage, and BDL + artichoke extract group

animals were given 1.5 g/kg/per os of artichoke extract by gavage after dissolving in distilled water.

After one week of treatment, the animals were sacrificed by taking intracardiac blood under the same anaesthesia protocol. The blood samples were centrifuged at 3000 rpm for 15 minutes, their serums were removed and total cholesterol (TC), low-density lipoprotein cholesterol (LDL-C) and high-density lipoprotein cholesterol (HDL-C) levels were analysed in the Biochemistry laboratories at Gazi University's Faculty of Medicine.

2.3. Statistical Analysis

For statistical analysis, the SPSS 24 program was utilized and $p < 0.05$ was considered statistically significant. ANOVA variance analysis was used to evaluate the data. Duncan test was used to evaluate the variables with significance.

3. Results

The results of the study (table 1) indicated that all animals with bile duct ligation had jaundiced. The presentation of BDL led to a significant rise in the level of blood TC, LDL-C and reduction of the value of HDL-C in comparison with their parallel control animals. The treating of BDL group with artichoke extract showed a significant reduction in blood values of LDL-C in comparison with BDL rats, (p=0,000<0,05) (figure 2). TC were decreased in the BDL group treated with artichoke extract in comparison to BDL group, and HDL-C decreased in the BDL group treated with artichoke extract, but without statistically significant (p>0,05) (Figure 1, 3).

Table 1:

Levels of total bilirubin and of serum lipid profile parameters in Wistar rats

	Control grup	BDL grup	BDL+Ac grup
	X±ss	X±ss	X±ss
TC mg/dL	36,4±9,03	61,2±11,3	44,42±21,19
LDL mg/dL	8,75±1,78	38,4±3,91	28,5±10,05
HDL mg/dL	28±4,54	24,4±16,35	18,33±8,04
T-B mg/dL	0,14±0,06	8,78±1,68	3,91±1,77

TC: Total cholesterol, LDL-C: low-density lipoprotein cholesterol, HDL-C: high-density lipoprotein cholesterol, T-B: Total bilirubin
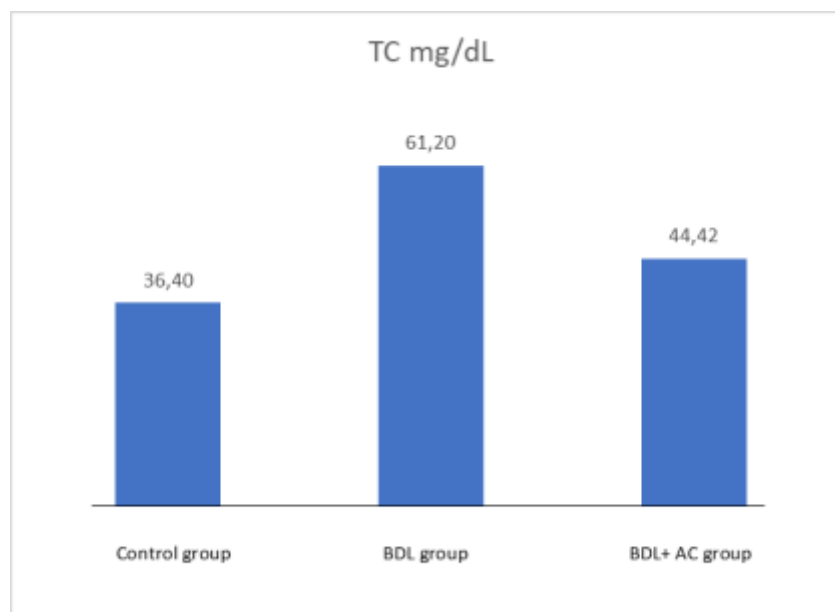

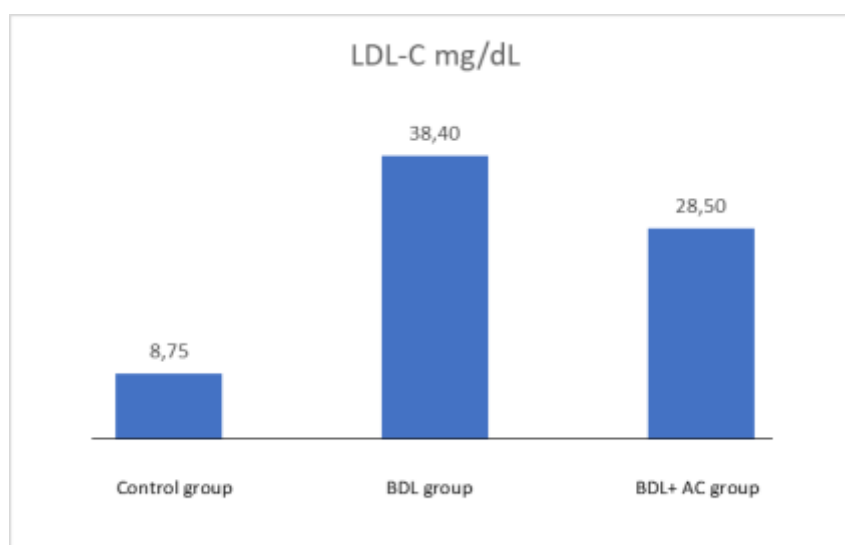**Figure 1: Serum total cholesterol (TC) values of control and experimental groups**

Figure 2: Serum low-density lipoprotein cholesterol (LDL-C) values of control and experimental groups
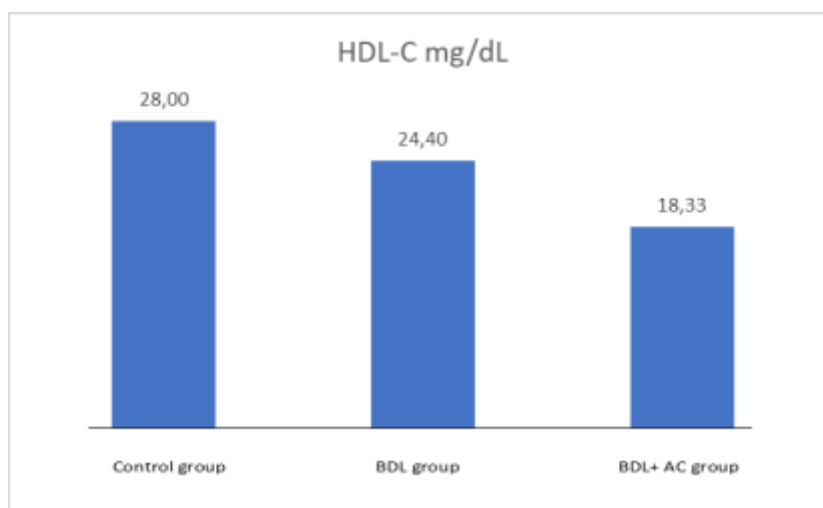
Figure 3: Serum high-density lipoprotein cholesterol (HDL-C) values of control and experimental groups

4. Discussion

Since hypercholesterolemia is one of the most important risk factors for the development of CHD, numerous animal experiments are carried out to better understand the relationship between cholesterol metabolism disorders and atherogenesis, as well as to evaluate potential treatments (Bersot, 2011). In experimental animals likes rats, pigs, and dogs, bile duct ligation induces cholestasis, results in the formation of an aberrant lipoprotein called LP-X in plasma. This lipoprotein is also found in people who have biliary stasis, but it goes away once the obstruction is relieved (Seidel et al., 1970). Many herbs contain antioxidant properties and can help to prevent the oxidation of low-density lipoproteins. Some phytosterols contained in plants can prevent cholesterol from being absorbed. Some polyphenols found in botanicals have the ability to inhibit cholesterol absorption. The artichoke appears to have 22 chemical components, 8 flavonoids and 11 caffeoylquinic acid (Schütz et al., 2004). Artichoke extract can have a substantial impact on hypercholesterolemia through a variety of methods, including suppression of cholesterol synthesis and LDL oxidation. The mono- and di-caffeoylquinic acids, as well as the cynarin concentration of artichoke, may be responsible for these therapeutic effects (Speroni et al., 2003) (Wittemer et al., 2005).

In the present research, we evaluated the effects of Artichoke extract on hypercholesterolemia in bile ligation rats. Animals from BDL treated with artichoke extract had normal growth and their serum were comparable to the control and BDL groups.

Interestingly, a one-week long period of supplementation with artichoke extract revealed a choleretic-protective aptitude, preventing the cholestasis-induced formation of hypercholesteremia in rats.

Serum cholesterol level are known to increase during the development of cholestatic liver injury in BDL rats (Cooper et al., 1974) (Dueland et al., 1991). It has been shown that administration of artichoke extract exerts an anti-hypercholesterolemic effect in rats with a diet high in cholesterol or with renal diseases (Mori et al., 1989) (Montilla et al., 1998). In the present study, rats with BDL had increased serum cholesterol concentration markedly. Artichoke extract given to rats with BDL, despite the decrease in cholesterol level, no significant differences were found compared to BDL group. The reason may be explained by the difference in the mechanism of hypercholesterolemia between extrahepatic cholestasis and feeding of a high cholesterol diet or renal diseases. Hypercholesterolemia in extrahepatic cholestasis is caused by the increases in hepatic cholesterol synthesis via increased 3-hydroxy-3-methylglutaryl-CoA reductase and cholesterol 7a-hydroxylase activities (Dueland et al., 1991), while hypercholesterolemia in feeding of a high cholesterol diet or renal diseases is brought about by the abnormal lipoprotein metabolism (Mahley & Holcombe, 1977) (Appel, 1991).

Artichoke leaves extract has been proposed to inhibit cholesterol biosynthesis in hepatocytes (Gebhardt, 1997), and to decrease the oxidation of LDL (Jimenez-Escrig et al., 2003). The study in (Kusku et al., 2010) recommend that artichoke leaf extract could be beneficial in preventing hypercholesterolemia-induced pro-oxidant states in the LDL+VLDL fraction as well as lowering elevated serum triglyceride and cholesterol levels. The authors of (Cervellati et al., 2002) (Lupattelli et al., 2004) showed that cynarine is utilized to mobilize and detoxify fatty deposits in the liver. Results of our study demonstrate that artichoke leaf extract can lower LDL-C levels of hypercholesterolemic rats. This finding is in agreement with study in (Englisch et al., 2000) which demonstrated, the using artichoke dry extract Lowering cholesterol and LDL-C levels.

Dyslipidaemia with abnormal lipoprotein levels is considered as a major risk factor for cardiovascular disease. However, HDL cholesterol has anti-inflammatory, antithrombogenic, anti-apoptotic and antioxidant properties to prevent atherosclerosis (Gylling et al., 2004).

In our study, there is no significant effect of artichoke on HDL-C level. This finding is in agreement with work in (Shahinfar et al., 2021) which demonstrated, that no significant effect of

artichoke on HDL-C level, and also with study in (Sahebkar et al., 2018) which reported that no significant alteration in plasma High Density Lipoprotein-Cholesterol by artichoke.

Over the last years, various pharmacological properties of artichoke extracts have been investigated. In a study by (Saenz Rodriguez et al., 2002) it has been proved to enhance bile flow and inhibit hepatocyte cholesterol biosynthesis in rats, and this is in agreement with authors of (Gebhardt et al., 2002) their results indicated importance of beta-glucosidase-dependent liberation of luteolin for the ability of artichoke extracts to inhibit hepatic cholesterol biosynthesis. The study reported in (Wider et al., 2013) have investigated the hypocholesterolemic effect of artichoke by humans, randomised controlled trials observed a moderate hypocholesterolemic impact. Compounds in artichoke leaves, such as cynarin and luteolin, may play an important role in inhibiting and reducing cholesterol synthesis (Englisch et al, 2000). In this context, Artichoke extract could be helpful as dietary supplement to reduce or prevent atherosclerosis which would help to maintain cardiovascular health.

The most herbal products and food supplements have antilipidemic effects supported by small-scale studies, their use in the treatment of dyslipidemia is limited (YAYLA & EU, K. (2016). The present results reinforce the idea that much more research regarding the potential and benefits of using the artichoke extracts as hypocholesterolemic agents is required.

5. Conclusion

As artichoke extract appears to positively modulate hypercholesterolemia, this study could contribute to the existing of evidence supporting the use of artichoke extract in the treatment of hyperlipidaemia.

6. Conflict of interest

No conflict of interest was declared by the authors.

7. Ethical statement

This experimental study was carried out after obtaining the approval of Gazi University Animal Experiments Local Ethics Committee (numbered G.Ü.ET-19.067).

8. Acknowledgments

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Role of Artificial Intelligence in Smart Cities for Information Gathering and Dissemination (A Review)

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Abstract

The rise in urban population and technological innovation has resulted in climatic, technological, and economic changes that can severely impact the value of life in cities. In reaction to the changes, the idea of smart cities has been developed, which refers to the novel application of information communication technology to minimize the severe impacts on the cities and their occupants. Artificial Intelligence is among the technologies being adopted to develop smart cities. Research shows that Artificial Intelligence (AI) is improving rapidly, and it plays a substantial role in helping intelligent city-wide systems in various domains. Thus, it is vital to decide the modern research advances to realize the role played by Artificial Intelligence in smart cities for intelligence gathering and dissemination. Also, there is a need to analyze the relationship between Artificial Intelligence and smart cities scientifically. To identify this relationship, this research paper will focus on the role of Artificial Intelligence, its applications, and the challenges associated with concepts and technologies identified as Artificial Intelligence in smart cities. Therefore, this research paper attempts to give insights into Artificial Intelligence's role in smart cities for intelligence gathering and dissemination.

Keywords: Urbanization, Smart City, AI, Risks and Legal Framework, Privacy and Remedies, DPR

1. Introduction

Cities are compound entities but are exposed to the necessities; they comprise individuals and communities associated with roads, spaces, and buildings in various contexts and settings. Cities are identified as smart cities with different sensors gathering data to obtain insight and employ the data to manage the objects that communities and human beings interact with efficiently (Nam and Pardo, 2011, p. 282). When items are identified as assets, asset management will be the primary benefit-appropriate management results in improved performance, reduced management cost, satisfied asset users, and improved sustainability. Smart cities are using Artificial Intelligence to gather intelligence in proactive management and job prioritization. In gathering intelligence, Artificial Intelligence allows collecting geospatial features to be employed in maps and GIS software in an automated manner. This research focuses on the role of artificial intelligence in smart cities for intelligence gathering and dissemination.

2. Research Background

The high rate of urbanization is associated with numerous challenges, such as the scramble for limited resources to meet the increasing human needs. The United Nations Department of Economics and Social Affairs report shows that more than 55 percent of the global population lives in urban centers. The percentage is expected to increase up to 68 percent by 2050 (d'Amour et al., 2017, p. 8939). Thus, the challenges associated with urbanization will continue to rise unless proper strategies are employed to address the challenges. Urbanization will increase due to the population increase in major cities and the rapid expansion of regional cities. In return, the rise in urbanization will result to pressure for a sustainable environment, where the population will need more and improved infrastructure on the little space available (Anser et al., 2020). Moreover, urbanization will result in a more affordable and better quality of life for city residents.

Smart cities are among the solutions established to address the rising challenges associated with urbanization. McKinsey conducted research that shows smart city technology will improve specific quality indicators of life by about 10-30 percent (Vuppalapati, 2019). Moreover, the study indicates that there will be a significant reduction in crime, reduced health weights, minimal commuting, and minimal carbon emissions.

Thus, a smart city is defined as a municipal region that depends on information and communication technologies to establish economic development, improve quality of life, and support governance systems (Kim et al., 2017).

For instance, municipal governance can link its transport and energy grid structures, establish sensor-equipped structures with efficient energy, and create communications that improve monitoring and accessibility to an emergency, healthcare, and various public services.

McKinsey's report identifies three stages that interlock to create an intelligent city function. The first stage is the technological foundation that comprises smartphones and devices equipped with sensors generating data and linking to high-speed communication systems (Viale et al., 2017, p. 526). The second stage is computers which process the information to create logical solutions for specific issues. The final layer is the overall public related to the identified technologies (Datta and Sharma, 2017, p.1). All the employment of smart city technologies relies on individuals regularly applying them and giving data to produce predictions.

Artificial Intelligence has played a significant part in the development of smart cities. For any city to work as a smart city, smart city technologies need a process of enormous volumes of data or Big Data. Big Data has explained the three "Vs." as high velocity, high volume, and high variety information composition (Al-Salim et al., 2017, p. 458). This implies that enormous data is generated rapidly via algorithms and the implementation of various data origins, such as varying data sets. There is a close relationship between Big Data and Artificial Intelligence. Artificial Intelligence is identified as the different approaches for employing non-human structures to study from experience and take after human intelligence conduct (Miller, 2019, p. 1). Artificial Intelligence can examine vast amounts of Big Data competently to establish forecasting and cost-effective remedies to drive innovative city technologies.

The nature in which Big Data and Artificial Intelligence work depends on if Artificial Intelligence is supervised or unsupervised. In supervising studying, datasets and figures are developed to train Artificial Intelligence connections to determine specific issues in the gathered raw data (Allam and Dhunny, 2019, p. 80). Artificial Intelligence will later carry out automated procedures and strategies while discovering new opportunities and probabilities that may offer improved results than the existing solutions. Berry et al. (2019) state that in unsupervised learning, non-identified and non-grouped datasets are employed to teach and ask queries of artificial intelligence systems, which the identified latent features and concealed configurations in the data.

Intelligence gathering in Artificial Intelligence is vital in the strategic planning of smart cities. Hassabis (2017) identifies Artificial Intelligence as a science of making machines smart,

where machines are taught to act and reason like human beings. Thus, artificial intelligence gathers intelligence by observing current trends in forecasting. Artificial intelligence can disseminate intelligence using the predictive model where the machines study and improve from their past predictions (Ben and Mellouli, 2019, p. 259). Moreover, intelligence dissemination can also be conducted through a prescriptive approach where the machine forecasts according to the available data and recommends the subsequent actions.

Use Cases of Artificial Intelligence in Smart Cities

Artificial intelligence is used in public transit in smart cities to improve transportation. Cities with numerous transport infrastructures and structures benefit from the implementations that will enhance the users' experience. In public transit, artificial intelligence gathers intelligence using real-time where buses, trains, and vehicles get real-time information via mobile applications (Voda and Radu, 2018, p. 118). The real-time information helps the users communicate about delays, breakdowns, and less congested paths to save time and make informed decisions. Such strategies encourage other users to modify their choices or travel paths to minimize future public transit congestions. Gathering and analyzing public transit application data helps smart cities to make informed decisions when changing public routes and their schedules (Navarathna and Malagi, 2018, p. 44). Thus, the users can effectively allocate more accurate infrastructure resources. Places such as Dubai have finished several innovative city projects. One of the projects is observing the condition of bus drivers, which has resulted in a 65 percent reduction in road accidents due to tiredness and fatigue.

Artificial intelligence is also used in public safety in smart cities. The networks and cameras installed to monitor public transport are being used to improve public safety by saving more lives and reducing the crime rate (Nambiar et al., 2018, p. 243). In smart cities, artificial intelligence gathers intelligence from traffic lights and congestion information, which the emergency services disseminate to arrive at their destinations faster and safer (Ciaburro and Iannace, 2020, p. 23). Moreover, smart cities can collect information on accidents or identify other factors to quantify, to establish predictive and protective strategies for the future.

Jung et al. (2013) state that automation systems are constructed using artificial intelligence in smart cities to collect and disseminate intelligence. In smart cities, sensors are installed in strategic structures to gather data on energy usage and forecast consumer behavior. The information will then be transferred to the relevant individuals, such as bodies controlling energy,

to make informed decisions based on consumer behavior. For instance, wholesalers and retailers use the intelligence from the data gathered by the sensors to identify peak seasons when their customers need more goods and services. Moreover, the data can help businesspeople to identify the most strategic locations to establish their business, where the public gravitates. Via the application of artificial intelligence, the data produced helps generate reliable predictions and trail daily, weekly, monthly, and seasonal variations (Baig et al., 2017, p. 3). Thus, the collected intelligence is disseminated to make consistent predictions.

According to Geisler (2013), Power grids are another field where artificial intelligence plays a vital part in smart cities for intelligence gathering and dissemination. Artificial intelligence and smart cities can ensure the safety of power grids and grow performance organizations. Smart grid, which includes power systems, such as production plants implanted with computer technology, can make smart meter appraisals of vast amounts of data to examine and forecast need replies and weigh clustering. Forecasting approaches can be developed on the smart grids to predict the price and demand for energy for an identified regular interval (Xiong et al., 2012, p. 2908). According to some research, the prediction models can exceed the existing models because they are more accurate in price and load prediction.

Legal Frameworks for Implementing Artificial Intelligence

According to Joshi et al. (2016), individuals dealing with the establishment of future smart cities technologies leveraging artificial intelligence structures, and national and local administrative firms generating the technologies for their regions, should assess how to circumnavigate the existing legal and regulatory principles guiding the establishment and implementation of artificial intelligence systems. The European Union identifies the primary advantage of establishing the artificial intelligence sector (Sajjad et al., 2020, p. 108). In February 2020, the union provided a white paper concerning artificial intelligence, European excellence, and the trust model. Artificial intelligence offered two chances and the likely need for a future regulatory guideline.

Cath et al. (2018) state that when identifying the capacity for artificial intelligence and public-private associations, in 2019, the government of the United Kingdom was the initial administration to examine the new group of artificial intelligence procurement principles established by the World Economic Forum. Even if the United Kingdom is the first government,

it is rapidly becoming increasingly vital for every state administration to have robust frameworks developed for the products being generated to be helpful to the citizens.

The implementation of artificial intelligence brings some legitimate concerns, such as data privacy dangers. The data administered by the systems comprises private data of employees and suppliers, such as facial identification and biometric structures for observing and security reasons. In the European Union, the General Data Protection Regulation is used together with local privacy regulations in every jurisdiction, for example, the Data Protection Act 2018 in the United Kingdom (Cornock, 2018 p. A1). Otherwise, they may comprise the inherent risks of creating and using an artificial intelligence system. According to research, there are no unique European Union-wide laws that govern artificial intelligence (England, 2013). Nevertheless, the European Commission developed the High-Level Expert Group on Artificial Intelligence and established its Ethics Guidelines for Trustworthy Artificial Intelligence in April 2019. The established guidelines state that artificial intelligence structures should be legal, strong, and ethical to fulfill the seven vital requirements to be perceived as trustworthy. Fig 1 represents the life cycle of a sustainable smart city empowered by technologies.

Fig 1: Life cycle of sustainable smart cities
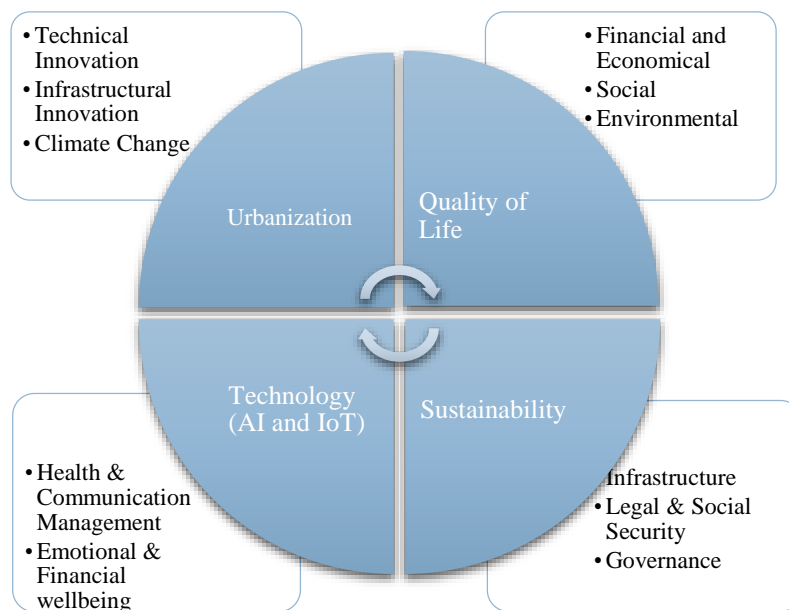
Additionally, the tasks have been executed on developing mechanisms to employ the Ethics Guidelines for Trustworthy Artificial Intelligence. A recently published report by the artificial intelligence sector and academics offers suggestions on how to advance the auditing of assertions concerning items promoted by the artificial intelligence industry (Thiebes et al., 2020, p. 1).

In 2020, the Information Commissioner's Office released guidance for firms that want to implement artificial intelligence systems. The guidance included directions for describing the decisions taken with artificial intelligence and guideline for auditing artificial intelligence (Buruk et al., 2020, p. 387). The principles are considered by the Information Commissioner's Office in implementing enforcement strategies where private data is dealt with, for example, the introduction of fines under the General Data Protection Regulation.

Risks in Executing Artificial Intelligence

There are both technical and non-technical risks associated with the implementation of AI in smart cities (Al Sharif & Pokharel, 2021). In smart cities, artificial intelligence can process private data such as issuing and observing the application of power in a residential area. Personal data can also be processed by overseeing the locomotion and providing applicable adverts founded on geo-location to prospective customers within the urban residence (Scherer, 2015, p. 353). Artificial intelligence in smart cities may comprise facial identification to trail and observe individuals motioning around a public area for protection and personalization (Verghese et al., 2018, p. 19). There are several extra challenges around privacy and data protection when artificial intelligence handles private data. The fig 2 below details about a model for risk acescent and resolution tool in smart cities.
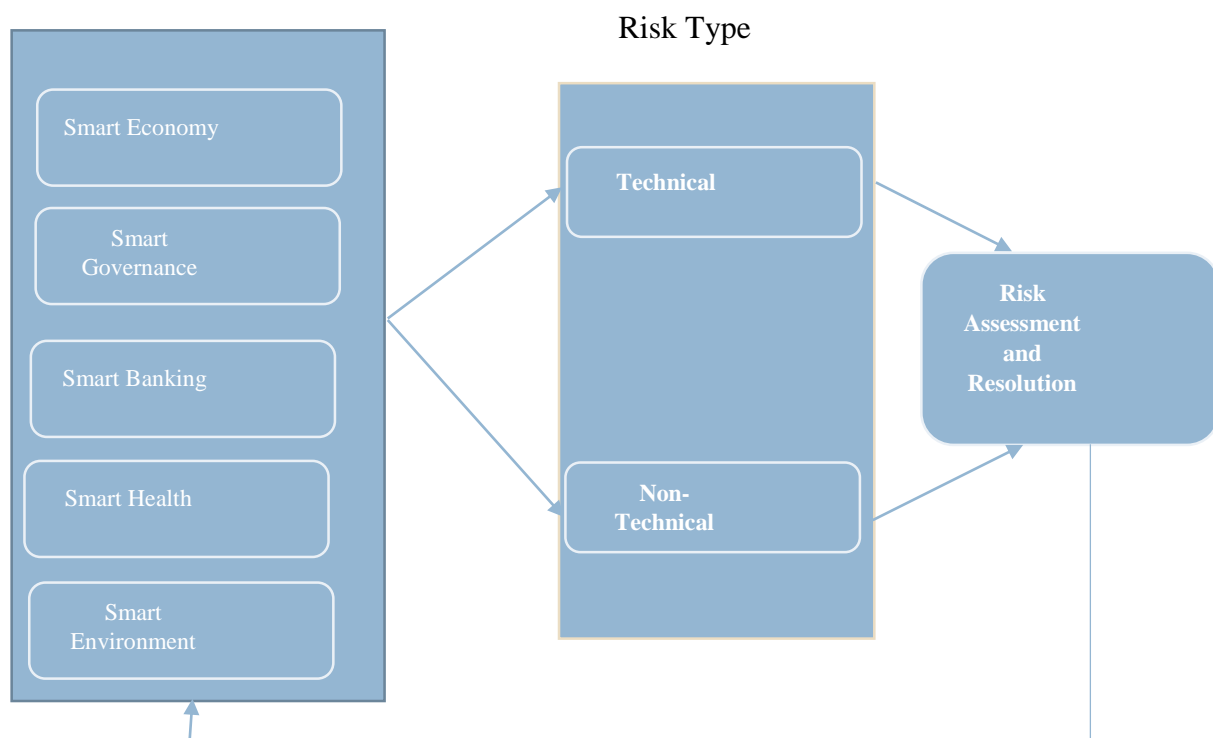
Smart City Dimensions

Fig 2: Risk acescent and resolution tool in smart cities

Yu (2020) identifies that there are other challenges concerning the equality and consistency of the algorithm. For instance, when facial identification technology is implemented for policing and public protection, it is expected that data groups for training the technology have an adequately broad range of various demographics symbolized within it. Thus, the facial recognition technology would accurately recognize individuals of various ethnic and racial origins instead of a specific ethnic group. The buyers of such technologies should attempt to identify how the technology developers adopted measures to ensure that the artificial intelligence evaded developing or cementing unequal bias during system development. For example, if the algorithm were developed with the data group, it would naturally process such individuals from the different metropolis, and if the procedures were established to examine possible bias (Villasenor and Foggo, 2020, p. 295). There should be control measures to ensure that the implementation users can identify any likely inequality. Such biases include discrimination, bias, or poor system performance.

Fulfilling transparency needs is a significant issue in smart cities. Specifically, it is crucial to communicate competently with the residents of a specific state, motioning around a smart city while relating with artificial systems (Malgieri and Comande, 2017). The transparency that needs to be stated in Articles 13 and 14 of the General Data Protection Regulation can be burdensome and are not essentially logical in an urban environment, even with the vast symbols (Hoofnagle et al., 2019, p. 65). Thus, it is highly recommended to establish signage that can comprise the application of regularly identified signs and QR codes, permitting people to get complete information available on the internet.

Another challenge is that of developing suitable human oversight measures. For the individuals involved in purchasing artificial intelligence systems, it is vital to consider the necessary stage of human regulation for the specific smart city infrastructure (Srivastava et al., 2017p. 130). Particular approaches should be embraced. However, the issue is the volume and velocity of data going via the Big Data structures and when human oversight can genuinely be generated. It is essential to have a strategy in place to enhance the system's suitability in every situation. A crucial point in the progressive implementation of sensor-equipped Internet of Things and different smart city technologies is if a smart traffic light or smart meter has been automatically prepared with a link to the free internet (Patel and

Doshi, 2019, p. 692). Such measures will bring out the risk outline of the system. If that is the case, the overall cybersecurity appropriate procedure will be more relevant. For example, if the technology can be installed with firewalls or antivirus software, password sanitation, and accessibility of security updating.

Remedies for Implementing Artificial Intelligence

While there are numerous risks associated with implementing new technologies such as artificial intelligence, the benefits imply that the creator and buyer of smart city technologies will require comprehending how to address the risks. Managing the risks will result in improved application and understanding of the intelligence gathered. When private data is involved in the artificial intelligence systems, administrations such as local and national governments and various system purchasers, identified as data controllers, should follow the overreaching responsibility guideline under the General Data Protection Regulation (Yigitcanlar et al., 2020, p. 1473). Thus, there will be practical data governance and executing security by intention and default when employing instruments to develop data or run artificial intelligence algorithms according to Article 5 of the General Data Protection Regulation (DPR rules).

Smart Cities and Overcoming the Privacy and AI Hurdles

There are vital factors that should be considered to overcome smart cities' privacy and artificial intelligence hurdles. The first factor is the Data Protection Impact Assessment. The application of new technologies and the improved data group processing using artificial intelligence can activate the need to carry out a Data Protection Impact Assessment (Brauni et al., 2018, p. 499). While relating, integrating, or matching data from numerous sources, the relevant bodies identify Data Protection Impact Assessments as a vital factor to consider. Application of innovative technology or generating biometric or generic information when combined with another activate from the guidelines on Data Protection Impact Assessments such as systematic monitoring also makes an organization in smart cities conduct an assessment. An improved Data Protection Impact Assessment is highly recommended to examine specific features of artificial intelligence such as firmness, efficiency, transparency, bias minimization, and liability. On the other hand, in massive region projects,

It is suggested that a Fundamental Rights Impact Assessment and Equality Impact Assessment dealing with practical stakeholders such as the public individuals who are likely to be impacted by the project should be conducted in advance.

Privacy and artificial intelligence hurdles can also be overcome by ensuring transparency. To deal with the need in GDPR for legal, equal, and transparent dispensation and transparency apprehensions in the Ethics Guidelines for Trustworthy Artificial Intelligence, the institutions wanting to deploy artificial intelligence in smart city technologies should follow transparency responsibilities keenly (Yanisky-Ravid and Hallisey, 2019 p. 428). Thus, organizations may need to create a layered model such as symbols and marks around the urban region. To attain an enhanced transparency level, transparency can also be enhanced by revising existing administrative privacy notices. The clarity should be centered on a lawful basis for processing, such as public interest.

Effective adoption and implementation of internal policies help organizations in smart cities demonstrate their accountability with the GDPR. There is a need to establish rules and responsibilities regarding the description of artificial intelligence facilitated decisions to people (Kumar, 2015, p.1). Privacy should be enhanced by default or design in smart cities during the implementation of artificial intelligence to ensure that institutions are sailing towards good data administration. Artificial intelligence execution techniques include data minimization approaches to guarantee that only the relevant data is gathered, processed, and maintained by the system for intelligence according to the identified purpose. Another technique is purpose limitation measures like separating data groups to guarantee the datasets are applied in their intended purpose. The final technique of implementing artificial intelligence is security methods such as pseudonymization or anonymization of probable information and the execution of access controls, encryption, and audit logs.

Completely automated decision-making helps the organizations in smart cities to overcome the hurdles. Suppose the artificial intelligence generates private data and is implemented for the application in automated decision-making comprising profiling without any substantial human participation in the decision-making process. In that case, it may lead to a legal or similarly significant impact on the person (Gassmann et al., 2019).

Such impacts include ranking emergency services requests in a smart city founded on data associated with residents making emergency pleas, which will be consequential according to article 22 of GDPR. The organizations in intelligent towns should have the correct legal basis to implement completely automated decision-making. Moreover, the organizations should ensure appropriate guidelines, such as the right to appeal against the decision of an individual decision-maker.

What makes Smart Cities Smart?

Smart cities have unique features that differentiate them from other cities. Smart cities use artificial intelligence-powered technology to achieve is goals and make them stand out among other cities (Jucevicius et al., 2014, p. 146). Some of the components that make smart cities smart are innovative traffic supervision, smart parking, smart waste management, smart policing, smart lighting, and smart authority. Artificial intelligence works closely with the Internet of Things to develop smart traffic remedies to improve the smart city's efficiency and speed of movement.

Smart parking is another feature that distinguishes smart cities from other cities. Due to the increased population, it is becoming difficult for individuals to find a parking lot because most people own cars. However, artificial intelligence helps smart cities install sensors that help individuals identify if there is a free parking slot around them (Grodi et al., 2016, p. 1). Thus, individuals in smart cities save time and minimize congestion and pollution within the city. Smart cities have smart waste management systems where waste is regularly collected and disposed of at the appropriate place. Proper waste management raises the urban population's need to embrace modern waste management methods (Rohit et al., 2018, p. 1). Artificial intelligence helps recycle some wastes while effectively disposing of the wastes that cannot be reused by providing a sustainable waste management system. For instance, Barcelona has a waste management system that has installed sensors on waste bins which informs the relevant authorities that it is time to collect the waste when the containers are almost filled.

Innovative policing in smart cities helps minimize the increasing crime rates in the modern world. Law enforcement agencies use evidence-based data-directed measures, which are economical, efficient, and practical, to capture crime. Singapore is among the smart cities using smart policing,

Where cameras and sensors are installed in numerous places to identify individuals engaging in illegal activities such as smoking in public (Yuen, 2018, p. 349). Street lighting is vital in smart cities, although they are uneconomical because they consume more energies. Thus, smart cities are shifting to using smart lighting, which is more economical (Coldren et al., 2013, p. 275). With proper lighting, individuals in smart cities can effectively run their businesses even at night to meet their expectations. Smart governance makes smart cities a conducive place for their inhabitants. Smart cities' artificial intelligence improves the decision-making process by working closely with the relevant stakeholders, such as the administration and the citizens.

Smart cities should have high livability to provide conducive living conditions for the residents. Moreover, the city will have minimal pollution, low congestion, and easily accessible services. Smart city infrastructure and artificial intelligence technology, which share the same goal of improving the living conditions in intelligent cities, work closely to achieve this goal. Thus, the cities become more competitive and sustainable. Artificial intelligence is implemented in the cities to widen the streets to reduce congestion (Marsal-Llacuna et al., 2015, p. 611). Artificial intelligence enables computers and machines to move, listen, see, and think like humans. Moreover, the technology allows efficient monitoring of smart cities to ensure they function as expected. Most urban planners are using artificial intelligence because it is a high-quality technology.

Workability is another feature associated with smart cities. With the help of artificial intelligence, smart cities are providing improved infrastructures to enable their residents to be internationally competitive in the job market (Zealand, 2018, p. 80). For example, Vienna's administration is using WienBot artificial intelligence to provide customized digital services to its citizens to improve the workability of the smart city. Smart cities should be sustainable even for future generations. Although most environmentalists and other counterarguments maintain that urbanization is not good, numerous benefits are ripped from urbanization. Such benefits include better educational opportunities, improved healthcare, and better infrastructure and services. The current initiatives are being implemented in smart cities while accounting for their future implications by ensuring they are sustainable. Artificial intelligence provides intelligent insights to urban planners to help them allocate resources more efficiently, using the available resource effectively.

Research conducted by McKinsey Global Institute found that the use of artificial intelligence in smart cities will help to minimize emissions by 15 percent, reduce water consumption by 30 percent, and reduce the average commuting time by 20 percent, to make the cities more sustainable (Batagan, 2011 p. 80).

Moreover, the individual in intelligent cities have equal access to quality learning opportunities in different learning settings. Learning settings embraced in smart cities include schools, families, workplaces, and public places. This is achievable because artificial intelligence supports all aspects of life, such as learning.

Challenges and Benefits of Artificial Intelligence in Smart Cities

Currently, most cities are changing their usual way of operation by implementing artificial intelligence. The cities change their method of operation, delivery, and maintaining social amenities. Nevertheless, the implementation of artificial intelligence n smart cities is challenged by deploying a technology that does not work competently or fails to align with other services in the smart city (Qureshi et al., 2020, p. 1). Thus, before implementing artificial intelligence, it is vital to consider if the technology will effectively work in the city it is being implemented. Additionally, it is essential to note that artificial intelligence is not a stand-alone technology because it collaborates with other technologies to be effective. Thus, for the urban regions to benefit from the advantages offered by smart cities, they should identify the technologies that complement artificial intelligence.

3. Recommendations and Conclusion

This research paper indicates that smart cities need to embrace artificial intelligence technology to improve their performance. Apart from embracing artificial intelligence, smart cities should adopt strategies to accommodate the technology within the numerous functions to develop a municipality. Such measures will ensure that the concept of smart cities is recognized and adopted in most parts of the world.

Conclusively, the development of intelligent cities is promising to improve the standard way of life in urban centers within the public sector and the private sector. However, developing smart cities needs careful consideration of the technology to enhance their sustainability. Artificial intelligence plays a vital role in smart cities by ensuring improved security, smart policing, proper waste management, efficient energy use, and smart parking.

AI collects intelligence in data using installed cameras and IoT-enabled sensors. The intellect is then disseminated to the relevant bodies to make informed decisions. Although urbanization is viewed as wrong by some environmentalists, AI in urbanization makes it more beneficial.

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The Social Levers of Entrepreneurial Success (An Empirical Study Based on Family SMEs)

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Abstract:

Entrepreneurial Social Competences (ESC) most advanced practices allows entrepreneurs to avoid the traps that can lead to unnecessary training and the social errors that my prevent them from achieving their objectives. Moreover, the sustainability and the company success depend directly on the individual's ability to push their collaborators to help and to sell, to induce a positive reaction from investors and financial institutions and to control their feelings. The current work offers a detailed insight into the social skills which are acquired and developed throughout the entrepreneurial process, showing their impact on the formation and amplification of the relational capital, and on the success and sustainability of the company. It is true that entrepreneurs ability to build a rich relational network in addition, to surrounding themselves with people likely to provide them with the adequate resources, makes it possible to ensure a good business performance. Qualitative research was conducted on nine Tunisian entrepreneurs in 2020 to prove how efficient these skills are. This research indicates that industrial entrepreneurs face various challenges including the acquisition of the social skills needed to weave an effective network of relationships and develop their social resources in order to obtain the information and assistance necessary for the success and sustainability of the corporation.

Keywords: Social Competences, Key Resources, Business Creation, Social networks, Social adaptability, Emotional intelligence.

1- Introduction

The concept of skills helps to examine, at a sociological level, the differences in performance and success. Very few studies in the entrepreneurial field as well as in sociology have provided a correlation between the social skills of the entrepreneur (CS) and the social entrepreneurial capital (CSE). Indeed, Baron and Markman (2000, 2003), Neergaard and Madsen (2004), Zhao et al (2010), and Omrane (2014) were interested in the training and development of the ESC and in gathering the particular social skills relevant to an entrepreneur. In fact, this work sheds a complementary light on this articulation.

A macro-level of analysis is used in order to understand the process by which entrepreneurs mobilize their relational capital and social networks in order to equip themselves with the resources required for the survival and the growth of the company. A micro-level of analysis that can lead to the skills that need to be acquired by an entrepreneur to develop their CSE throughout the survival-development phase is also applied. However, this research focuses mainly on social skills which rely on the individual's ability to express themselves, communicate with, understand, persuade and impress others.

In this context, a social approach based on the interactive theory of competence is chosen. It mainly refers to social interactions reflected through relations and exchanges between individuals and the various actors with whom relations are maintained and which will trigger and boost the process of building, forming and developing competence.

To this end, entrepreneurial CSs are highlighted. These skills are developed throughout the entrepreneurial process, notably during the survival development phase characterized by problems related to the asymmetry of information, uncertainty, the scarcity of resources and the lack of legitimacy. They facilitate access to resources, but they are essential for the acquisition of a certain legitimacy and credibility around the viability of the project.

This research paper examines the socio-relational mechanisms and their ability to provide entrepreneurs with the most privileged access to resources in order to ensure the performance and sustainability of the company.

This study aims to clarify the different types of mechanisms through which the entrepreneur's socio-relational skills helps to take advantage of the relational network.

Likewise, it tries to show the importance of the social and relational components to the development of the entrepreneur's social capital which is subject to accumulation, production and depreciation in order to facilitate their access to external resources.

Also, our work provides a deeper understanding of the different types of social competences (SC) that are likely to favor the development of the entrepreneur's social capital and to present their relevance to the access to the necessary resources and the necessary means for the development of the enterprise.

Actually, this research adds new elements to the previously conducted works. It explores the mechanisms through which specific social skills such as social persuasion, emotional self-awareness and valuing others help entrepreneurs develop their social capital.

2- Theoretical Scoping

2.1. The role of the entrepreneur's social capital in facilitating access to key resources

Various studies that have been conducted in the field of economic sociology have shown that many different resources have been mobilized through the contractor's personal network (Bourdieu (1980); Coleman (1990); Putnam (1995))

and that the company success depends on the entrepreneurs' relationship capital and their ability to move within the relationship network (Denieuil, 1992).

The environment, the social culture, as well as the favorable economic situations allow entrepreneurs to enrich and amplify their relational capital. In this respect, Putnam (2000) stated that "a well-connected individual in a poorly connected society is not as productive as a well connected individual in a well-connected society. In addition, even a weakly connected individual living in a well-connected society can benefit from it". (Wiesinger, 2007:11)

In order to understand the mechanisms of the relational structure impact on the allocation of resources by the entrepreneur, the rewards of the entrepreneur's relational capital is highlighted at three important criteria: CS size and structural diversity, the number of strong and weak linkages, and the quality of linkages on access to necessary resources. Similarly, Burt and his collaborators discussed some of the positive effects of the entrepreneurial social network structure and of both the quality and the nature of the social contexts that this network contains on the contractor's access to the external resources requested.

Indeed, the external resources that are of a particular importance for businesses, and whose access is facilitated via a broad relational network are information, financing, and social.

The current paper focuses on the required financial resources as well as the relevant information resources.

Added to that, the mobilized relational capital structure varies during the entrepreneurial process. As the project progresses needs are transformed into essential resources throughout its evolution. The network that conveys these resources has also changed. Throughout the engagement phase, the entrepreneur will also have an exploratory behavior that will allow him to create more computational and less cohesive intentional social networks and pivot towards the exploitation of structural holes in order to ensure the business development. (Hite and Hesterly, 2001).

These social networks, rather formed via a combination of strong and weak links, are not only better diversified but also more expended. As the project advances, the contractor will gradually prune this network while continuing to enrich it with new links. In this way, the breadth of the relational network is an actor that may benefit from a privileged access to varied and valuable information or the speed with which information is obtained before others who do not take advantage of these relationships; thus the recognition of opportunities (Han and Yang, 2013).

For Omrane (2015), an entrepreneur who interacts with people whom he is emotionally unattached to has better access to more useful and complete external information. In addition, studies conducted by Aydi (2003), Djou et al (2020) have shown that interpersonal relationships between bankers and entrepreneurs have positive effects on credit conditions. Relationship capital helps to improve the borrower's risk information. As for Neergaard and Madsen (2004), they showed that the contractor's weak links make it easier to access financial resources.

In this respect, it may be concluded that the entrepreneur's social networks seem to be an important factor of the success or the failure of the project since it presents a key to access resources and the identification of opportunity.

2.2. The socio-relational skills of the entrepreneur: a mobilization of resources in business creation

2.2.1. The types and skills of the Socio-Relational Skills with respect to the Contractor

Social skills provide the entrepreneur with multiple benefits during his entrepreneurial project including working with other organizational members in an efficient way, generating motivation and trust (Lamine et al., 2014), creating collaborations (Peredo and Chrisman, 2004),

Accessing important information and seizing opportunities (Omrane, 2013), fostering the formation of business alliances (Baron and Markman, 2003) and finally obtaining financing (Omrane, 2015).

With regard to these basic assumptions, it can be considered that social sagacity is established in the entrepreneurial field during the social and professional interactions and it could affect the results expected by individuals in different contexts.

2.2.2. The effects of the entrepreneur's social and relationship skills on the mobilization of key business creation resources

Success, attainment, sustainability and failure of companies is a key issue for entrepreneurs. It requires, of course, good management skills and capacities for the consolidation and the development of the project. These skills are linked to the ability to sell and locate in the market. Thus, the skills to radiate and combine the trust of others, those of effectively managing and making the most of one's resources, and finally those of striving for a long-term evolution.

Our theoretical grounding allows us to view engagement as a separate phase of the creation process. The engagement phase translates into the effective transition of the entrepreneur to the act of creation. During this phase, the contractor generally has very few resources in terms of time, attention and funding (Ravasi and Turati, 2005). The acquisition of these resources is often a crucial step in the launch of new projects. At this stage of the process, decision-making skills are identified through the use of choice and commitment skills. This could only happen through strong involvement and a propensity for learning on his part. The role of the entrepreneur consists in his ability to develop his entrepreneurial skills in creation, research and allocation, and in those in the management of the novelty and ambiguity that surround his project.

After a firm commitment and a successful start, the entrepreneur must ensure the survival and development of his business. However, during the project evolvement and development, the entrepreneur is confronted with questions of recourse to his strategic and social-relational entrepreneurial skills in order to ensure the viability of his new project. As such, the contractor is committed to continually mobilizing and leveraging new physical, organizational, human and financial resources to support the pace of development of the project.

This paper reports on the diversity of the essential entrepreneurial knowledge, skills and attitudes during the three phases of the business creation process through an initial synthetic examination of the skills identified during the entrepreneurial process.

In this respect, the entrepreneur should particularly have a multidimensional profile to combine with coherently different personal, social and technical skills and development.

2.3. Social perception and its scope

According to many authors, social perception predisposes the entrepreneur to an ability to identify others with relevance. This ability allows the individual to perceive the extent to which partners are reliable, to select better partners or employees, or to conduct effective negotiations with various partners, shareholders, staff, suppliers, customers, etc (Baron and Tang, 2009).

2.4. Impression management and its scope

Baron and Markman (2000, 2003) attest that the printing management skills of the project leader permits him to mobilize the financial resources that he needs through his efforts of self-promotion and praise of others,. In the same perspective, Baron and Tang (2009) tried to analyze the ability of the entrepreneur to return to the good graces of his partners and to self-promotion which allow him to be recognized and valued. In addition to developing a client database, the bank also obtains financing from risk capitalists and other funding agencies.

2.5. Interpersonal influence and its scope

When it comes to the creation of projects, entrepreneurial success depends on the degree of social persuasion. In fact, an entrepreneur with strong persuasive skills could convince bankers, particularly the capitalists, of the risk to grant him the necessary funds for the progress of his entrepreneurial project (Gartner et al., 1992; Markman and Baron, 2003; Baron and Tang, 2009).

2.6. Social adaptability and its scope

Several previous studies confirmed that social adaptability makes it possible to adapt one's behavior to different social situations and positively supports one's professional success and progression skills in one's professional career (Baron, 1999; Baron and Tang, 2009). Indeed, the entrepreneur's social flexibility allows him to establish new business relationships and to obtain better professional results as well as to promote the financial success of his business (Markman and Baron, 2003; Baron and Tang, 2009).

2.7. Expressiveness and its scope

Some authors such as Baron and Markman (2003) and Baron and Tang (2009) showed that expressiveness is the ability to express feelings and reactions to the interlocutors in an appropriate way.

An entrepreneu's ability to express his own emotions and feelings openly can positively impact his entrepreneurial success. Thus, for Cialdini (2001) expressiveness provides assets to persuading customers and convincing bankers to obtain credits.

2.8. Emotional intelligence and its scope

At the professional level, entrepreneurs who are able to develop self-motivation skills, to influence the emotions of others and to express their emotions well are able to acquire the relevant information and funding and may in particular have a competitive advantage that others do not have (Kring et al., 1994).

2.9. The effects of the entrepreneur's social skills on the development of his social capital

The studies in the entrepreneurial field as in sociology have created an articulation between the entrepreneur's social skills and the entrepreneurial social capital. Among these works, we can cite those of Baron and Markman (2000, 2003), Neergaard and Madsen (2004) as well as Boyatzis (2007) who are interested in the training and the development of the ESC within the particular social skills that are available to the entrepreneur.

Diener and Seligman (2002) suggested that people who have capitalized on social skills tend to have more social contacts than people with limited relationship skills. Similarly, Zhao et al (2010) explained the dynamic process through which social skills (i.e., apparent sincerity, networking ability, interpersonal influence, and social intelligence) enable the entrepreneur to mobilize social networks in order to achieve a better entrepreneurial performance.

Since then, we have explored the tool through which specific CS's, namely social persuasion, emotional self-awareness and print management, help entrepreneurs develop their social capital and access external resources.

3- Research Methodology:

This study focuses exclusively on family SMEs (**Small and medium family corporates**) located in Sfax, Tunisia and belonging to the sectors of textiles, food processing, furniture, electro mechanics, chemical industry (perfumery and cosmetics, glue, paint, plastic and maintenance products) and various manufacturing industries. Thus, we conducted a qualitative study in 2020 among nine family SME project leaders. In fact, semi-direct individual interviews were conducted face to face with the entrepreneurs. Each interview lasted between 50 minutes and one hour. In addition to that, interviews were recorded using a Dictaphone and a transcript of the entire speech was recorded.

The results of the content analysis showed that socio-relational skills, already represented at the level of the theoretical scoping of this study, are crucial to SMEs sustainability. These results allowed us to designate the nature of the most significant relationships (personal/ professional) at the level of the relational capital of the entrepreneur in order to retain the links between the three notions of socio-relational skills, relationship capital and mobilization of resources necessary for business creation.

4- Analysis of Results Achieved

The following is a summary of the main findings from the exploratory study of family SME entrepreneurs. The qualitative study was conducted to better identify and understand the concepts derived from our main research question. Indeed, the content analysis strategy was conducted in a phased approach which revolved around two steps based on the work of Lacroux (2009).

The first step consists in a complete transcription of the information collected via their input. The purpose of the second stage of analysis is to conduct several readings of the collected information in order to be able to dissociate each reading by theme and extract all the information so as to divide the collected discourses into different segments. Depending on the needs and objectives of the exploratory study for a better cross-cutting thematic analysis at the end of this stage, unnecessary data were discarded according to the guidelines of Miles and Huberman (2003).

4.1. Content Analysis of Entrepreneurial Relationship Capital

The results of our research shed the light on the strong link between social skills, relational capital and the access to external resources. This research highlighted the different positive impacts of the entrepreneur's social capital with the consideration of three key criteria including structure (size of social capital and structural diversity), nature (number of weak links) and quality of links (their heterogeneity) on its access to essential external resources. We tried to get entrepreneurs to give more attention to people who are directly or indirectly involved in the development of their projects and to those who provide financial and informational assistance. Indeed, we determined that they are essentially close acquaintances and at least distant links. Also, we found that the number of these people range from two to ten people. This explains why the size of a good network does not have to be large since one of its roles is to be able to connect to other networks.

Some of the contractors interviewed stated that most of the relationships they have developed so far are rather professional and held with clients, suppliers, or probably with some administrative officials, They added that these relationships established generally from the engagement phase have evolved in terms of scope, proximity and frequency of interaction, but they remain merely professional and focused on mutual exchange and collaboration.

One interviewee said, "My varied and diversified professional contacts are the most important as they are the most appropriate ones to have the right information, obtain authorizations, find funds, markets, good employees, etc."

Other surveyed entrepreneurs reported that they developed weak links with: "neutral agents" either directly during their search for information or indirectly through friends, relatives or trusted entrepreneurs (strong links).

Several respondents then testify to the importance of relational capital composed of people who do not have the same knowledge networks and who have distinct social positions stemming from distinct social circles. An interviewee testifies that "The relational environment of the economic actor is a set of social relations, networks and individual actions, it is really important to have a circle of relations coming from different social networks to be able to exchange this diversity of contacts, to make your network rich (…) the factors that led to the development of this project are both external and internal".

Some respondents noted that social relationships help to access valuable information. Yet, the information provided by personal contacts is more useful, more relevant, more exclusive and less redundant than that received from more formal sources dense networks can also facilitate the imitation of business practices and products. Thus, the entrepreneur who has weak links with other actors has more access to the resources of advantageous information than to other resources.

Some other entrepreneurs stated that the professional relationships they have at their disposal will be strengthened and are likely to become more intensive over time if their businesses progresses. These entrepreneurs attest that their professional knowledge has given them access to information and that it is also a source of funding in the sense that it also highlight the role of their referral networks in convincing investors. They add that most of the relationships they have developed so far are rather professional and held with clients, suppliers, or are probably held with some administrative officials,

They noted that these relationships, were established generally from the engagement phase, they have evolved in terms of scope, proximity and frequency of interaction, but they remain on the whole professional and focused on mutual exchange and collaboration. This result is further supported by the work of (Granovetter, 1973, 2005), which considers "weak links" likely to lead to better business opportunities and provide privileged access to larger markets, especially beyond a much localized social circle.

The relationships highlighted by the contractors interviewed vary from personal to professional depending on the project development phase. Indeed, the respondents indicated that the close ties with the family circle, the relatives, provide essential support for any entrepreneurial approach particularly in the start-up phase. We concluded that family equity is an essential asset in the family business. This allows us to conclude that the entrepreneurial social network goes through several sizes, depending on the phases of business creation, and that the good use of this network reflects the level of the company's performance.

4.2. Content Analysis of Access to External Resources

The most cited constraint when starting a business is the lack of financial resources. However, credit markets suffer from information asymmetry between lenders and borrowers. Indeed, the major challenge facing these companies is to obtain the resources essential for the performance and the survival of the company.

It was noted from the interviewee's testimonies that strong ties are positively related to the access of to financial resources that are required for a business development. Initially, the company can afford to finance itself with equity and informal loans within the family or neighbors, without resorting to foreign capital. Among the testimonials a contractor states: " I come from a modest family who encouraged me morally and financially to start my business, my father and my uncles are great shoe traders (more than 40 years old), it served us as a visa, to enter the market. So the good reputation of the parent company has helped me a lot in making my investment successful". Another person said:" Finding the funding to start a project, which is the first step to success, is the most difficult step towards starting a business. This period is particularly critical because the risks are high. In short, there are few banks that agree to bring money at this stage, between us entrepreneurs and a banker there is a strong asymmetry of information this is a major obstacle when it comes to financing a business creation, the challenge is even greater when you're a young entrepreneur."

So the need for funding increases with the growth of its activities. Therefore, the contractor will seek external financial partners. Indeed, maintaining closer ties with bankers allows entrepreneurs to have better access to bank loans. The results show that the entrepreneur who multiplies close relationships with high-ranking people, managers of the administration or executives of financial institutions is more advantaged to access external resources.

One of the interviewees said: "The existence of a social link between the banker and a business manager with whom we have a close relationship is very useful for accessing the required financing; it allows us to have a bank loan, because we were recommended by a client of the bank that we already appreciate". Another entrepreneur confirmed that "when we benefit from a strong relationship network, especially those of influence, it is an advantage that can help us to take advantage of a bank loan in order to develop our business".

This result confirms the statements of Chi et al (2015) and Elouze et al (2021) which show that social networks are effective in reducing uncertainty in the banking sector. Following the evolution of the entrepreneur's relational networking during the different stages of the entrepreneurial process, we found that with the development of the company, the contractor faces a major problem of penetrating the most relevant and useful information, being able to manage and control it. We have also found that the sources of information collected vary between internal and external actors. For example, one of the contractors interviewed said: "The suppliers of raw materials and materials as well as the fairs also present a source of information for me. For example for raw material suppliers the identification and knowledge of their requirements in terms of delivery times, means of delivery, payment method and product quality generate information that must be captured to make it useful for decision-making and effective strategies". Indeed, the results found support the vision of Ginsburg (1980) which affirms that formal information systems increase the capacity to process information by facilitating the flow of information and by developing the decision-maker's cognitive capacity

4.3. Social Skills Content Analyses

By consulting entrepreneurs on the different socio-relational skills that have enabled them to amplify their social capital to support their access to external resources. We realized that most respondents give a specific precaution to certain types of social skills, which are also: persuasion and social influence, self-esteem, self-efficacy and good grace (the effects of valuing others).

Indeed, the ability to manage one's relationship, to convince, to persuade and to influence, to build confidence, self-motivation and self-management are the social skills that entrepreneurs should develop.

In this sense, our interviewees tackled the importance of communicating well with others and establishing trusting relationships with them, as well as motivating workers and being sensitive to their emotions. One of the interviewees said:**"** In the company, communication is paramount. Everyone must know that it is important, whether it's the courier; the workers or the manager. We accompany the person who works with us at all levels. If there are any absences, we try to understand why the person was absent, now there is a good working atmosphere, a group of people dynamic led in the same momentum, a common cause to make the result. I see in the total commitment of my assistants a well-shared desire to move forward and win together**".**

Nevertheless, these remarks are consistent with the research of Bernoux (2002) who presents the importance of the bargaining function in a group, because it recognizes each individual as different and admits him as a member of the group. Moreover, Sainsaulieu (1995) bases collective identities on the fact that "individuals share the same logic of actors". Thus, the creation of a group identity in the company is seen by the creation of particular relational norms.

Referring to the work of Bandura (2003) as well as Markman et al (2005) and according to what was stated by interviewees, self-efficacy is another dimension that could be relevant to the previously mentioned social competence.

As a result, emotional intelligence, sustainability and success depend directly on the individuals ability to control their emotions and those of others. The results of our research show that emotional intelligence helps entrepreneurs to adapt to change. I also, it enables it them to make entrepreneurial decisions and access external resources.

Among the interviewed persons one contractor testified this by stating that:"the most delicate phase in the creation of a company is the maturation phase, at this level the head of the company must show intelligence perseverance and motivation until his company takes off, aiming at achieving a certain balance, the must know how to sell and to convince the other and win a negotiation when the situation demands it, build up a clientele, be up to date and surpass competitors."

This is in line with the remarks of Crozier and Friedberg (1977) who emphasize the need for a successful change to give certain flexibility to the organization beforehand.

Indeed, the importance of emotional intelligence in the workplace has been proven by several researches carried out since the emergence of the concept. In fact, this study has found that a manager's that have been personality and his or her way of controlling emotions do not necessarily influence the company's entrepreneurial behavior, with the exception of risk-taking.

In this way, the ability to take risks is innate in humans and not acquired. Indeed, the entrepreneur's personality influences his decision-making ability, which results in a lack of clarity and a low percentage of certainty, and this explains the positive relationship between self-awareness and risk-taking. As the project evolves, the skills of the entrepreneur develop and enable him to provide answers for complex problems.

As part of this idea someone among the interviewees stated: "I received information that one of the biggest customers has just declared bankruptcy, it was a blow to our company at this incident but we should always fouson flexibility to deal with the ups and downs of a given industry, in other worts we need to be able to react quickly to the challenges.", another person adds: "When a problem arises, everything we had planned becomes obsolete". The first two skills that dominate are technical and social, something that is learned in action, and often adapted to the situation in which one finds oneself ».

However, with the growth of the project the entrepreneur will call on investors or credit institutions, to supplement the financial needs of the company, and to increase the share capital. The entrepreneurs interviewed, highlighted the fact that the creator must rely on his social and relational skills, especially his qualities as a negotiator. Therefore, the entrepreneur is called upon to develop and to exploit the social skills that generate the most social ties, also, to adhere certain emotional, psychological and social skills to a set of entrepreneurial skills, that are specific for each phase of the entrepreneurial process. In this context, the entrepreneur should use his persuasive skills to convince potential investors wich the credibility of his project, and to promote his access to the resources that he needs, in order to advance his entrepreneurial project. Nevertheless, the results of the research clearly show that, faced with this profound change characterized by technological and technical growth and the rapid development of knowledge, the penetration at the level of the most relevant and useful information appears to be one of the main challenges for the entrepreneurs. Penetrating these resources allows him to overcome the difficulties of environmental uncertainty resulting from the scarcity of resources,

ignorance and lack of information, as well as the difficulties of knowing and seeing the actions and reactions of individuals as in the chemical, electrical, mechanical and industrial sectors.

As for as this research is concerned, according to the testimonies of the interviewees the entrepreneur is called to create relational networks, that would allow him to amplify close relationships with other individuals, belonging to different organizations, wich facilitates access to essential and recoverable resources.

Moreover, from what we have shown in the results, a majority of entrepreneurs are generally characterized by enthusiasm and emotional intelligence that are linked to their self-confidence, their self-efficacy, their emotional self-control and their self-determination developing a relational composed of essentially weak and diverse contacts. Thus, the results found show that socially competent entrepreneurs are more chanced to easily increase their social capital.

To conclude, it will be necessary to restate the key stakeholders of family SMEs, such as investors, customers, suppliers or other professionals. Therefore, these people are carried away by entrepreneurial skills, interpersonal influence and emotional self-awareness, and they are not tempted enough by the flattery and praise tactics engaged by the entrepreneur.

5- Discussion:

The present work has explored how the value attached to the specificities family business can either be created or destroyed in the dynamics of the social capital. Initially, the entrepreneur can finance his project through his own funds, but the need for cash flow increases as the company grows. This growth will push the entrepreneur to secure his formal relational capital and leads to more efficient actions.

The social capital developed by entrepreneurs guarantees integration within the socio-economic network of the territory which impacts their reputation and visibility which is acquired in the entrepreneurial approach. Yet, providing a rich relational capital is not enough as this capital should be well used and wisely exploited. certainly, entrepreneurs' ability to build a rich relational network and surround themselves with people likely to provide them with the resources necessary for the proper functioning of their business can boost their business performance and sustainability.

Our work has also offered a detailed insight into social skills. These skills enable the identification of entrepreneurial opportunities and access to information and knowledge that support their exploitation.

It is obvious that the enterprise must be endowed with the capacity to change, adapt, acquire and assimilate external knowledge. These are, in fact, three specific social skills that help entrepreneurs during the survival-development phase, to mobilize entrepreneurial social capital, and providing to have access to informational and resources (come from external actors) and financial (via bankers) necessary for the development of the company which are: (1) social persuasion is appropriate to the manner in which he approaches a discussion and communicates in different contexts in which he attends, most often offering him the opportunity to solicit the financing required for the take-off of his business, (2) managing the impression through good graces is consistent with self-promotion and praise of others, predisposing them to mobilize the financial resources they need, (3) emotional intelligence facilitates individual adaptation and ability to change and consequently entrepreneurial success. It also makes it possible to make entrepreneurial decisions and helps the entrepreneur to access external resources.

From all what have been studies in this research, the performance and the sustainability of the company depends directly on the ability of the individual to influence his collaborators in order to seek their help, to sell themselves and to induce a positive reaction towards investors and financial institutions and also, to control one's emotions and those of others. Therefore, the social skills of an entrepreneur revolve around his ability to bring together actors from different backgrounds.

As a result, entrepreneurs can achieve their goals faster, if they adjust their communication methods to persuasion, so if they have a good knowledge of persuasion techniques, this will facilitate their business. In addition, social perception, self-expression and expressiveness also have a positive impact on the performance of companies.

Beyond that, every entrepreneur is therefore at the heart of tensions related to the situations in which he acts and to the very nature of his action. These tensions can seen in cases of the entrepreneurs interviewed, depending on the case, blocking, annoying or sources of overreach and innovation. Therefore, the entrepreneur must know how to take charge of the situation so that it does not affect the productivity and the involvement of each one, and that it doesn't create any negative consequences for the company.

Several techniques and practices of staging and imagination of the different probable situations have the ultimate vocation to develop, among entrepreneurs, the skills of interaction and effective communication with others.

However, on one part, the technique of anchoring is to associate a gesture with a positive feeling. The simple act of repeating this gesture in stressful situations, serves to train a leader to be constantly focused on his objectives and to remain attentive to maintain his balance with others, on a second part, on the technique of the spectator, which aims to develop the persuasive skills of the entrepreneur in his interaction with key stakeholders.

6- Conclusion

In this qualitative exploratory study, we shed light on the contributions of the socio-relational skills to the light of the notion of entrepreneurial social capital facilitating access to external resources. In addition, environmental conditions can lead to the business survival or disappearance. Thus, companies may face two main challenges. The first challenge includesthe need for responsiveness in the face of heightened competitive intensity, increasing customer power and the globalization of markets while the second challenge comprises the development of information and communication technologies that contribute to exchanges within and outside a company (Louart, 1996).

Of course, the more the entrepreneur is able to access and master useful and reliable information, the more he will be able to manage the evolution of the market and the less his company will feel vulnerable to changes in its environment. Indeed, the most advanced practices of entrepreneurial social skills make it possible to avoid the pitfalls that lead to good unnecessary training for entrepreneurs and to social mistakes that could threaten the achievement of their intended objectives. To conclude, the socially competent entrepreneur is more prepared to increase and develop his social capital which facilitates his access to the essential external resources required for the survival/development of SMEs.

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The Politics of Gender and Gender relations with Reference to Sudanese Girls Songs

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Abstract

Sudanese women's experience in oral tradition remains unrecognised in its own cultural setting. *Agani al-Banat* (literally means the girls' songs) is not regarded as a serious artistry either because in most cases the author is unknown, or sung by those who are considered disrespectable according to the riverine culture i.e. the culture of the northern Sudanese who live along the river Nile.

The Girls songs are worth of studying and investigating due to the terminology, expression and symbols used in these songs, the rites associated with their performance, the continuity and dynamism of the songs themselves make the girls songs a pure women's culture with its distinctive features and symbols that influence or be influenced with social reality.

Through applying Griswold's cultural diamond framework this paper examines selected songs' texts, which carry various symbolism and meanings which, identify gender relations, gender identity, women's aspiration/feelings, and rebellion to the dominant culture. The journey within the girls' songs texts has uncovered both positive (empowerment) and negative (disempowerment) impacts of these songs on Sudanese women's expereince. In term of empowerment the Sudanese women, through the Girls' Songs, break the silence towards some practices such as compulsory relatives' marriage and polygamy. While in terms of disempowerment, these songs, supports the dominant culture through participating in presenting and perpetuating the stereotype images of woman's identity as being only defined by her body.

Keywords: The Girls' Songs, Gender identity, Gender relations, Women's culture, Empowerment, Disempowerment

سياسة النوع الاجتماعي والعلاقات بين النوع (قراءة نسوية من خلال عينة من أغاني البنات السودانية)

الملخص باللغة العربية

لاتزال تجارب المرأة السودانية في التراث الغنائي التقليدي غير معترف بها. أغاني البنات لا تعتبر فنًا جادًا إما لأن المؤلف غير معروف في معظم الحالات، أو من يتغنى بها لا ينلن قدر من التقدير والاحترام من قبل الثقافة النهرية-أي ثقافة شمال السودان والذين يعيشون على طول نهر النيل.

أغاني الفتيات جديرة بالبحث والدراسة وذلك يرجع للمصطلحات والرموز المستخدمة في هذه الأغاني والطقوس المرتبطة بأدائها واستمرارية وديناميكية الأغاني نفسها تجعل أغاني الفتيات ثقافة نسائية خالصة تؤثر وتتأثر بالواقع الاجتماعي. من خلال تطبيق إطار الماس الثقافي لـ Griswold، تبحث هذه الورقة في نصوص الأغاني المختارة ، والتي تحمل العديد من الرموز والمعاني التي تحدد الهوية النوعية لكل من الرجال والنساء، بالإضافة إلى أمال ومشاعر المرأة السودانية، بل تمردها على الثقافة السائدة. ولقد كشفت الرحلة في نصوص أغاني الفتيات عن عدة جوانب للتمكين وعدم التمكين للمرأة السودانية.

حيث نجد أغاني البنات عملت على تمكين المرأة السودانية على سبيل المثال من خلال كسر حاجز الصمت تجاه بعض الممارسات والعادات السيئة مثل زواج الأقارب الإجباري وتعدد الزوجات. بينما من حيث عدم التمكين، فإن هذه الأغاني تدعم الثقافة السائدة في السودان من خلال المشاركة في تقديم وإدامة الصور النمطية لهوية المرأة على أنها محددة فقط من خلال جسدها.

الكلمات المفتاحية: أغاني البنات، الهوية النوعية، الثقافة نسائية، الثقافة السائدة، التمكين، عدم التمكين

1. Introduction:

Sudanese women's experience in oral tradition remains unrecognised in its own cultural setting. *Agani al-Banat* (literally means the Girls' Songs) is not regarded as a serious artistry either because in most cases the author is unknown, or sung by those who are not considered respectable according to the revirine culture i.e. the culture of the northern Sudanese who live along the river Nile. It was not always the case with the experience of *al-Hakkama* (bardess) in western Sudan, whose songs are recognised within the oral tradition in western Sudan. *al-Hakkama*'s songs have the similar themes of *Agani al-Banat* but with much emphasis on the conventional values of the tribes of western Sudan such as noble decent, courage, chivalry, and generosity. *Al-Hakkama* if she praises or ridicules a man, the whole community accordingly, will either estimate or underestimate him, therefore her song has an influential power on men.

By the girls' songs (*Agani Al-Banat*), I mean the songs which are composed and sung mostly by young, unmarried women (girls) in special occasions such as marriage and circumcision. Wedding ceremonies provide girls a socially acceptable forum for musical expression as well as an environment for expressing their own feelings sometimes their resistance to the dominant culture. The girls' songs fall within the category of "popular culture", and folklore. It is popular because people commonly like these songs, yet many consider them as vulgar and plebeian. "Popular" here:

> Seems to be equated with exclusion from the institutions of knowledge production. It signals a form of knowledge supported by tradition and superstition, rather than by reason, and thus one particularly prone to error. 'Accepted by the people' means non-legitimate and crude(Shaiach 1989, p. 30)

However, **the importance of doing research** on the Girls' Songs derives from the following:

1. The Sudanese society, like any other Arab/African societies, derives its culture from oral knowledge.
2. The Girls' Songs have a significant influence on Sudanese culture because they constitute an art of both poem and melody, which gradually normalize the idea and the notion in the sub-consciousness.

Therefore, these Songs could be an important component of the oral traditions, which might affect negatively or positively on gender identity and the gender relationship.

3. The Girls' songs are worthy of studying and investigating due to the terminology, expression and symbols used in these songs, the rites associated with their performance, the continuity and dynamism of the songs themselves make the girls' songs a pure women's culture with its distinctive features and symbols that influence or be influenced with social reality.

For evaluative information about gender ideologies the article suggests to examine if the Girls Songs have impacts "in defining and reflecting established social and sexual orders and in acting as an agent in maintaining or changing such orders" (Kosoff 1987, p.15). The article, therefore, attempts to **investigate certain questions**: How gender identity and female/male relationship are represented in these songs? How these songs symbolise women's aspiration, feelings and/or rebellion to the dominant culture?

Having raised these questions, the article is intended to **investigate the following propositions:**

- The girls' songs as an oral tradition reflect the stereotype image of male and female identity.

- Analysis of girls' songs could identify women's aspiration and/ or rebellion to the dominant culture.

Through selected songs' texts sang during the 1980s and 1990s, this article intends first, to outline the values of the dominant cultural with regard to the traits of the ideal man and woman. Secondly to examine Sudanese women's experience and their perception of male/female relationship, so as to examine the voice of women as a social commentary upon the dominant values and the power structure they represent. Finally, to come to better understanding of the impact of the Girls' Songs -as an oral tradition- on the Sudanese women's life and their gender's identity.

2. Concrete Analytical Framework:

We can identify different themes within the songs texts which are made up of contradictory mix positions. Within the text of Girls' Songs we can construct different reading positions ranged between subordination, negotiation, accommodation and out-spoken attitudes.

In order to examine these positions, I will borrow the framework presented by Griswold. Griswold argues that cultural objects (e.g. songs, radio program and novel) are made by human beings i.e. they have creators. But in order to enter culture and become cultural objects; they must have people who receive them, people who are not passive audience. Culture, objects and the people who create and receive them are acting in a particular context. Griswold called this context the social worlds by which she means the economic, political, social and cultural pattern. From these four element: creators, cultural objects, recipients and social worlds, Griswold shaped her framework which she called a cultural diamond. For her "the cultural diamond is accounting device intended to encourage a fuller understanding of any cultural object's relationship to the social world" (Griswold 1994, p. 15). Using Griswold's cultural diamond, the four elements, which are examined in this article, are the creators refer to the singers, the cultural objects refer to the songs, the recipients are the audience and the social worlds refer to social economic and political context within which the songs are sung. Here what links cultural objects (the songs) with the social worlds (the socio-economic and political situations) are the meanings of these songs.

Therefore, the Girls' Songs are examined as a text, which carries various symbolism and meanings that identify the gender identity of both men and women. Studying the Girls' Songs on the basis of the texts alone, are nearly impossible and/or misleading without some detailed knowledge of the culture in which these songs are composed or circulated. The text, then, are analysed within the context of socio-economic and political situation and changes in Sudan. In other words, the songs are examined as text within a certain context which constructs for their listeners particular forms of knowledge and pleasure and makes available particular identity and identification.

Understanding the "real" or "inner" roles of the Girls' Songs, yet, is not an easy task. So in my search for the meanings in the "Girls' Songs," I am going to address myself to what I consider important such as symbolism signifying submission, resistance or accommodation.

3. Sudanese women's social reality and the Girls' Songs:

The Sudanese society with its different ethnic groups is considered to a large extent a male dominated society where male/female relationship is hierarchically arranged

According to gender. The girl, since childhood, is brought up separately from the boy in an atmosphere which is full of warning and fear. She receives endless warnings about how to behave like a girl; to preserve her virginity and femininity; and to be obedient to her brother regardless of his age. It is an atmosphere full of don'ts that puts much emphasis on women's sexuality.

The main role has been defined for girls, since childhood, as being a wife and a mother. According to Tobia the socialization of the Sudanese child pass through three stages: the stage of alluration, of intimidation, and of adaptation (Tobia in Ferna (ed.), 1985). Tobia explained, further, that the alluration stage begins during early childhood, where the child's personality is shaped by two distinctive elements. The first element is the reward principle, when the child begins to learn the qualitative measurement of his action and behaviour according to the society's traditions and norms. This pedagogic method is carried either within the school and/or the family spheres. The second element is "the peer-group jealousy which drives the child to intimate his peer in order to overcome any possible sense of alienation or isolation among them" (Ibid, p. 105).

The Sudanese society, similar to other conservative ones, gives more attention to the girls' social conduct and attitudes. The fact that they are "girls" means that they are supposed not to play with boys or behave like them, besides they must stay at home and help their mothers in domestic activities. A girl with good morals should be a virgin; hence she must be circumcised to safeguard her chastity and virginity. The rationale behind circumcision is the family fear of insatiable female sexuality and the notion of strong woman's uncontrollable sexual drives which constitute a threat to social order.

Another pedagogic institution, which contributes to perpetuating the stereotype image of a good girl, is the school. Education is supposed to uplift a woman's consciousness and widen her options in life, yet, the school as a socialization agent emphasizes, through the curriculum, the significant roles of housewife and motherhood for the girls.

In fact, education paved the way for Sudanese women to incorporate in public life and achieve some economic and political gains. The first Sudanese women's association- which was founded in Omdurman in 1947- was organized by the educated young women.

This association, called "The Educated Girls' Association", was considered to be the nucleus of the organized women's movement in Sudan. Yet Sudanese women's associations (such as The General Union of Sudanese Women, The National Women Front and Sudanese Women's Union) fail to understand the dynamic of patriarchal structure of the Sudanese society that impedes the social transformation of women. Instead, these associations together with the government "carried out an educational policy that differentiated between male and female and relegated women's role in society to domestic domain" (El Bashir 1996, p. 64).

The initial dichotomy between man/women spheres comes in when the girl passes through puberty; here the intimidation stage comes. In this stage the importance of marriage for girl is highlighted to preserve girl's chastity and honour (*Sharaf*). Honour in Sudanese culture of northern tribes is largely connected with the good behavior of their females. In interview when a Sudanese man asked whether killing, stealing, breaking promises affect one's *sharaf* or not; he replied that this may affect family's *sharaf, sharaf* here is synonymous to *Karama* (dignity) he explained further. In Sudanese culture "paradigm cases for loss of *ird* (decency) and *sharaf* are adultery and loss of virginity; the paradigmatically way of affecting somebody's *karama* is by insulting him" (Nordenstam 1968, p. 103). Therefore *Karama* is personal matter while *sharaf* is a family matter.

Yet, this stereotype image about woman's virginity and honour of the family is not dominant among the Muslim nomads of western and eastern Sudan. This is due to more openness and liberal attitude towards sexual behaviour. The Baggara Muslim tribes of western Sudan are nomad cattle-owners. Their intermarriage with the African tribes of the south results in less restriction in their attitudes towards women. Baggara women "have less restraint placed on their personal liberty, except that tradition still requires from them to be circumcised" (Hall & Ismail 1981, p. 139). In this respect the practice of circumcision is not related with controlling female sexuality, since Baggara woman has liberal premarital sexual relationship. The Baggara tribe has a custom called *al-hidaanah* (embracement). Here the male who is in love with a female goes to her home and lies with her in bed embracing, kissing her but he should not break her virginity. This premarital sexual relationship is practiced and allowed under the supervision of the parents. A male who practices "*Al-hidannah*" with the female is supposed to marry her, yet *al-hidannah* is not a perquisite.

This practice of premarital sexual relationship is, also, approved among Dar Hamid, the Arab Muslim tribes of western Sudan. The Dance *Elkudundaia kul zolun bai Rayah* literally means "everyone has his own idea in dancing partnership". At the end of the game dances "every male facing a female would continue dancing till they disappear from sight. They disappear for sexual and flattering gestures or intercourse." (Ahamed & Kheir 1990, p.6)

The traditional social and sexual barriers between the girls and the boys begin to gradually collapse when both of them have a chance to meet at the universities, and public offices in a way that would have been improbable a few years ago. Life in the three Towns (Khartoum, Khartoum Bahri and Omdurman) is changing so fast that you can see young women working everywhere in public restaurants, Hotels and on the street as vendors. Such an opportunity creates an environment for both girls and boys to progress and fosters more understanding of male/female relationships, yet they find that they still bound by the rigorous rules of social conduct in their society. This conduct puts much focus on the way young women are dressed, and how they behave in presence of men. A young woman (girl) should wear Tarah (a short head veil), while an adult woman should wear the tobe (Sudanese national garment) The Islamic state of ousted Al-Bashir passed a code that obliged girls/women to wear the veil which is "worn merely to comply with religious and social prescriptions governing female modesty" (Hall & Isamil (ed.) 1981, p. 28). The major concern of Islamic fundamentalist is female sexuality; they argue that the freedom of women would degenerate into licentious promiscuity. For them, the Islamic identity is in danger so "the community must return to a fixed tradition, identify lies in the private sphere (women's behaviour, dress, appearance), Muslim Personal laws are necessary at the level of the state ..., or the community"(Moghadam 1994, p.12).

It is important to mention here that even woman organizations, which are supposed to change the stereotype images of the ideal girl/woman, participate in highlighting these images. For instance both the Sudanese Women's Union (represents the secularist discourse) and the General Union of Sudanese Women (represents Islamist discourse) are concerned with the 'authentic' Sudanese woman who should reflect the image of the 'ideal' Muslim woman in dress and attitudes. Hale states that both organizations:

> [L]ay claims to evading the position and status of women, the former by placing the "woman question" and the emancipation of women at the front of the political struggle;

the latter by also placing women and the family at the centre of the culture. Characteristic of both of these perspectives, however, is a politics of "authencity"(Hale 1990, p. 3).

These organizations together with other social institutions play vital role in providing and presenting the normative value of the 'ideal woman'. Therefore the identity politics which results from the search for authenticity are proactive so that Sudanese women are ideologically manipulated by male-controlled religio-political and secular political institutions to engage in or disengage from particular cultural practices or economic activities- all in the name of the "ideal woman" (Ibid, p.3).

The "ideal woman," according to the tradition of Sudanese Northern Muslim tribes, should be protected through marriage. Marriage, therefore, is emphasized as an institution through which the girl's sexuality is controlled and regulated and the honour of the family is protected. Until recently one of the marriage ceremonies was to confirm virginity of the bride by consummation of marriage in public way by displaying the virginity blood (Ahamed & Kheir 1990, p. 4).

4. The Marriage Rituals:

The rituals associated with marriage vary in certain details among Sudanese tribes. However Omdurman, with its large population from different ethnic groups from Sudan, gives a surprisingly uniform picture of how marriage is celebrated, regardless of the social class to which families might belong. Until recently wedding ceremonies lasted between three to seven days. With the societal restrictions over the gathering entertaining atmosphere between men and women, the wedding ceremonies are virtually the only relief from the routine of life in a segregated society. Also it is an opportunity for a young man and woman to single out a partner from among the guests. The first ritual before wedding ceremonies take place is *Gloat al-Khier* where a present from the groom is given to the bride. If the present is accepted, it means the groom has the family's approval. In the early stage of the marriage negotiation the bride's age has some significance. For instance the virgin girl is not expected to have an opinion on her marriage and the decision is left to her parents and the eldest brothers. While the widow or divorcee woman's opinion is considered.

The second stage in the wedding rituals *is Sed al-Mal* (Bride dowry). In *Sed Al-Mal* the groom gives his bride the dowry, which consists of money, full wardrobe of clothes, shoes,

and cosmetic and food stuff. Socially the dowry is determined by many factors such as the bride age, beauty, social and academic status, virginity, marital status (i.e. whether she is widow or divorce). The economic status of the groom, likewise, plays a vital role in the amount of dowry in kind and money. The Sudanese expatriates in the Gulf countries brought into society extravagant marriage practices. The marriage tends to be a material transaction, where woman is ardent to marry a man who pays more regardless of his social background. The marriage, recently, is swinging towards materialistic considerations away from the old criteria. Previously, the qualification of the groom, among northern Sudanese tribes, was based on if he *is mu'assal* (i.e. of known descent or genealogy; known decent here implies he has an Arabic lineage, which is matter of pride and respectability). Until recently, the common question being ask about non-relative groom *is jinsu shinu* (literally what is his race/tribe?). As marriage in Sudanese culture "is not looked upon as a matter of personal choice but rather as a matter that concerns all members of an individual's kinship group" (al-Shahi 1986, p. 69).

The inter-family marriage is not supported by the Islamic traditions because it produces weak genealogy; the northern Sudanese preference is given first to marriage within the lineage especially the cousins. In this respect the groom's or the bride's freedom of the choice of the partner, is less wide in practice since they have a social and moral obligation to marry within the lineage.

5. The Girls' Songs (Agani al-Banat) what's in a Name?

For the preparation of the wedding celebration, a special singer hired to train the bride how to dance. While the singer "sang the traditional bridal songs and rhythmically beat her drum with her hands, the girl expertly performed the sensuous dances which would mark her transition from adolescence to womanhood" (Hall & Ismail 1981, p. 158).

The Girls' Songs took its particular name "*Agani al- Banat*" in the 1950s when a group of girls in Omdurman began to compose and perform these songs in occasion of the bride dancing lesson (*Talaimat al-Arousa*). Some researchers (alTahir, 1995, Malik, 2003) argued that the girls songs first appeared in the city of Kosti in 1935. At that time, Kosti was a famous trading centre from which the agricultural products were transported to Khartoum.

In that atmosphere, the tum-tum rhythm appeared in the singing of two slave-descendants twin sisters called Um Bashir and Um Jabair who lived in the *Radiefs* (slums).

Another name given to these songs the "girls of mat" (*Banat al- Sabata*), here *Sabata* refers to the mat made of palm leaf over which the bride perform her dancing (Al-Inba, 1997). The marriage ceremony, thus, was the place within which *Agani al-Banat* were composed and sung and afterwards other types of the Girls' songs such *as Agani al-Gadat* were composed.

According to the Musicology *Agani al-Banat* falls within the rhythm of *al-Tum* .The musical instrument of *al-Tum* rhythm is called *Daluka* (a round instrument made of mud and covered from one side with sheep leather). A Sudanese Musicologist argues that the Girls' Songs are synonymous to '*daluka* songs', these type of songs reflect the influence of African culture in Sudanese folk songs. Another kind of influence can be felt within the Girls' Songs comes from the Bob music (Al-Faurq, ND). The Tum and Bob music are used in Girls' Songs for their quick and dancing rhythm which is necessary in the bride dance.

The language used in the Girls' Songs is a mixture of Arabic and local slang, certain words used in these songs is considered by the dominant culture as vulgar. Some attribute that to the background of some singers who came from less conservative setting. With influence of the bourgeois class, among which the practice of the bride dance is prevailing, some English words are used in these songs.

Since the Girls' Songs examine different topics, which are beyond the scope of this article, I will focus on two themes: gender identity and woman and man relationship. These songs could be a powerful tool in propagation of the ideas and certain values as they were sung among audience of men, women and children in marriage and circumcision ceremonies. Audio cassette, technology and website through which girl singers are enabled to inexpensively produce and market their songs has, likewise, enlarged the numbers of the Girls' Songs listeners.

What distinguishes these songs is the lyrics, which are most short phrases keep growing, shifting and acquiring new flavour as girls singers continue to add to them and adapt to the situation requires.

For the lyrics to succeed, they must gain the approval of the audience which is mainly women (El-Nour,2014). Therefore, if one wants to know how Sudanese girls/women feel about men, about their bodies and their society one would listen carefully to the Girls' Songs.

6. The Sudanese Girls' Songs: Gender Identity:

The gender structure of a society reflects socially constructed and maintained arrangements made between men and women based on culture-specific gender ideologies. The Sudanese culture, similarly, has formal notions of gender identity which operate as "master organizing principles for other domains of life or social activity" Ortner & Whitehead, cited in Koskoff 1987, p. 5).

Several researchers (Keeling 1985, Campbell & Eastman 1984 cited in Koskoff 1987) have noted the links between women's sexuality, their culturally perceived sex role, and music behaviour. Some describe performances which amplify female sexuality such as erotic dance movements and doing hip-rotations to learn the right sexual movement. In the Girls' Songs, this correlation is perceived in the erotic bride's dance when the Tum and Pop music rhythm are heavily played and the tempo quickens for the bride to move quickly her breast, and butt.

6 .1. The Norms of the Ideal Woman's Body:

The Girls' Songs, together with social practices, constitute a language which reflects women as a "body". For any in-depth understanding of femininity, women's body is the first place to start with "it is the surface on which are inscribed the culturally coded and socially sanctioned contexts of the perfect or desirable women" (Thapan 1995, p. 34).

The Girls' Songs, which sang since the 1970s up to now, portrayed woman's body in form of symbolism such as Banana, Pine tree and Pony to indicate body's delicacy and a perfect stature; an example is:

Gawama zya bana	Her stature is like a Pine tree
Wa ayniaha na'sana	Her eyes are drowsy
Ya shatalat al-bana	You look like a Pine tree
Wa bana rawiana	a well-watered Pine tree.

The ideal woman in these songs, also, is the one who is as sexually attractive and her body is exposed to various norms such as not being slim, having big butts, round legs beautiful eyes,...etc.;

Ya Bahiya....Iyiah	Oh Bahiya.....
Al-Shaham Da..Iyiah	All this fatness....
Al-laham Da..Iyiah	All this flesh......
Al-Sadur Da..Iyiah	Oh this breast.......
Al-Saulub Da..Iyiah	Oh this butt.........

The description of woman body in the above song uses words such as butt, breast, fatness which are not allowed in other social gatherings, yet, they are circulated through the Girls' Songs. By accepting such songs, the girls embrace and internalize the norms of the "ideal woman" as being their own defining characteristics.

The Sudanese society, which is influenced by the traditional and Islamic culture, views premarital sexual relationship as taboo and a sin. Unlike man, the virginity and chastity is prerequisite for the "ideal woman". In fact Sudanese traditions prefer men to have some sexual experiences before marriage. The following song text related women's virginity with pigeons:

Al-Balaum nazal ya Ahalna..	The pigeons had come down aye folks
Al-Balaum nazal jnana..	The pigeons had come down and made us crazy
Al-hamam nazal fi al-saha	The pigeons came down to the yard
Al-hamam nazal braha...	The pigeons had come down slowly...

In the subconscious of the Sudanese, the symbols used in this song have specific connotations. For example the identification of woman with "pigeon" is emphasized because it is known as a domestic bird and is considered as *tahir* (pure). Purity here is related with honour and virginity. Chastity and virginity of the girls, in Sudanese culture, become largely interrelated with the practice of circumcision which was supposed to control women's desire and sexuality.

Boddy (1987) in her " Spirits and Selves in Northern Sudan: The Cultural Therapeutics of Possession and Trance" explained that circumcised females are linked to pigeons because they are pure (*tahir*) and clean (*nazif*). She further elaborated:

> To women circumcision has a different significance, for although it restrains their sexuality, this is not, they say, its purpose. The surgery, in that it is "hot" or "painful"(Harr), prepares a girl for womanhood; makes her body clean, smooth, and pure; renders her marriageable; confers on her the right to bear children; and invests her with fertility. (p.6)

Cleanliness, purity and virginity are linked with birds and circumcision to direct the focus to what are culturally appropriate feminine characteristics, therefore "gender images are naturalized: they become part of the taken-for-granted world within which women's gender identities are reproduced and reaffirmed"(Ibid: 6).

The set norms of the "ideal woman" portrayed on the Girls' Songs have its impact on women's experience. Sudanese women, through different times, have exhibited, demonstrated and performed certain values, practices and rituals which reflected their celebration with their body. This celebration is clearly manifested in the preparation of the bride. The bride before the wedding is secluded for one month or more in order to gain weight and attain an ideal body. As she is fed and pampered during her seclusion, she realizes herself as the one who will nourish and cater to others. Another practice related to this body celebration a smoke bath (*Dukhan*) should be taken for the first time in the bride's life to make her body smooth, light and perfumed. Then she will be massaged with *Dilka* (a mixture of baked durra flour and Indian or French scents). All these practice- *Dukhan* and *Dilka*- are done with purpose to please and satisfy the groom (Hall and Ismail, 1981).

Another celebration with woman's body is openly displayed in the "bride's dance". This dance is accompanied with *Agani al-Banat* (the Girls' Songs) and Drum beats. The bride dances in her wedding day -almost nude, dressing sexy garment- to present a "body show" for the groom and his relatives who judge her body.

Through the "bride's dance" performance the bride clearly exhibits sexual energy, performs a provocative dance and dressed in her most seductive finery exposes herself to the public

scrutiny. Experiencing the body as a celebratory in the bride dance supposes a "desire attains fulfillment in women's perception of their body as well as in the gaze of the other" (Thapan 1995, p. 33).On the other side, some Sudanese women feel their body as an oppressive when they fail to fulfill, among other things, these requirements of the "ideal woman". These women try to find an outlet to those psychological pressures through practice of *al-Zar.*

Al-Zar is the name given to the ceremony required to pacify spirits known *as Zar, Dastur* or *Rih Ahmar* (Cloudsley, 1983). Most of those women feel alienated from their body or feel unappreciated by their husbands or society because either they did not give birth to a child or did not get married or do not match the set norms of the so-called the "ideal woman". In al-Zar practice some possessed women dislike their body to the extent that they impersonate men through imitating their behaviour. They wear men's clothing, smoke cigarettes and drink alcohol. All these behaviours are considered as a taboo for women, but within *al-Zar* ceremony they are permissible.

6 .2. The Norms of the "Ideal Man":

The "ideal man" in the Girls' Songs is not the one who has the "ideal body". "In fact, the Girls Songs reflect different types of the "ideal man" for instance as the educated man (in particular the Teachers) and the Farmers in the 1960s, as the Soldiers in the 1970s, but after the appearance of the bourgeoisie class and expatriate since the 1980s, the ideal man is the one who is capable to satisfy her materials needs such as gold and *Tobe al-Jakar* and *al-Harir* (Sudanese national garment made from special and expensive materials). The following song suggests that:

Aiza a'aris wa alabas al-Jakar	If I want to get married and
ashan walad al-Tugaar	wear tobe al-Jakar, I should get married to the son of the merchant.
Aiza a'aris wa al-bas al-Harir	If I want to get married
ashan walad al-Amir	and wear tobe al-Harir , I should marry the son of the prince.

Physical strength and intelligence as attributes of the "ideal man", are traits expressed in the Girls' Songs. In the following song, the iron is used as metaphor to propose that man must be physically strong and tough as the iron does. An example is:

al-Nasih hadidu..	Al-Nasih is iron..
al-bridu al-Shiekh, ana bridu..al-shiekh	who is being liked by the Sheikh I like him
sayaru	I went in his procession.
al-shiekh ganat leik al-Sirara	al-Sirara sang for him...
galat al-shiekh warth...	she said he is intelligent
al-shatara	by birth and has self-esteem.
wa kada ma brida al-hagara.	

It is clear that the physical strength symbolizes in this song suggests that masculinity is seen as biological trait, where maleness remains a recessive genetic trait likewise intelligence. Both those traits express in this song as an attribute of the" ideal man". The concept '*ma brida al-hagara*' indicates that Sudanese man who has a contempt and resentment against humiliation is the ideal man who has self-respect and self-esteem along with preservation of honour, courage and generosity.

Since the 80s, the expatriates from middle and lower classes have formed a big a strata in Sudanese society, creating their own social and cultural attitudes. They brought with them new attitudes which are concentrated around their economic capabilities especially in marriage ceremonies. They compete with *al-Tugar* (the businessmen) in their social practices through spending a lot of money on their wedding ceremonies. This practices was reflected with admiration in the Girls' Songs :

Al-Balal sabah ainai ya ainai	My sweetheart, the light of my eyes,
Jab al-Shalah min Oman	he brought wedding present from Oman...
Sada malau bil al-Dollar	He paid his dowry in dollars.
Jab al-Shalah mutikafi	He brought enough presents for all,
Sada malau bil al-fi	he paid his dowry in thousands (Sudanese pounds)
Jab al-shalah min Oman,	He brought from Oman
Kursi Jabar ma Kirdan.	*Kursi Jabar* instead of *Kirdan* (gold necklace).

Also the "ideal man" in these songs has no choice of being non rich man, he should either be an expatriate in gulf countries or a successful businessman from Western Sudan e.g.:

Al-ma bigtarib ya nas,	Oh people, who does not being an
yabiga Tagir Gareeb..	Expatriate, he must be a merchant from Western Sudan
Kan zalan kalimau...	if he is angry, [if he does not like suggestion of being rich]
yaga al- khzan, ya nas kalimu	let him throw himself in the Dam, oh people !!

Finally the "ideal man" in these songs is defined as a generous person; generosity is commonly associated with having an Arabic origin. The ethnocentric tendency embedded in the following song, albeit, is not always echoed by the singers. In various occasion, they attribute any good quality of the ideal man with reference to the groom tribe. The singer if she praise the groom's tribe, she will get in turn what is called nigta (a sum of money paid by the groom, his relatives and friends). An example is:

Habibi da al- Arabi min Taba	My sweet heart is an Arab from Taba (city in central Sudan)
al-shagi min tibutu al-fi	My sweet heart is Shaagi (Tribe from North Sudan)
jibu ma biaadu da hibibi	He is jaali (Tribe from North Sudan)
	by origin.

da Jaali min Jaadu

7. Sudanese Girls' Song and Gender Relationship:

The girls in these songs express, also, how they feel about men. The singer uses these songs as strategies to tell her community that she is in love, to defend her love and even to encourage or refuse suitors and ridicule unwanted ones. These love songs represent a social criticism since the girls, through these songs, denounce the dominant culture, which presumes that women should have no decision in the marriage negotiation .

Through Girls' Songs, Sudanese woman breaks this silence and expresses her desire and choice for the future husband. In the following example, the singer declares to her family that she is in love and defends her feeling by arguing that love affair is not something she initiates, it is known since the time of prophet Mohammed's companions. The singer employed wittingly the same dominant Islamic culture in order to defend her love.

Ya Uma ya Yaba	Oh mother, oh father
al-hub ana ma badatu	why are you worried,
min zaman al-Sahaba	I did not start the love,
Ya dahb al-shiebika	it had been since the time of prophet's
al-nas tahmoni baika	companions,

Oh my hooked piece of gold, people accused me by falling in love with you.

Sudanese men and women, currently, have the freedom to marry from outside their tribe, yet, the marriage between first cousins is still common. The inter-family or tribe marriages are preferred in Sudan for different reasons: first these types of marriages keep the authority within agnostic kinship group and keep the family or tribe wealth because the gifts and the bride wealth paid on such marriage are not taken outside the family/tribe. Moreover, the grooms pay less wealth when they marry inside their tribe. Secondly, it helps to secure the family or tribe as an economically and politically corporate group (Salih, 1987).

In the following songs, the singer declares her resistance to the dominant norms which forced her to get married to one of her cousin. She denounces such kind of marriage and even ridicules her cousin.

Umi galat lia	My mother told me...
ukhdi wad al-a'am	to get married to my cousin..
gulta liha la	I said to her no,
la la ma bradh	I won't accept him.
aritu bil a'am	he is awful,
al-ashtu kulah hum.	Life with him will be miserable.

In fact, we can cite several examples from the Girls' Songs (*Agani al-Banat*), which have as a text underlying didactic-pedagogical intent and conveying their own cultural messages, while permitting or repressing the reproduction of models of social behavior. These songs, also, reveal what is commonly called "culture" in the ways of acting, thinking and perceiving social reality and interact with it.

The emphasis of the songs' texts on female/male relationship and choice of partner entails that girls have created a space through which they reveal their feelings and challenge certain aspects of their patriarchal society. Through these songs Sudanese girl has advantage to address the whole community and used them "not only as social criticism but as strategies to defend herself, attack others, encourage suitors, announce an engagement, remind young men of the tribe that she is in love, shame or ridicule an unwanted swain, or justify her decision to break an engagement" (Joseph 1980, p. 427). When the male Sudanese asked why such songs are allowed to be performed in public, they reply that a wedding will not be a wedding without these songs, besides they do not take these songs seriously, because they consider them as "play" and accordingly socially meaningless and ineffective.

Therefore, the sexually attractive, virgin and obedient woman as images of "ideal woman"; the rich, the strong, and the intelligent man, as images of the "ideal man" which are depicted in these songs, proposed several questions such as: If the girls are passive agents in this culture of the "ideal woman" or do they participate actively and creatively in it? One can conclude that these songs, which are sung by the girls, provide no alternative to the stereotypes prescribed by the dominant culture, but conform and accommodate with the images assigned to them since these songs "usually express moral and cultural values and stress social attitudes" (Muhammad 1996, p. 63).

Despite the fact that these songs represent some resistance to this dominant culture, yet they reflect the collective consciousness of the society as a whole. This collective consciousness represents a discourse of male-dominated society where the social, the religious and the economic parameters interact together and call for the young girl's singers to highlight female sexuality as a norm. Within such a pattern one can delve into assessing the Girls' Songs as an agency for women's empowerment or disempowerment.

8. Assessment of the Girls' Songs in terms of women's (dis)empowerment:

The Girls' Songs as a sites for discursive construction of meaning of gender identity and gender relations can be assessed through two divergent outlooks: The first one of a disempowerment in which these songs define women only by their bodies.

In case of Sudanese women represented in these songs, woman's mind is out of the question because this is an attribute only for man.

Here I do not deny woman's celebration with her body as she experiences and manipulates it for her physical and emotional well-being, but what I deny that woman's identity is being only defined by her body. In patriarchal epistemology, culture is a product of mind and therefore culture is made by man while woman's body is naturally created for procreation and reproduction, hence woman is related not to culture but to the nature. Woman in her relation to her body is dominated by the set norms of the "ideal woman", which are defined by the culture. Woman, in this sense, is involved in a contest with herself and other women to attain those norms and she became more delighted if she has fulfilled them than if she developed intellectual skills. Furthermore, relating women only to body will lead to the polemical binary of man/woman, mind/body, culture/nature and the superiority of mind over body and consequently the superiority of man over woman.

In term of disempowerment, the Girls' Songs may, similarly, perceive as a mechanism, which—while giving women the impression of gaining power—ultimately supports the dominant culture through participating in presenting and perpetuating the stereotype images of the 'ideal woman. Through reiterated exposure to these songs, then, the girls internalized their gender identity as has been prescribed in these songs. The associations of the songs mainly with wedding ceremonies is, likewise, a mode of participation in the 'market marriage', whilst the singers don't attack the institution of marriage itself in their songs.

The second perspective is of an empowerment if we look at the body as a source of bargaining power being used by women. Though this perspective has its immoral implications for many, but also it is worthy to be considered. Woman, who has the beautiful and the ideal body, can use her body to manipulate men in order to get a well-off partner. In the Girls' Songs women express their celebration with this power, for example:

Al-Mahira Agad al-Galad	Oh our bride the beautiful Pony, and the
ya arousna ...,	continuous series of a perfumes.
Arisic galabo al-Thapat.	How warm and how sexy you are...
	our bride ...your groom could not resist your beauty.

The Girls' Songs, as well, are used by Sudanese women as a powerful weapon against certain traditions and norms. Through these songs, Sudanese women break the silence towards some practices such as compulsory relatives' marriage and polygamy. In these songs they also became candid about their feelings. The love songs represent a form of social criticism since it implicitly assaults three stereotypes often expressed by men that: first women, especially girls are too foolish or uninformed to hold strong opinions about something important such as the choice of husband; second they are merely tools in the male game of strengthening past affinity relationships or establishing new ones through marriage; third unmarried girls, segregated from contact with non-related males, have no opportunity to develop positive or negative feelings toward any particular man (Joseph, 1980).

Studying the Girls' Songs is central to understand the dynamics of Sudanese women's empowerment because of the different ways in which the girls "appropriate a profound awareness of changes in their environment as a form of empowerment to undermine fixed perceptions of women and their seeming marginality in the social process" (Mugambi and Helen 1994, p.69). Therefore these songs can be employed as social and political weapons and strategic devices which will help women/girls to have voice in their community and gain control over their lives.

Finally I expect by examining these songs as a text, which carries symbolism of resistance and out-spoken stands among the girls, we would enhance new directions in the critique and analysis of Sudanese women's experience in lyric and oral traditions. As well by reflecting the experience of the Girls' Songs as a "pure women's culture" we will enhance women's empowerment.

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