Cultural differences in the appraisal of stress

Bogdan Popa[1], Laurent Guillet[2] and Etienne Mullet[3]

[1]*Private Practice, Bucharest, Romania*

[2]*University of South Brittany, Lorient, France*

[3]*Institute of Advanced Studies (EPHE), Paris, France*

We examined the form of the relationship between estimated stress level, on the one hand, and situation strain, personal resources and social support, on the other hand, among students from a collectivist culture (Tunisia), and compared these results with the ones already observed among students from an individualistic culture (France). Participants were presented with two or three pieces of information about strain and personal or social resources through the use of concrete scenarios, and were asked to infer a certain level of stress. Situational strain had less impact and social support had more impact on stress judgments among Tunisian than among French students. In addition, the information integration rule differed from one group to the other. Among Tunisian participants, stress level was conceived as a function of the perceived imbalance between strain and resources (personal and social). Among French participants, it was conceived as a function of the perceived imbalance between residual strain (original strain diminished, to some extent, through the implementation of personal resources), and social resources.

Cognitive appraisal processes are central components in current models of stress (Folkman & Moskowitz, 2000; Lazarus & Folkman, 1984). These include (a) individuals' appraisal of the situational strain, (b) individuals' appraisal of the personal resources they possess to cope with the strain, and (c) individuals' appraisal of the social resources available to supplement, enhance or replace personal resources. Although many studies have assessed the extent to which each kind of appraisal predicts current level of stress (Bourbonnais, Brisson, Vezina, & Moisan, 1996; Carver &

---

[1] Address correspondence to Dr. B. Popa, e-mail: bogdan05popa@yahoo.fr

Scheir, 1999; Pierce, Sarason, & Sarason, 1996), few studies have explored the way these factors combine their effects (Smith, Smoll, & Ptacek, 1991). Most stress studies have generally assumed a subtractive combination model of the type: Stress = Situational strain – Personal Resources – Social Resources. This model simply expresses that the higher the strain, and the lower the personal and social resources, the higher the stress level.

Guillet, Hermand and Mullet (2002), using French samples, examined the form of the relationship between estimated stress level on the one hand and severity of an accident (an indicator of situational strain), frailty (an indicator of personal resources) and isolation (an indicator of social resources), on the other hand. According to these authors, a functional theory of cognition approach (Anderson, 2008) was totally compatible with current stress theories since they emphasize the role of personal judgment (personal assessment) in the prediction of the stress level experienced. Many studies have shown that (a) perceived level of situational strain was a better predictor of stress level than "objectively" measured situational strain (Cohen, Kessler & Gordon, 1997), (b) perceived level of personal coping resources was a better predictor of stress level than "objectively" measured coping resources (Cohen, Kessler & Gordon, 1997), and finally (c) perceived level of social support was a better predictor of stress level than "objectively" measured social support (Avison & Gotlib, 1994).

The design used by Guillet et al. (2002) comprised several sets of scenarios describing a person who had been injured in a more or less severe way, who is known as being more or less psychologically frail, and who is more or less socially isolated. In the main set of scenarios, all three pieces of information (severity of occasional injury, frailty, and isolation) were indicated. In others sets of scenarios, only two pieces of information were indicated (e.g., severity and frailty). This complex design allowed the authors to examine whether the impact of each factor varied or not as a function of the number of pieces of information indicated (two or three). In other words, the configuration of this design allowed distinguishing between several possible information integration rules (Anderson, 2013).

Regarding the way in which severity and frailty were combined, a summative information integration rule was shown to be operative. The impact of severity on judged stress was not dependent on the number of pieces of information that were presented. In other words, the impact of severity was the same whether, regarding resources, only one piece of information (e.g., psychologically very frail) or two pieces of information (e.g., psychologically very robust but completely isolated) were indicated. Regarding the way severity and isolation, and the way frailty and isolation

were combined, an averaging rule was shown to be operative: The impact of isolation varied as a function of the number of pieces of information that were presented.

The following equation synthesized the main findings: Estimated stress = [w (Severity + Frailty) + w' Isolation] / ($w + w'$). In this equation, w is the weight of the sum of severity and frailty, and w' is the weight of isolation. From a French perspective, the grouping of the factors into these two separate components – personal component and social component – is appealing from a phenomenological viewpoint. Firstly, the "Severity plus Frailty" component corresponds to what directly characterizes the entity that is at the very center of the situation in an individualistic culture: the affected individual. Secondly, the "Social Resources" component corresponds to what surrounds the individual and the problem he/she is coping with. The overall assessment takes the form of a weighted balance between the personal component and the social component. When the personal component is represented by two pieces of information (severity and frailty), (a) its relative weight ($w / w + w'$) is higher than when it is represented by only one piece of information (severity), and (b) the relative weight of the social resource component ($w' / w + w'$) is lower. As a result, the observed impact of social resources on estimated stress is weaker when the personal component is represented by two pieces of information than when it is represented by only one piece of information.

Present Study

The present study aimed at replicating Guillet et al.'s study on a sample of Tunisian students; that is, on people living in a different cultural background. In collectivistic cultures such as the Tunisian culture (Hofstede, 2001), the traditional family is socially central (Camillieri, 1967). For most individuals, it is considered as the entity to which all individuals owe their life, identity and legitimacy. It is the most significant model of social relationships. It is through the family that most individuals express their needs and values. For most individuals, the family structure remains the basic frame of interpretation for the outside world. Even if the traditional family has been subjected to many tensions with the introduction of modernity, it has been able to adapt. The changes in family structure caused by the modernization of daily life have been accompanied by unexpected compromises that tend to minimize their effects (Camillieri, 1967).

As a result, in collectivistic cultures, when troubles arise, associated stress may be assessed in a different way than in individualistic cultures. As

collectivistic worldviews construe the self as socially embedded, emphasis is placed on collective responsibility, as much or more than on individual responsibility (Triandis, 1995). In collectivistic cultures, when a problem affects an individual, it automatically becomes a family or community problem: Families in the Maghreb are the main source of support for young as well as older adults (Young & Agree, 2004).

Also, in collectivistic societies, things tend to be considered as "destined to happen". Such a belief in determinism leads to mere acceptance of the many problems encountered in daily life (Laungani, 2001). This belief may prevent most persons from experiencing high stress level, and it may help reducing it. If situational strain is viewed as the result of fate and if it is conceived as mostly affecting the community then personal and social resources would not be clearly dissociated as they are in individualistic cultures. Personal stress would be experienced as part of collective, diluted stress.

By contrast, individualistic worldviews construe the self as independent and self-reflexive, and emphasize personal responsibility and personal well-being (Markus & Kitamaya, 1991). In individualistic cultures, people are strongly expected to be self-reliant, to be fully responsible for their failures, and to cope with their problems (Triandis, 1995). They are expected to exert voluntary control over their actions: When troubles occur, their origins tend to be analyzed in causal terms (Laungani, 2001). As a result of these worldviews, vicissitudes in life tend to be associated with high levels of stress. Also, in individualistic cultures, conditions that permit the sharing of personal concerns with family and friends tend to be less present. Thus, in individualistic cultures, (a) situational strain would be conceived as the possible result of personal behavior, (b) personal resources and collective resources would be clearly dissociated, and (c) stress would be conceived as essentially personal stress. This is precisely what the second equation shown before expresses.

Hypotheses

The first set of hypotheses was about the impact of each factor. It was expected that situational strain would have a weaker impact among Tunisian than among French students. As stated before, as things tend to be considered in Tunisian culture as destined to happen, mere acceptance of the many problems in daily life tend to be the rule. It was expected that personal resources would have a weaker impact and social resources a stronger impact among Tunisian than among French students. As emphasis is, in Tunisian culture, placed on collective responsibility, when a problem

affects an individual, it quickly becomes a family problem or a community problem.

The second set of hypotheses was about the integration of information process. It was expected that, among Tunisian students, the grouping of the terms shown in the equation discussed before -- Estimated stress = [*w* (Severity + Frailty) + *w'* Isolation] / (*w* + *w'*) -- would be different. The strain plus personal resources grouping (Severity + Frailty) would be replaced by a personal resources plus social resources grouping (Frailty + Isolation). In other words, personal and social resources would be conceived as forming an overall "pool of resources" (the family resources) that would be used for coping with situational strain.

The following equation precisely expresses this hypothesis: Estimated stress = [*w* Severity + *w'* (Frailty + Isolation)] / (*w* + *w'*). In the equation, personal resources (frailty) and social resources (isolation), as parts of the same pool of resources, are combined in a summative way. This implies that the impact of frailty on judged stress should not vary as a function of the presence or absence of information regarding isolation, and the impact of isolation should not vary as a function of the presence or absence of information regarding frailty. This equation also indicates that situational strain (severity) is considered as separate from the pool of resources, and that stress level is assessed by combining strain and resources in such a way that the importance of strain is inversely proportional to the importance of resources. This implies that the impact of severity of injury should vary as a function of the number of pieces of information concerning resources. It should be higher when resources are represented by two pieces of information (frailty and isolation) than when they are represented by only one piece of information (e.g., frailty).

METHOD

Participants. The participants were 57 students (18 males and 39 females), aged 18 to 26 (*M* = 23.64, *SD* = 3.35). They were unpaid volunteers. They were contacted on the University of Tunis, Tunisia campus. In Guillet et al.' Study 3, the participants were 60 students (29 males and 31 females), whose mean age was 21. They were contacted on the University of Nantes, France campus.

Material. The test material was the same as the one used in Guillet et al. (see Study 3). It comprised five sets of cards. Each card described a situation, and presented a 20 cm-response scale with, on the left, "No stress

at all", and on the right, "Very high level of stress". The first set of cards was the main set. It comprised 27 cards. These cards contained three pieces of information: level of situation strain (accident with very severe consequences, accident with severe consequences, accident with non-severe consequences), level of injured person's resources (psychologically very robust, normally robust in psychological terms, and psychologically weak), and level of social support available (many friends and family members willing to help, some friends and family members willing to help, and no friends and no family members willing to help). The design of the card composition was Situation strain x Personal resources x Social support, 3 x 3 x 3. One example of scenario was the following: "Ahmed is normally robust in psychological terms. He has just had an accident. The consequences of the accident were severe. He knows he can count on some friends and family members for help. In your opinion what level of stress is Ahmed currently experiencing?"

The second set comprised 9 cards containing only two pieces of information: severity of the situation strain and personal resources. The design was Situation strain x Personal Resources, 3 x 3. One example of scenario was: "Kamel is psychologically robust. He has just had an accident. The consequences of this accident are very severe. In your opinion what level of stress is Kamel currently experiencing?" The third and fourth sets were constructed in the same way as the second set except that the pieces of information were about severity and social support, and personal and social support, respectively.

Finally, the fifth set comprised two additional cards containing the same kind of information as the 27 cards of the main design. In these scenarios the severity of the consequences was more extreme than in the main design: either extremely serious or truly minimal. These extreme scenarios were intended to prevent ceiling and floor effects. They were always presented first.

Procedure. The procedure consisted of two phases, as recommended by Anderson (1982). The first was a familiarization phase. The task of the participants was (a) to read two or three pieces of information on each card, (b) to infer from them a certain level of stress, and (c) to report this level on the response scale. The cards from the first four sets were shuffled and presented in random order. Two extreme scenarios (fifth set) were presented first. After having completed the 56 (27 + 9 + 9 + 9 + 2) ratings, the participants were allowed to look back and correct as many responses as

they wanted, until they expressed satisfaction with the whole set of responses. All participants' questions were also answered during this phase.

The second phase was the experimental phase. It was analogous to the familiarization phase except that the participants were not allowed to change their answers or to ask questions. The order of the cards was different from that used during the familiarization phase, except that the two extreme scenarios were again presented first. It was also different from one participant to another. Participants worked individually, in a quiet room, and at their own pace: No deadline was set.

RESULTS

The lowest and highest mean responses (3.74 and 19.16, respectively) were still distant from the possible minimal and maximal values: There was thus neither floor nor ceiling effects to complicate the interpretation of the results.

Main Design

Figure 1 (top panels) shows the data from the Tunisian sample. All curves were ascending: The higher the level of strain, and the higher the level of inferred stress (a difference of 5.14 between the highest, 13.68, and lowest, 8.54, levels). All curves were clearly separated: The higher the level of personal resources, the lower the level of inferred stress (14.87 – 9.61 = 5.26). The whole set of curves was higher in the right panel than in the left panel: The higher the level of social support, the lower the level of inferred stress (13.65 – 9.78 = 3.87). Finally, curves were roughly parallel: All three informers were combined in an additive way.

Figure 1 (bottom panels) shows the data from the French sample (taken from Guillet *et al*., 2002). Three main differences with the Tunisian data can be observed. Firstly, curves were steeper; that is, strain impacted more on judgments (15.97 – 5.84 = 10.13). Secondly, from the left to the right panel, sets of curves were less ascending; that is, social support impacted less on judgments (12.62 – 11.14 = 1.48). Thirdly, curves formed a fan-shaped graph open to the left: The higher the situation strain, the weaker the impact of personal resources. The effect of frailty was, however, similar in both samples (14.62 – 10.18 = 4.44).
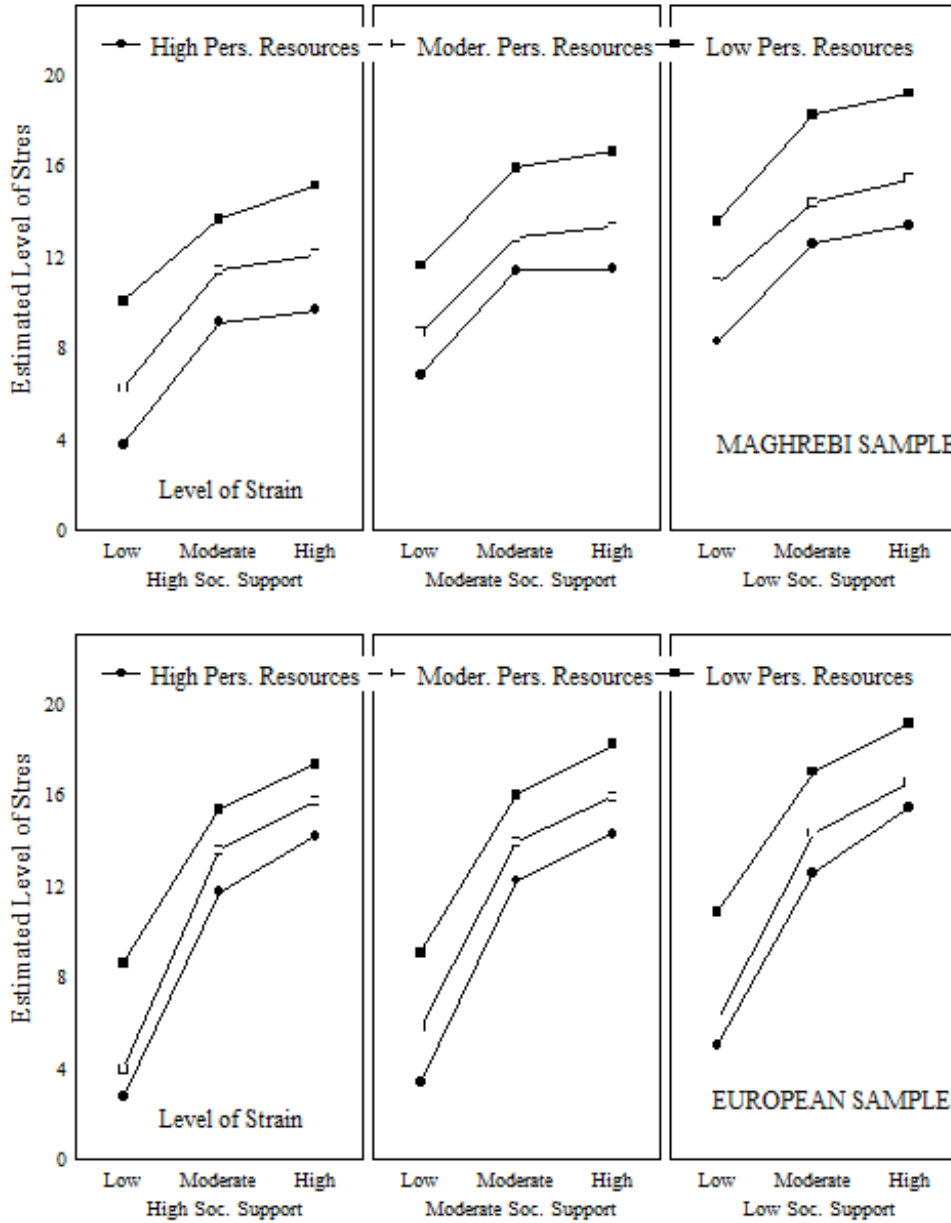
Figure 1. Estimated level of stress as a function of strain, personal resources, and social support among Tunisian participants (Maghrebi sample) and French participants (European sample). The three levels of strain are on the horizontal axis. The three curves correspond to the three levels of personal resources. The judged level of experienced stress is plotted on the vertical axis. The three panels correspond to the three levels of social support.
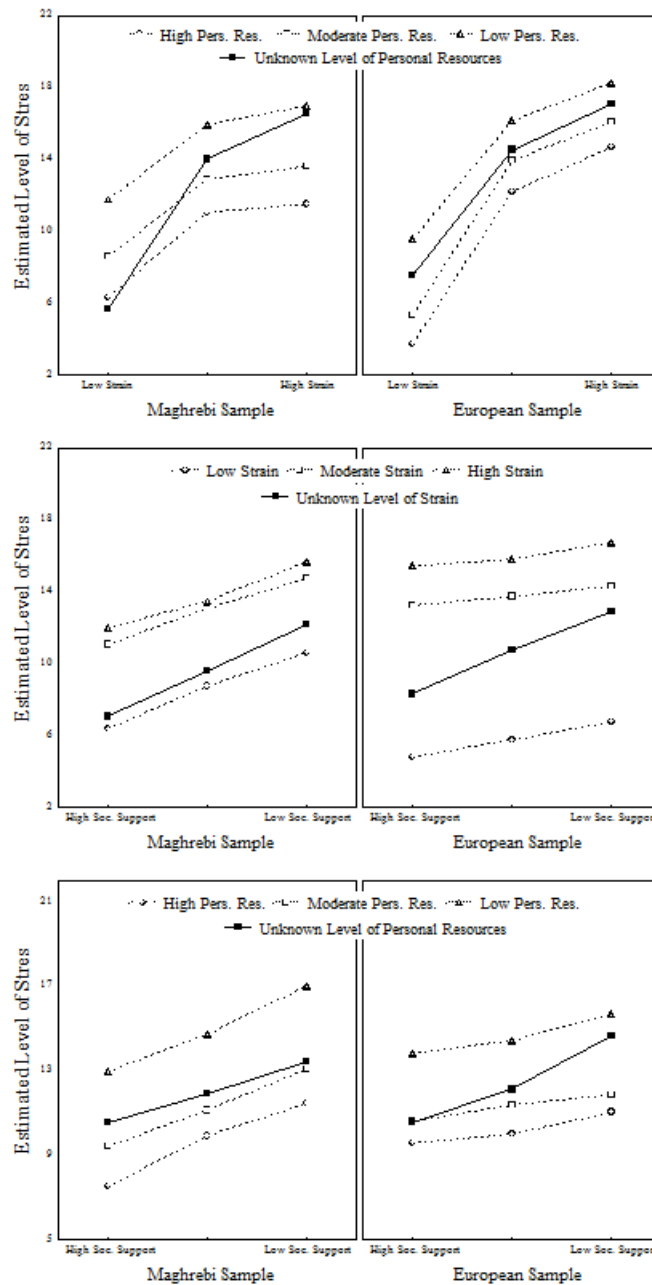
Figure 2. Estimated level of stress as a function of strain, personal resources, and social support among Tunisian (Maghrebi) and French (European) participants in the complete, 3 x 3 x 3 design (dotted curves) and in three incomplete, 3 x 3, sub-designs (full curves). The three levels of social support are plotted on the horizontal axis, from high to low. The three dotted curves correspond to the three levels of personal resources. The full curve corresponds to the results observed in the incomplete design; that is, when the information on personal resources was not given.

An ANOVA was performed with a Culture x Situation strain x Personal resources x Social support, 2 x 3 x 3 x 3 design. Unsurprisingly, the three main within-subject effects were significant at $p < .001$. More interestingly, the Culture x Strain interaction, $F(2, 230) = 47.51$, $p < .001$, the Culture x Social support interaction, $F(2, 230) = 24.46$, $p < .001$, and the Culture x Situation strain x Personal resource interaction, $F(4, 460) = 6.76$, $p < .001$, were significant. A second ANOVA was conducted in which Gender was the between-subject factor. Gender was not significant and no interaction involving gender was significant, $p > .60$.

Sub-designs

Figure 2 (top panels) shows the results of the Strain x Personal Resources sub-design (full curve) embedded in the results of the main sub-design (dotted curves). In the left panel (Tunisian sample), the full curve is clearly steeper than the slope of the other curves. In the right panel (French sample), the slope of the full curve is roughly parallel to the three dotted curves. Figure 2 (center panels) shows the results of the Situation strain x Social support sub-design (full curve) embedded in the results of the main sub-design (dotted curves). In both panels, the slope of the full curve is clearly steeper than the slope of the other curves. Figure 2 (bottom panels) shows the results of the Personal resources x Social support sub-design (full curve) embedded in the results of the main sub-design (dotted curves). In the left panel (Tunisian sample), the full curve is roughly parallel to the three dotted curves. In the right panel (French sample), the slope of the full curve is clearly steeper than the slope of the other curves.

Three other graphic analyses were also conducted. These analyses were similar to the ones shown in Figure 2 and their results were consistent with those previously presented. Specifically, among Tunisian students, the slope of the strain curve was steeper when no information about social support was provided than when information about social support was provided whereas among French students it was not the case.

An ANOVA with a Culture x Situation strain (very severe consequences, severe consequences, non-severe consequences, and unknown level of severity) x Personal resources x Social support design, 2 x 4 x 3 x 3, was conducted on the appropriate sets of data. The Culture x Strain x Personal resources interaction was significant, $p < .001$. A second ANOVA with a Culture x Situation strain x Personal resources (very robust, normally robust, weak, and unknown level of psychological robustness), x Social support design, 2 x 3 x 4 x 3, was conducted on the appropriate sets of data. The Culture x Strain x Personal resources interaction was

significant, $p < .001$. A third ANOVA with a Culture x Situation strain x Personal resources x Social support (many friends and family members, some friends and family members, no friends and no family members, and unknown level of social support) design, 2 x 3 x 3 x 4, was conducted on the appropriate sets of data. The Culture x Personal resources x Social support interaction was significant, $p < .001$. Detailed statistical results are available from the corresponding author.

DISCUSSION

As hypothesized, situational strain had a weaker impact among Tunisian than among French students. This finding was consistent with the view that, as things tend to be considered in Tunisian culture as destined to happen, mere acceptance of the many problems in daily life tend to be the rule among them (Laungani, 2001). As hypothesized, social resources had a stronger impact among Tunisian than among French students. This finding was consistent with the view that, in Tunisian culture, problems are considered in familial and communal terms rather than in strictly personal terms (Laungani, 2001). Contrary to what was expected, personal resources had similar impact in both samples. This finding was not consistent with the view that, in individualistic cultures, people are more clearly expected to be fully self-reliant than in collectivist cultures. Also, in the present study the effect of frailty was always higher than the effect of isolation: Even in a collectivistic culture, personal resources are given more importance than social resources for judging stress. This may be explained by the fact that personal level of stress was assessed, not collective level of stress. It would be interesting, in future studies to examine, in different communities, the perceived relationship between stress experienced by the family (or the community) as a whole, and severity of the injury received by one of its members, this person's frailty, and the level of solidarity of the group.

As regards the information integration process by which situational strain and personal resources were combined among Tunisian students, it was shown that, contrary to what was observed among French students, the impact of personal resources on the inferred estimated level of stress was independent of the level of situation strain considered. This finding is consistent with the view that personal resources and communal resources are, in collectivist cultures, considered as forming a common pool, which implies that the efficiency of personal resources is not conceived as depending on the level of strain.

As regards the integration process by which personal aspects and social aspects were combined among Tunisian students, it was shown that, contrary to what was observed among French students, personal resources and social support were combined through a summative operation. In addition, among Tunisian participants, situational strain was combined with the other two factors through an averaging operation.

As stated early, from a collectivist perspective, the grouping of the factors that has been observed in the data from the Tunisian sample is appealing from a phenomenological viewpoint. The personal resources plus social support grouping corresponds to the set of resources that can be collectively mobilized to cope with the problem at hand, which implies that these two types of resources are strictly cumulative: An averaging operation, as the one observed among the French, would not culturally make sense. Also, the dichotomy between strain and resources expresses the collectivist idea that when someone is strained, the whole community is strained, which implies that all resources must be mobilized for coping with the problem: The resulting level of stress is merely an average of strain (with positive values) and resources (with negative values).

In both samples, strain and social support were combined through averaging; that is, in both cultures, they were considered as "substitutable" entities. In other words, it was generally considered that a certain amount of social support can make up for a certain amount of situation strain. This finding makes sense. In Tunisia as well as in France, the stressful consequences of an event can be offset, and sometimes eliminated, turning to the family (e.g., which can be required to take care of the children), the friends (e.g., who can be solicited to share the notes they have taken in class), and the institutions (e. g., by having recourse to surgical operations and plastic surgery), even if the personal burden associated with the negative event has to be personally assumed.

As regards strain and personal resources, however, combination was through averaging among Tunisian students only. In other terms, in Tunisian students' views, a certain amount of personal resources can make up for a certain amount of situation strain, which implies that personal resources and strain are conceived as playing the same functional role. Among French students, in contrast, situation strain and personal resources were not considered as "substitutable" entities: A certain amount of personal resources cannot make up for a certain amount of situation strain. Overall, social support is conceived as substituting for one part of the stressful consequences of a negative event, and personal resources are conceived as "diminishing" the very impact of this negative event: Coping

is conceived as working through the implementation of personal resources, not through the recourse to social support.

Finally, as regards personal resources and social support, combination was summative among Tunisian students only. Among them, social support and personal resources were not considered as substitutable entities. They were viewed as two separate parts of an overall pool of resources. Among French students, however, social support and personal resources were considered as substitutable entities. This is probably because, among French students, reduction of stress is conceived either through reduction of situational strain (by implementing personal resources) or through the recourse to social support.

The present findings have a number of implications regarding the way stress may be experienced among Tunisian people. As experienced stress is conceived as depending on an averaging-type combination of situational strain and resources, the stress level experienced may be higher than minimum even in the absence of any situational strain. In other words, experienced lack of personal resources (frailty) and experienced lack of social resources (isolation) are in themselves conceived as sources of stress. It is only when there is no lack of personal resources, no lack of social resources, and no situational strain that the level of experienced stress may be closed to the minimal value.

Finally, it must be emphasized that these differences observed between Tunisian and French participants are differences in the process; that is, differences in lay theories on what determines stress. This does not mean that strong differences in outcome between Tunisia and French participants are to be expected. In fact, a correlation coefficient computed between the mean stress judgments observed in both samples was as high as .89. What the present study illustrates is that, as argued by Hong and Chiu (2001), meaningful differences between two cultures may not be apparent when just assessed at the "outcome level" but they may become clearly apparent when assessed at a more "fine grained level" represented by the lay theories (see also Bouazzaoui & Mullet, 2005; Kamble, Ahmed, Sorum, & Mullet, 2013; Morales et al., 2010; Olivari et al., 2011; Singh, 2011).

Limitations

This study has several limitations. Firstly, the size of the samples was small and they were mainly composed of young persons. As a result, we are unsure about the degree of generalizability of our results. In particular, future studies on larger samples of Tunisian participants are needed to determine which proportion of participants conceive stress in the way that

has been reported above, and which proportion of participants may conceive stress in alternative ways, and to relate these conceptualizations to measurements issued from collectivism-individualism scales.

Secondly, the experiment was a "what if" experiment (e.g., what if a severe accident happened to someone with certain personal and social resources?) Although the ecological validity of experiments using the current paradigm has been already established (Fruchard, Rulence-Pâques & Mullet, 2007; Levin, Louviere, Schepanski & Norman, 1983; Louviere, 1984), it remains to be shown whether in the specific case of experiencing stress, the relationship between stress, strain, and resources is actually the one described by the equations above.

Thirdly, one may wonder whether the results regarding the integration process were affected by imputation processes intervening during the judgment process (Ebenbach & Moore, 2000, Singh, 1991). In Figure 2 (left top panel), the full curve, which reflects the impact of severity of strain on judged stress when the level of frailty was unknown, was steeper than the three other curves that reflect the effect of severity on stress when the level of frailty was known. This may be due to the fact that when information about frailty was absent, it may have been, more or less voluntarily, reconstructed from the available information. In other words, from low level of severity the participants could have imputed no frailty, from intermediate level of severity, they could have imputed intermediate frailty, and finally from high level of severity they could have imputed frailty. This could adequately explain why the full curve cuts across the three other curves (Singh, 1991). Such imputations, however, are rather improbable. From different levels of severity of an injury, there is no easy way to impute different levels of frailty/robustness.

REFERENCES

Anderson, N. H. (1982). *Methods of information integration theory*. San Diego : Academic Press.

Anderson, N. H. (2008). *Unified social cognition*. New York: Psychology Press.

Anderson, N. H. (2013). Unified psychology based on three laws of information integration. *Review of General Psychology, 17,* 125-132.

Avison, W. R., & Gotlib, I. H. (1994). *Stress and mental health. Contemporary issues and prospects for the Future*. New York: Plenum.

Bouazzaoui, B., & Mullet, E. (2005). Workload, family responsibilities, and anticipated life satisfaction among young French adults issued from European and Tunisian origin. *Journal of Happiness Studies, 6,* 161-185.

Bourbonnais, R., Brisson, C., Vezina, M., & Moisan, J. L. (1996). Job strain and psychological distress in white-collar workers. *Scandinavian Journal of Work, Environment & Health, 22*, 139-145.

Camillieri, C. (1967). Modernity and the family in Tunisia. *Journal of Marriage and the Family, 29*, 590-595.

Carver, C. S., & Scheier, M. F. (1999). Optimism. In Snyder, C. R. (Ed.), *Coping: The psychology of what works* (pp. 182-204). New York: Oxford University Press.

Cohen, S., Kessler, R., & Gordon, L. (1997). *Measuring stress : A guide for health and social psychologists*. Oxford: Oxford University Press.

Ebenbach, D. H., & Moore, C. F. (2000). Incomplete information, inferences, and individual differences: The case of environmental judgments. *Organizational Behavior and Human Decision Processes, 81*, 1-27.

Folkman, S., & Moskowitz, J. T. (2000). Positive affect and the other side of coping. *American Psychologist, 55*, 647-654.

Fruchart, E., Rulence-Pâques, P. & Mullet, E. (2007). Ecological validity test of laboratory studies of information integration. *Teorie & Modelli*, 12, 281-288.

Guillet, L., Hermand, D., & Mullet, E. (2002). Cognitive processes involved in the appraisal of stress. *Stress and Health, 18*, 91-102.

Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations* (2nd ed.). Thousand Oaks: Sage.

Hong, Y., & Chiu, C. (2001). Toward a paradigmatic shift: From cross-cultural differences in social cognition to social-cognitive mediation of cultural differences. *Social Cognition, 19*, 181-196.

Kamble, S., Ahmed, R., Sorum, P. C., & Mullet, E. (2013). The acceptability among young Hindus and Muslims of actively ending the lives of newborns with genetic defects. *Journal of Medical Ethics*, in press.

Laungani, P. (2001). The influence of culture on stress: England and India. In Adler, L. L. & Gielen, U. P. (Eds.) (2001), *Cross-cultural topics in psychology* (pp. 149-170). London: Praeger.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal and coping*. New York: Springer Publishing Company.

Levin, I. P., Louviere, J. J., Schepanski, A. A., & Norman, K. L. (1983). External validity of laboratory studies of information integration. *Organizational Behavior and Human Performance, 31,* 173-193.

Louviere, J. J. (1989). *Analyzing decision making: Metric conjoint analysis*. Newbury Park: Sage.

Markus, H. R., & Kitamaya, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98*, 224-253.

Morales Morales, G., Lopez Ramirez, E. O., Esterle, M., Muñoz Sastre, M. T., & Mullet, E. (2010). Judging the acceptability of sexual intercourse among persons with learning disabilities: A Mexico-France comparison. *Sexuality & Disability, 28*, 81-91.

Olivari, C., Munoz Sastre, M. T., Guedj, M., Sorum, P. C., & Mullet, E. (2011). Breaking patient confidentiality: Comparing Chilean and French viewpoints regarding the conditions of its acceptability. *Universitas Psychologica: Pan American Journal of Psychology, 10*, 13-26.

Pierce, G. R., Sarason, I. G., & Sarason, B. R. (1996). Coping and social support. In Zeidner, M., & Endler, N. S. (Eds.), *Handbook of coping* (pp. 434-451). New York: Wiley.

Singh, R. (1991). Two problems in cognitive algebra: Imputations and averaging versus multiplying. In Anderson, N. H. (Ed.), *Contributions to information integration theory*, Vol. III (pp. 143-180). Hillsdale, NJ: Erlbaum.

Singh, R. (2011). Information integration as a basic psychological process. In Misra, G. (Ed.), *Handbook of psychology in India*. New Delhi: Oxford University Press.

Smith, R. E., Smoll, F. L., & Ptacek, J. T. (1990). Conjunctive moderator variables in vulnerability and resiliency research: Life stress, social support and coping skills, and adolescent sport injuries. *Journal of Personality and Social Psychology, 58*, 360-370.

Triandis, H. C. (1995). *Individualism and collectivism*. Boulder, CO: Westview.

Young, K. M., & Agree, E. M. (2004). The power of older women and men in Egyptian and Tunisian families. *Journal of Marriage and Family, 66*, 126-146.