التوتر لدى المترجم الفوري اثناء الترجمة الفورية من الانكليزية الى العربية ومن العربية الى الانكليزية

The Investigation of Interpreters' Stress during Simultaneous Interpretation from English into Arabic and Vice Versa

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الكلمات المفتاحية: التوتر، الترجمة الفورية، استراتيجيات التعامل مع التوتر، اتجاه الترجمة، البروتوكولات الراجعة

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الملخص

تعتبر الترجمة الفورية من المهام المعرفية الصعبة التي تحتوي على عمليات معرفية مختلفة مثل الاصغاء وتحليل النص الاصلي ثم تكييفه وتقديمه بلغة الهدف فوريا وتحت ضغط عامل الوقت. عادة ما تسبب الترجمة الفورية ضغطا معرفيا كبيرا على المترجمين ولذلك تعتبر واحدة من اكثر المهام المثيرة للتوتر. في هذا السياق يتعرض المترجمون الى انواع عديدة من التوتر اثناء الترجمة الفورية تعود بعضها الى عوامل بيئية مثل درجة الحرارة والرطوبة وخاصية التهوية داخل كابينة الترجمة. وتشير العوامل النفسية الى الفهم الذاتي للتوتر والذي يتأثر بالعوامل الشخصية مثل الثقة بالنفس وطريقة التعامل مع المواقف. بينما يشير التوتر الفسيولوجي الى مؤشرات التوتر الفسيولوجي كمؤشرات التوتر الموضوعية عند قياس نشاط القلب والاوعية الدموية كضغط الدم ونبضات القلب. بغية البحث عن اسباب التوتر النفسي (مسببات التوتر) والاستراتيجيات المعتمدة للتعامل مع التوتر النفسي وتأثير اتجاه اللغة على التوتر في الترجمة الفورية من الانكليزية الى العربية ومن العربية الى الانكليزية شاركت مجموعتان من المترجمين الفوريين: محترفين وطلبة في مهمتين للترجمة الفورية من الإنكليزية الى العربية ومن العربية الى الانكليزية. استخدمت الدراسة بروتوكولات الراجعة (استبيان ومقابلات) والتي فيها ابلغ المترجمون عن حالات التوتر واسبابه (مسبباته) بالإضافة الى ربط تحليل عملية الترجمة بالنص المترجم. اعتمد تحليل الدراسة على نموذج كومول (٢٠٢١) لتحليل المقاطع التي ابلغ عنها المترجمون على انها مواطن شعروا فيها بالتوتر من خلال الاشارة الى ثلاثة انواع من اختلال الطلاقة وهي التوقفات غير الطبيعية

التي تتجاوز ثلاثة ثواني وعلامات التردد والبدايات الخاطئة. بينت نتائج الدراسة ان كلا المجموعتين شعرا بالتوتر في كلا المهمتين ولكن التوتر الذي اصاب الطلبة قد اثر سلبا على الترجمة من خلال لجوئهم الى التوقف والحذف. ومن جهة اخرى فأن التوتر الذي اصاب المحترفين قد حفزهم على البحث في الاستراتيجيات المناسبة للتعامل مع التوتر مثل استنباط المعنى من لغة المصدر واستخدام التعميم في الترجمة.

Abstract

This paper deals with simultaneous interpreting as a demanding cognitive task that involves various cognitive processes under severe time pressure; it is considered one of the most stressful tasks which causes heavy cognitive load on interpreters. Stress in interpreting refers to those responses that have emotional and harmful effects which occur when the requirements of the task are more than interpreter's available resources. Interpreters experience different types of stress during Simultaneous Interpretation (SI) such as environmental, i.e. temperature, humidity and air quality as well as Psychological stress affected by personal factors such as self-confidence and the situation judgment way. The study aims at investigating stress experienced by professional and student interpreters during English-Arabic-English SI. It is hypothesized that the more professional the interpreter is, the more able s/he is to successfully cope with this stress by utilizing some stress coping strategies. In order to investigate the impact of stress on the interpreter's performance when rendering simultaneously and to study interpreters' awareness of stress, 40 student and 3 professional interpreters are chosen to participate in English-Arabic-English interpreting tasks. The study concludes that both groups experienced stress in this dual task. However, students' stress has negative effects on their performance and on the interpreting process when they resorted to pause and omit the SL segments. On the other hand, professionals' stress motivated them to search and apply stress coping strategies such as inferring the meaning of the source message and generalization.

1. Introduction

Simultaneous Interpretation (SI) is widely known as one of the most cognitively demanding tasks that involves listening and analysis, memory skills, verbal fluency, self-monitoring and production (Gile, 1995). The interpreter has to be qualified to master all these processes and skills to be able to provide good interpretation (Christoffels and de Groot, 2005: 469). It is expected that cognitive skills and language abilities will form the most important part of interpreters' future success. The focus of many scholars of interpretation was mainly dedicated to cognitive aspects of interpreting studies; however, little concerns were paid to the study of the psychology of interpreting process (Pöchhacker, 2011: 107). In this regard, several scholars of interpreting studied the psychological perspectives of interpreting after the 20th century, such as studying the psychological traits and emotions of stress, motivation, and anxiety (Timarová and Ungoed-Thomas, 2008; Rosiers et al. 2011; Bontempo and Napier, 2011).

Regarding stress in interpreting which is the main aspect of this study, various studies applied psychological measures to objectively measure interpreter's levels of stress during SI (Klonowicz, 1994; Korpal, 2016, 2017). Others based their studies on the use of retrospective protocols such as questionnaires and interviews to subjectively measure interpreter's levels of stress during SI task. (Riccardi et al., 1998; Walczy´nski, 2019). As the notion of stress has not been studied in SI between English and Arabic, this study hopes to fill this gap in interpreting.

2. Psychological Stress in Simultaneous Interpreting

According to Selye (1936:32) the terms stress refers to a "nonspecific response of the body to any demand for change". However, the same researcher rephrased and formulated a new definition for stress which is "a state manifested by a specific syndrome which consists of all the nonspecifically induced changes within the biological system (ibid.: 64). In the same context, stress is seen as a psychological response when it is hard to balance between the task requirements and the availability of coping resources (Riccardi, 2015: 405). The notion of stress can also refer to the concept of anxiety which is considered one of the stress emotional manifestation (Korpal, 2017: 120).

From the psychological point of view, SI as a demanding task involves various objective stress factors: the recurrent mental operations, the simultaneity of comprehending the source message and producing the target message, the information load, the time factor, in the interpreter's exhaustion, and the environmental challenges of the booth, etc. (Kurz, 2003; 51). Hence, many studies considered SI as a stress provoking occupation that requires the ability to cope with all these factors to be able to provide adequate interpretation (Seleskovitch, 1978; Riccardi et al. 1998; Jimenez Ivars and Pinazo Calatayud, 2001).

It is clearly understood that interpreter's cognitive and linguistic skills significantly affected interpreter's work. However, it is agreed that the impact of psychological and personal factors have not been investigated in the field of interpreting (Korpal, 2016: 299). Having said that, the psychological aspects (i.e. factors related to psychological and emotional traits), such as, personality profile, motivation, anxiety control or stress coping, and communication abilities, are gaining a significant attention from interpreting scholars (e.g. Timarová and

Ungoed-Thomas, 2008; Rosiers et al., 2011; Bontempo and Napier, 2011).

Most of the studies that research the phenomenon of stress from the psychological angle focus on subjective experience of stress that were involved in the work of interpreters (Kurz, 2003). This tendency may be derived from Lazarus' "appraisal theory of stress" (Lazarus, 1977), in which the notion of stress is regarded as a subjective phenomenon that is related to one's subjective understanding of the challenges of SI task. It could justify the studies that relied on interpreters' reports of stress, as they reflect interpreters' emotional reaction which basically depends on their own evaluation processes.

The studies that investigate the perception of interpreters for the notion of stress normally use process research through retrospective methods (e.g. questionnaires and interviews), and triangulated it with the analysis of the product. (Cooper et al., 1982; Kurz, 1997: Riccardi et al., 1998; Gumul, 2021). Cooper et al. (1982) conduct an empirical research to study the resources of occupational stress among conference interpreters, perceived stress, and job satisfaction. The participants of the study were 826 professional interpreters who answered a questionnaire designed by the researchers. The study shows that approximately 50% of the participants state that approximately half of stress in their lives is related to their job; an overall satisfaction with the profession; the significance of subjective awareness of stress.

Kurz (1997) applied the State and Trait Anxiety Inventory (STAI) to study the levels of anxiety in the performance of conference interpreters. The study shows that interpreters have better control of their levels of anxiety and were capable of managing the situation positively. In other words, interpreters are considered 'consistent' performers, who can provide high quality performance under stress.

Moser-Mercer et al. (1998) researched the impact of psychological and physiological stress and the quality of interpreting of 5 professional interpreters. The study finds that prolonged turns in SI raise the levels of stress among interpreters and compromised the quality of interpreting. In the same line, Riccardi et al. (1998) investigated the aspect of anxiety experienced by 30 interpreting trainees and 15 professional freelance interpreters. Three psychological instruments were applied in the survey test:

- ASQ - IPAT Anxiety Scale: to measure anxiety levels in adults;
- CDQ - IPAT Depression Scale: to provide information on depression levels which is based on measuring the factorial analysis;
- MMPI-2 (The Minnesota Multiphasic Personality Inventory): to test the anxiety outside the conference setting.

The study shows that students have high levels of depressions and more anxiety values than professional interpreters and lower levels of depression and anxiety in the professional interpreters performance than in the control group.

In 1999, the Research Committee of (AIIC) conducted the Workload Study regarding the psychological and physiological aspects of stress in the performance of conference interpreters. It aims at identifying the main causes of stress (stressors) that have an effect on the interpreters' performance. The findings of this study reflects that a clear distinction has been identified between the participants who believe that the occupational stress has positively motivated them solve the problems (51% of the participants) and those who consider stress as a negative aspect that affect interpreters performance (30% of the participants). However, those who consider stress neither harmful nor useful counts 19% of the interpreters (AIIC 2002: 35).

Korpal (2017) uses retrospective instruments and triangulated them with physiological measure of heart rate with survey research tools to investigate the psychological and linguistic indicators of stress in SI of professional and student interpreters. In other words, the researcher used X-1 form of the STAI questionnaire to test self-reported anxiety, and the CISS (Coping Inventory for Stressful Situations) questionnaire with interviews to measure the strategies applied to cope with stress. In terms of accuracy, this study shows that speaker's high delivery rate is regarded as an important factor of causing stress which negatively affect the process of interpreting.

1. Stress Levels in the Performance of Professional and Novice Interpreters

The levels of stress in the performance of professional and novice interpreters may not be directly comparable as the real life assignments and job context require different skills and proficiencies from interpreters (Gumul, 2021: 25). In other words, the challenges of the task, the burden of responsibilities to provide professional service, the fears to lose a client, etc. are aspects seem to emotionally affect novice interpreters. However, even professional interpreters experience stress as they face unknown aspects and might need to apply strategies to cope with this kind of stress which may be considered beyond their standard repertoire (Riccardi et al, 1998; Kurz, 2002).

In various studies, novice interpreters experience more stress and anxiety than professionals even during training sessions and mock conferences. Kurz (2003) compared between professional and novice interpreters in terms of coping with stress during interpreting task. The researcher investigated the levels of physiological stress in both experimental groups during SI task by applying pulse rate and skin conductance as indicators of stress. The results of this study identified

four differences between professionals and novices: meaningful patterns of information, organization of knowledge, context, and access to knowledge in addition to (Kurz, 2003: 58). With regard to pulse rate values, the study reflects significant differences between both groups as high average of pulse rate values were detected in the novices' performance as compared with low rate in the professionals renderings. This author agrees with Gile (1995) who recommends that trainee interpreters should be taught how to develop stress coping strategies due to their significant effects on the performance of interpreters and on the quality of interpreting.

In his studies, Korpal (2016, 2017) indicates that SI is characterized by the sensation of stress for the interpreters even in mock conference or training sessions. The studies reveal that trainee interpreters experienced both physiological and psychological stress with high levels particularly when there was a high delivery rate of the ST. Regarding the relation between stress and interpreting direction, Korpal (2017) explains that rendering from the retour into the native language may be more stressful and difficult when the source speech contains technical terms which may cause comprehension problems. However, rendering into B language could be more difficult when the native language is more synthetic than the retour. In the same line, Gile (1995) considers rendering from interpreter's B language into A language requires more Listening and Analysis Effort, whereas, rendering into interpreter's foreign language may require more processing capacity for the Production Effort. In an experiment study, Aal-Hajiahmed (2022) finds that students encountered more problems during rendering from their A language (Arabic) into their B language (English) in SI task.

3. Research Design

3.1. Methodology

This research uses a mixed method of analysis (qualitative and quantitative). Process analysis of the participants' post interpreting reports (questionnaires and interviews), is triangulated with the product (analysis of participants' interpreting recordings). The process analysis or the retrospective protocols refers to eliciting verbal information from the participants immediately after the interpreting task to study their awareness of stress segments and identify the stress coping strategies. It is one of the few methods that can be applied to access the participants' mental operations involved in the process of interpreting (see e.g. Ericsson & Simon, 1993; Ivanova, 2000; Gumul, 2021; Aal-Hajiahmed, 2022). In the product analysis, participants' interpreting recordings are transcribed and analysed to be matched with participants' reports regarding their stress awareness, stressful segments, and stress coping strategies. Product analysis focuses on stress indicators of three aspects of disfluencies in the TT: pauses exceeding two seconds, hesitation markers and false starts. Moreover, the analysis investigates the effects of stress on the participants' interpreting direction.

3.2 Materials

The English speech was selected from https://millercenter.org/the-presidency/presidential-speeches/september-7-2020-labor-day-press-conference to be simultaneously interpreted from English into Arabic and which consists of around 1000 words. It is an extract from the former US president Donald Trump's speech on the Labor Day 2020. The average time of the speech was 7 minutes. The average delivery speed of the English speech was 110-120 words per minute, which is considered a normal speed based on Schlesinger (2003). Similarly, the

Arabic speech chosen for the study was King Abdullah's speech on the Independence Day of Hashemite Kingdom of Jordan https://www.youtube.com/watch?v=PWBNtYTD7FQ&t=313s . The duration of the speech was about 7 minutes with delivery speed rate of 110 (WPM). The total number of words in Arabic speech was 550 words.

3.3 Participants

The experiment was conducted during summer training courses held annually in the College of Languages, University of Princess Norah Bintu Abdurrahman University, KSA. The availability of contacts and the willingness of the students and professionals to participate in the study help to achieve the experiment. Two groups of interpreters took part in the experiments: the first group consists of 40 student interpreters who finished their third year study at the Department of Translation, College of Languages, University of Princess Norah Bintu Abdurrahman, KSA. Their ages ranges between 21-25, their native language is Arabic and English is their B language, and 5 students speak French as their C language. The second group includes 3 professional interpreters who are members of the teaching staff in the same department. They have more than 10 years of experience in consecutive and simultaneous interpreting. Two of them have PhD degrees in conference interpreting, while the third participant has MA in the same field. Their ages ranges between 35-37 years, their A language is Arabic and English is their B language, two of them have Spanish as their C language.

3.4 The Experiment

This study is part of a larger study which investigates the problems and interpreter strategies in English-Arabic-English SI tasks. The two groups participated in the two SI tasks: English to Arabic and Arabic to English. In order not to feel tired and fatigued, each task was

conducted in different day during summer training courses, July, 2023. The participants were given instructions to how conduct the study before the day of the experiment. They were notified that they would perform SI task, but they were not informed about the main purpose of the research in order not to affect their feedbacks. In the day of the experiment, they were given details about the experiment such as the topics of the original speeches, speakers, duration of the experiment, steps of the experiment, etc. The participants firstly performed the interpreting task and then answered the interview questions regarding the stress segments and the coping strategies applied. As a recalling clues, the participants were able to access the original transcripts during answering the interview questions. Then, they filled in a questionnaire asking them whether they experienced stress during the interpreting tasks or not. If so, what are the causes of this stress, and how did they deal with it. All the interpreting recordings were transcribed and analysed based on the methodology designed for this study. The analysis of this study is based on Gumul (2021) model of investigating interpreters' stress and stress coping strategies in SI. In this model, the analysis of process is relied on participants' retrospective reports and on the analysis of the product (the quality of their interpretations).

3.5. Discussion and Results

3.5.1. Students' Study

The analysis of students' reports regarding the stressful segments show that 29 students reported that they had stress in both SI tasks. However, the analysis of students' outputs revealed that all the students experienced stress even those who have not reported stress. In other words, 72.5% of the students were aware of the stress they experienced whereas 27.5% of the students failed to report experiencing stress though the analysis of the product identified

segments of disfluencies such as hesitations markers and false starts in their performance. This result reflects that students were not fully aware of the stress experienced during the ST task which negatively affects their performance as they will not be able to apply stress coping strategies. The students reportedly confirmed that the stress has negative effects on their performance (e.g. Moser-Mercer et al., 1998; Riccardi et al., 1998; Kurz, 2002).

Although 29 students reported that they had stress in both SI tasks, the number of these reports were more in Arabic to English task than in English to Arabic direction. This means that students experienced more remarks of stress when rendering into the retour than into their A language (e.g. Chiang, 2009; Gumul, 2020). Furthermore, more problems were identified when rendering into their B language which gives evidence that rendering into their B language is more stressful than working into other direction (Aal-Hajiahmed, 2022).

The analysis of students' interpreting recordings reflects that disfluencies were clearly identified in all students' renderings though not all students reported stress during SI tasks. The results indicate that the frequency of long pauses were the main aspect of disfluencies in the interpretations of 27 students who paused for longer than 2 seconds when they encountered problems with providing adequate renderings. Accompanied with these pauses, 15 students hesitated in the form fillers such as um and ah, and false starts were detected in the interpretations of 7 students during the pauses. In the same line, hesitations such as using fillers (um, uh), vowel and consonant lengthening, and stuttering were identified as the main aspect of disfluencies for 9 students. False starts were frequently applied in the interpretations of 4 students. Moreover, other aspects of disfluencies were identified in the analysis of students' rendering which also impacted their interpretations such as articulatory disfluencies (e.g.

consonant and vowel lengthening, mispronunciation of words, etc.). However, these aspects are not within the scope of this study.

With regard to causes of stress, the analysis of students' retrospective reports reflects that 9 students related the stress to speaker's delivery rate which affected their comprehension for the ST and led them to miss important information. In other words, speaker's delivery rate formed 22.5% of the main stressors for the students which affected their performance negatively. This result gives an evidence to other studies that found speaker's delivery rate as one of the main stressors for student and even professional interpreters during SI task (Barghout et al., 2015; Korpal, 2017). It also causes a recurrent processing problem particularly in SI (Gile, 1995). Regarding stress coping strategies, these students applied the strategies of summarizing, generalization, and skipping to cope with stress that was resulted from the high delivery rate. Moreover, they resorted to pause which made them omit important information and affected their interpretations.

Table (1)

shows examples of students' reports regarding speaker's delivery rate as a stressor and their coping strategies.

St. Code	Stress	Stressor	Stress coping strategies
ST.2	Yes	I couldn't follow up with the speaker as his delivery speed rate was high which made me miss important information and feel stressed which could definitely affect my performance for the entire task.	I resorted to summarizing, generalization and even omitting important segments of the source text.

St. Code	Stress	Stressor	Stress coping strategies
ST.5	Yes	I felt stressed when I could not follow the speaker as he was delivering the source speech fast	I tried to render the important events and skip what I could not catch up.
ST.7	Yes	I had problems with speaker's delivery rate which affected my performance and made me stressed. This feeling repeated in different occasions especially during English into Arabic task when the speaker moved fast.	I left sentences unfinished as I paused several times to recall what have been said earlier.
ST.26	Yes	I think the SL speech was delivered fast which made me encounter problems and feel stressed. I hesitated and got nervous because I missed many segments of the source speech.	I tried to concentrate on the important points of the source speech and skip what was redundant.

Comprehension aspects such as problems with hearing the SL, recalling what have been said by the speaker, and SL syntactic recognition, were the main stressors for 8 students who related the experienced stress to these aspects. In the same line, difficulties with comprehending the SL speech represent 20% of the total stressors that were identified in the students' retrospective reports. Comprehension

problems are considered among the main problematic elements that increase interpreters' cognitive load and affect their performance (Gile, 1995, Ivanova, 2000, Aal-Hajiahmed, 2022). Therefore, interpreters have to develop coping strategies that can help to prevent or avoid these problems, and reduce the stress during the SI task (Gile, 1995). This finding is incompatible with Gumul's (2020) study as comprehension stressors were not reported widely by the participants as compared to other stressors such as delivery rate and time pressure. The students reportedly had to pause to figure out what have been said which led to omitting significant segments of the source speech. See **Table (2)** below:

St. Code	Stress	Stressor	Stress Coping Strategies
ST.4	Yes	I had difficulties with hearing some parts of the source speech which made me hesitate and feel stressed.	I paused to figure out what I have heard which made me skip important segments of the SL
ST.12	Yes	I couldn't understand the structure of many SL sentences which stressed me a lot	I deleted the unclear SL sentences because I didn't want to provide inadequate renderings
ST.28	Yes	I felt stressed because I couldn't recall many SL words which were not difficult at all	I tried to recall but failed because I had to process other segments

Time pressure was the main cause of stress for 7 students as they reportedly did not have the time to rethink or recall the correct equivalents which made them hesitated and confused. Time pressure counts 17.5% of the total stressors that were reported by the students. The students revealed that they resorted mainly to literal rendering and pausing when they were overwhelmed with stress. This result agrees with other scholars of interpreting studies who argue that, due to time limits in SI, interpreters are affected by transferring the SL segments which makes them resort to transcoding (Kalina, 1994; Gile, 1995; Li, 2015, Gumul, 2020). See examples of students' reports in **Table (3).**

St. Code	Stress	Stressor	Stress coping strategies
ST.11	Yes	I think time limitation of SI was the main cause of hesitation as the source speech did not contain difficult terms.	Though I resorted to literal rendering to follow the speaker, I missed many SL segments.
ST.23	Yes	Interpreting with time pressure was very stressful, I should train myself on that	I couldn't do anything just waited to catch up with the speaker.
ST.32	Yes	Time was a problem for me as I could not follow the speaker which made me nervous and stressed	I tried my best to keep the same pace but I couldn't therefore, I omitted many SL segments

Similarly, lexical elements (names and numbers) particularly in English to Arabic task were deemed as the main causes of stress for 7 students as they reportedly understand that these elements usually cause problems for interpreters. However, they could not deal with them adequately when they resorted to omit these elements from their renderings. It is clear that names and numbers are problem triggers that cause problems even for professional interpreters (Gile, 1995). Therefore, interpreters have to transcode these elements once the speaker utters these elements (Aal-Hajiahmed, 2022).

Table (4)

shows some of the students reports.

St. Code	Stress	Stressor	Stress Coping Strategies
ST.17	Yes	Numbers and names were very difficult to be retrieved which made me feel nervous and stressed	I ignored them because I could not recall them
ST.26	Yes	Names and numbers made me tired and affected negatively on other segments	I skipped them because I they vanish from my mind
ST.30	Yes	The reason my stress was the inability to interpret the names and numbers adequately	I omitted them from my interpretation

Providing the accurate equivalent in the TT was the main stressor for 5 students who believed that several SL segments have more than one TL equivalent; therefore, they did not know which word best suit as an equivalent for the SL. Selecting the accurate equivalent represents

12.50% of the total stressors reported by the students during both SI tasks. Thinking about which word could be the correct equivalent in the TT made the students pause which has an effect on other segments. In this regard, various scholars in the field of interpreting tried to solve this problem by suggesting the strategy of approximation when interpreters encounter problems with selecting the appropriate equivalence for the ST segment as they may choose the nearest one (Al-Salman and Al-Khanji, 2002; Li, 2015).

Table (5)

explains some of the students reports.

St. Code	Stress	Stressor	Stress coping strategies
ST.20	Yes	At the beginning I felt it was easy task but then I realized that there are more than one equivalent for some SL word which made me feel stressed	I do not think I choose any of the equivalents
ST.34	Yes	I hesitated when I did not know which word shall be a good equivalent for the ST one	I think I left it without interpretation
ST.36	Yes	Especially in Arabic into English task, I felt stressed when I didn't know the precise equivalent for the SL word.	I paused to think but I couldn't choose due to the time

The Syntactic difference between the SL and the TL was reported as the main causes of stress for 4 students with 10% of the total stressors particularly in Arabic into English SI task as the students tried to provide equivalent TL structure. They believe that they made many grammatical mistakes during their interpretations into English because they could not understand the syntactic differences between the SL and the TL. Consider **table (5) below**.

St. Code	Stress	Stressor	Stress Coping Strategies
ST.5	Yes	I got stressed when I made mistakes with providing adequate grammatical structures especially in Arabic into English task	I could not solve this issue because of the time limit
ST.11	Yes	Forming passive voice in English and problems related to tense made me feel stressed as I hesitated while thinking of correct grammatical structures.	I tried to simplify it and avoid using passive voice.
ST.26	Yes	Differences in sentence formation between English and Arabic were stressful especially in Arabic into English task.	I did not do anything to solve this issue.

Table (6)

shows the stressors according to students' reports in both SI tasks

Stressors	**High delivery rate**	**Comprehension problems**	**Time pressure**	**Lexical problems**	**Multiple TL equivalents**	**Syntactic differences**
Coping strategies	Summarizing Generalization Skipping	Pausing	Literal rendering Omission	Omission	Pausing	Simplification Pausing
P. of total stressors	22.5%	20%	17.5%	17.5%	12.5%	10%

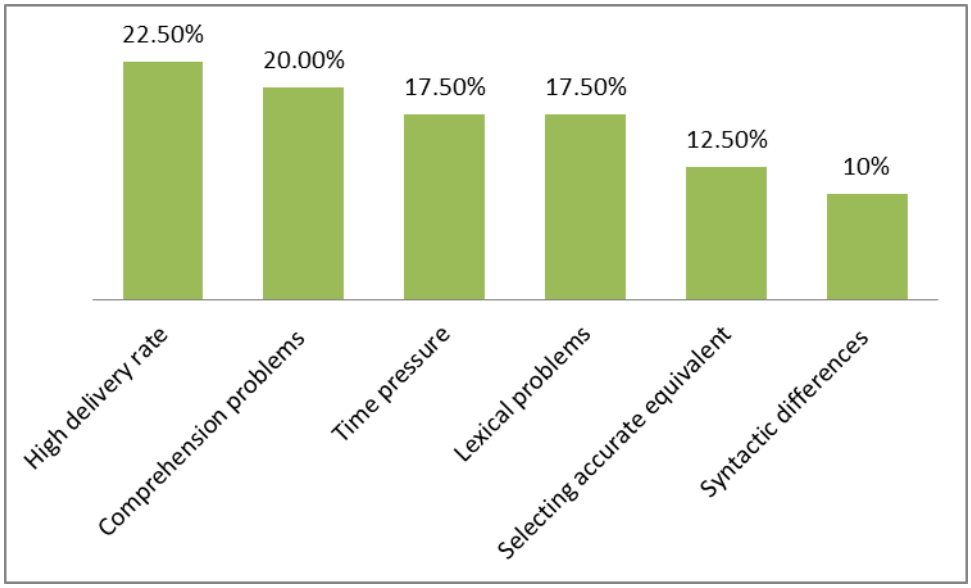

Figure (1)

shows the stressors as reported by the students

3.5.2. Professionals' study

The analysis of professionals study shows that the participants were fully aware of the stress segments they experienced during the SI tasks as the analysis of their reports matched the analysis of their interpreting recordings regarding the stress segments in both SI tasks.

Due to experience, knowledge, and skills professional interpreters are more aware than the students regarding the interpreting problems and the use of strategies (Aal-Hajiahmed, 2022). The professionals confirmed in the retrospective reports that they experienced stress (Kurz, 2002) when they encountered problems, but this stress motivated them to solve the problems through the use of strategies (AIIC, 2002).

The analysis of professionals interpreting recordings reveals that the main aspect of disfluencies identified was hesitations during producing the TL. However, the hesitations have not affected the interpretations due to professionals' successful management of difficult situations in SI. In terms of directionality, the analysis of this study indicates that no clear difference has been identified in the retrospective reports of professionals in both tasks as the analysis of their interpreting recordings detected remarks of hesitations in both SI tasks which were reportedly due to interpreting challenges. It could be reflected that, due to expertise, professionals' performance has not been affected by interpreting direction as they manage to use coping strategies to solve the problems (Chang, 2009).

The analysis reflects that the stress was due to comprehension problems such as hearing the SL segment, and understanding the SL structure which affected the production of the TT. Moreover, one of the professionals stated that high delivery speed was stressful (Korpal, 2017). Therefore, professionals resorted to use the strategies of generalization, skipping, and inference (relying on the context) to solve the problems and get rid of stress (Korpal, 2016). Table 7 explains professionals reports regarding stressors and coping strategies in both SI tasks.

Pl. Code	Stress	Stressor	Stress Coping Strategies
Pl.1	Yes	I hesitated when I could not hear and recall what was said by the speaker which stressed me a lot	I decided to rely on the context and provide general TL elements
Pl.2	Yes	The speech was fast as I could not follow up which made me feel confused	I relied on my knowledge to get the meaning of the SL
Pl.3	Yes	Difficulties with understanding some SL structures specially in English into Arabic task was very stressful	I skipped what was unclear to keep the pace

Conclusions

The study concludes that students are not fully aware of the notion of stress as their retrospective reports do not match the analysis of the product. However, professionals were able to report the stressful aspects during the SI tasks which were confirmed in the analysis of their interpreting recordings. The results show that professionals, due to knowledge and experience, develop stress coping strategies that can be applied when they think that the experienced stress may affect their performance, such as relying on the context to grasp the meaning, using a general term or structure in the TL, and skipping the unclear word or structure in the SL. On the contrary, students do not have much to do with stress as they do not have the experience and knowledge to reduce the stress through the use of coping strategies. Hence, they resorted to pause and omit the SL segments which have negative effects on their performance and consequently distort the interpreting process . One of the interesting findings of this study is that stress has both positive and negative effects on interpreters where both groups reportedly experienced stress during the SI task, but professionals believe that the experienced stress has a positive effect on their performance as it motivated them to search and apply stress coping strategies that are used to solve the problems and reduce the cognitive load on interpreters. Students' stress, on the other hand, has negative effects on their performance as they lack the knowledge and experience to apply stress coping strategies and solve the problems. The main aspect of disfluencies identified in students' performance is pausing which increases the cognitive load and distorts the interpreting process. In the same line, hesitations and false starts were also detected in the students interpretations during both tasks which were resulted from pausing and the difficulties of managing the stress. This study reflects that the main

stressors for students are high deliver rate of source speech, comprehension problems, time pressure, lexical problems, selecting accurate equivalent and syntactic differences which pose cognitive load and led to inadequate interpretation. Professionals, on the other hand, consider comprehension problems, such as hearing and understanding the SL speech, and fast SL speech, the main stressors that were tackled appropriately through the use of stress coping strategies. The stress for students, in this study, seems higher during Arabic into English than into their retour as they encountered more problems with producing their B language. However, professionals' stress was not affected by the interpreting direction as few remarks of hesitations were detected in both SI tasks which were successfully tackled by the use of stress coping strategies.

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