

## STRESS, COPING AND SOCIAL SUPPORT IN THREE GROUPS OF UNIVERSITY STUDENTS

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### SUMMARY

**Background:** The paper presents the findings of our study researching the differences in strategies for coping with stress, social support, hassles and uplifts of sport, medical and psychology students at the University of Ljubljana, Slovenia.

**Subjects and methods:** A random sample of 237 Slovene undergraduate university students was studied. The three groups were chosen among students of medicine, sport and psychology.

**Results:** It was found that there were no significant differences in strategies for coping with stress between the three groups of students. Significant differences between the groups were found in the number of uplifts and hassles, but not in the mean of both variables. Sport students had less social support compared with the other two groups of students, but the difference between actual and ideal social support is not significant.

**Discussion:** The results were interpreted according to our hypothesis and compared with findings of research in students' stress.

**Conclusion:** Some suggestions for further research are given on the basis of the present research.

**Key words:** coping with stress - university students - hassles and uplifts - social support

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### INTRODUCTION

University students experience a variety of stress-related situations, which are daily hassles relating to teachers, student colleagues and studying at home (Spangler et al. 2002). It is generally believed that medicine is one of most demanding studies. Medical education is long and emotionally taxing (Radcliffe & Lester 2003). Medical students thus experience tremendous stress during their undergraduate study (Guthrie et al. 1998, Supe 1998, Spangler et al. 2002, Yiu 2005). On the other hand, the study of sport is supposed to be one of the easiest, being more physical training oriented, although few authors have empirically investigated the sources of stress and coping responses experienced by sport students. Only recently have Reed and Giacobbi (2004) expressed concern about stress and burnout in sport students. In their study they concluded that

students of sport should be encouraged to use problem-focused and emotion-focused forms of coping with stress. There are also very few research data on how psychology students perceive stress and their strategies for coping with it.

Why did we select precisely these three groups of undergraduate students? Mainly because they are all learning to become professionals who, along with their basic profession, will also teach people to recognise and cope with stress. As teachers at these three faculties, we were interested in how students recognise their own stress and what strategies they use to cope with daily stress.

Because major life events are poor predictors of strain and distress (Kanner et al. 1981), we decided to assess minor life events, such as daily hassles. These are the irritating and distressing demands of daily existence. Concurrently we also considered daily uplifts, which are positive, boosting events that make one feel good. It seems

that hassles and uplifts have effects independent of major life events. We also stressed the question of social support because this could be seen as a potential for coping with stress or even become the coping style in itself.

In our research we were interested in both emotional and practical support, and in the difference between real and ideal support for both types (Power et al. Aris 1988).

Social support has been conceptualised as a component and as a context of adaptive behaviour. As a component, significant others constitute external social resources, which can be mobilised. They are providers of perception-focused, emotion-focused or tangible coping assistance. Both as a component and as a context, social factors influence appraisals of the situation and of personal control early in a person's career. As a contextual factor, cohesive social groups and dyads form a secure base and sense of existential anchoring or coherence, in which complex coping behaviour can take place (Waltz 1994).

Social support thus is subsumed into a very wide range of informal helping relationships between the individual and other people. Most commonly these people are friends and family, but various other people may help (Cowen 1982).

Psychological mechanisms, such as styles for coping with stress, are placed in the individual's social network, so the role of social support is thought to be crucial. The social support network could be a function of a certain coping style or vice versa. For instance, interpersonal coping with stress directly affects the availability of social support, which in turn influences the loneliness of the coping individual. Pleasant social coping behaviour increases social support and decreases loneliness, whereas unpleasant social coping behaviour reduces social support and increases loneliness (Kato 2002).

Avoidance coping behaviour is a powerful predictor of depression in both men and women (Felsten 1998). On the other hand, Felsten (ibid) also found that the correlation between stress and depression is stronger in students who use problem solving as behaviour for coping with stress. Felsten (ibid) furthermore argues that there is no difference

between men and women in the use of either problem solving or avoidance coping strategies.

It is obvious that there is little evidence of the strategies for coping with stress in different groups of students who study under considerable stress and are expected to cope with it. There are some specific factors which could affect stress and stress coping styles, such as the term when stress is measured, specific institution, measures used etc. These specific factors could determine stress burden and stress coping styles and this can lead to the impression that there are considerable differences in stress burden between different kinds of students. But it is not possible to generalize such results. We expected that different groups of students could to a certain degree undergo different kinds of stress burden, but generally there are no statistically significant differences in hassles and uplifts, stress coping styles and social support between different groups of students.

The aim of our study was to compare the amount of hassles and uplifts, strategies for coping with stress, and social support between three groups of undergraduate students at the University of Ljubljana, Slovenia.

## **SUBJECTS AND METHODS**

A convenience sample of three groups of undergraduate university students from three different faculties, i.e. medicine, psychology and sports, were asked to volunteer for the study after signing the informed consent. There were altogether 237 subjects included, 124 students of psychology, 37 students of medicine and 75 students of sport. The sample approximately represented the gender ratio of these three faculties (75% female students and 25% male students). Their age mean was  $M = 20.6$  years and there was no significant age difference between male and female students.

The Coping Responses Inventory-Adult (CRI-Adult), Significant Others Scale (SOS), and The Uplifts and Hassles Scales were applied.

The Coping Responses Inventory-Adult (CRI-Adult), (Moos 1990) evaluates personal coping strategies and is based on eight scales. These are:

logical analysis, positive re-appraisal, cognitive avoidance, acceptance or resignation, seeking guidance and support, problem-solving action, seeking alternative rewards and emotional discharge. It is a 48-item questionnaire. Each coping response item is rated in terms of a four-point frequency scale, ranging from “never” (0) to “fairly often” (3). Stability of CRI scores suggests consistency over one year period despite variations in stressors. The reliability of the CRI has been investigated by means of internal consistency of the subscales and by the test-retest method over one year period. Moos (1990) reported that both measures indicated “satisfactory” reliability.

The Significant Others Scale (SOS), (Power et al. 1988) is designed to gather information from the individual on both their key supporters and the different types of help that they provide. It focuses on perceived rather than received support and on the adequacy of the perceived support. A seven point frequency scale is used, ranging from “never” (1) to “always” (7). There are two types of scores, one for actual support and the other for ideal support, each consisting of ten items and six or more relationships. Both types of support are referring to practical support and to emotional support. Then, difference between practical (ideal and perceived) and emotional (ideal and perceived) support is calculated. The test-retest reliability for all four summary support functions over six month period was 0.73 to 0.83).

The Uplifts and Hassles Scale (Kanner et al. 1981) assesses daily hassles, together with daily uplifts, as a measure of stress. The two Hassles and Uplifts scales consist of a list of 252 events in total, rated on four point scales of frequency and severity. There are 117 hassles and 135 uplifts. Originally, replies are based on experiences during the last month, but in our study a whole study year was taken into account. The hassles and uplifts items are rated in terms of their severity (0 to 3). The client is asked first to circle all hassles and uplifts experienced during the study year and then to rate them for severity and frequency respectively. Frequency scores are thus obtained (numbers of hassles or uplifts circled), which are not summed together. The intensity score is then

generated by calculating an average for the severity of the hassles and frequency of the uplifts.

Reliability was assessed by the test-retest method over nine months. For the hassles scale the average correlation coefficient for the frequency score was  $r=0.79$  while for the uplifts scale it was  $r=0.72$ . The associations between intensity scores were  $r=0.48$  and  $r=0.60$  respectively.

The study was approved by the National Ethics Commission. All participants signed a letter of informed consent. The instruments were applied in groups.

According to our hypothesis we examined the differences in daily hassles, uplifts, stress coping and social support between students from different types of faculties. Therefore, the ANOVA procedure was used. We compared all dependant variables between the three types of faculties. Data were analysed with the SPSS 13.0 for Windows statistical package.

## RESULTS

It was found that severity of hassles ( $F=2.134$ ;  $df=2$ ;  $p<.05$ ) and frequency of uplifts ( $F=1.236$ ;  $df=2$ ;  $p<.05$ ) do not differ between different groups of students (Mean Hassles=1.63;  $SD=0.38$ ; Mean Uplifts=2.01;  $SD=0.31$ ). According to this interpretation of hassles and uplifts, the hypothesis regarding the difference between groups of students in hassles and uplifts is accepted.

There was significant difference found in number of hassles ( $F=3.773$ ;  $df=2$ ;  $p<.05$ ) and in number of uplifts ( $F=6.567$ ;  $df=2$ ;  $p<.05$ ). Students of psychology have a significantly higher number of uplifts; the other two groups of students don't differ significantly in number of uplifts (ANOVA - Bonferroni post-hoc test – mean difference between psychology and medicine students –  $p<.05$ ; psychology and sport students –  $p<.05$ ). According to this interpretation of hassles and uplifts our hypothesis is rejected.

Medical students have a significantly lower number of hassles than the other two groups. These two groups (students of psychology and students of sport) don't differ significantly in number of hassles. Descriptive statistics for all three groups is added below (Table 1).

**Table 1.** Descriptive statistics for Hassles and Uplifts scale

	Type of students	N	Mean	Std. Deviation
number of uplifts	Psychology	124	52.48	23.37
	Medicine	37	40.73	19.83
	Sport	75	42.37	22.77
number of hassles	Psychology	124	23.69	13.92
	Medicine	37	16.89	15.77
	Sport	75	23.50	12.14

Since differences were found in the number of hassles, we specified types of hassles and uplifts in which groups of students differ.

ANOVA was performed and all following differences were significant at  $p < .05$  level. Students of psychology more often tend to misplace and to lose things, they don't have enough money for clothing and for housing and they don't have enough time to do things they like than the other two groups of students, which don't differ significantly. Students of psychology also report more often than the other two groups that they dislike their work duties while students of sport more often dislike their work duties than students of medicine.

Students of sport are less often inconsiderate smokers than other two groups of students but they have more often troubles with relaxing and with waiting, and they more often report about sexual problems (not physical). We didn't find typical hassles for students of medicine.

Students of psychology enjoy relaxing, socializing, entertaining, having free time and dreaming more than the other two groups.

Students of sport appreciate exercising and physical shape more than the other two groups. They also practice their hobbies more often than students of psychology, while students of psychology practise their hobbies more often than students of medicine. However, they enjoy reading and giving presents less frequently.

Students of medicine are more characterised by what they don't like as much as the other two groups, for instance practicing their hobbies, socializing, engaging in recreational activities and dreaming.

Further, it was not possible to conclude that there are typical styles for coping with stress for specific types of students (Table 2). ANOVA showed that differences between three groups of students were not statistically significant.

**Table 2.** ANOVA - F and p values and descriptive statistics for coping styles

	F	p	Mean for all groups	Std. Deviation
logical analyses	1.737	0.178	0.17800	3.747150
positive appraisal	1.934	0.147	9.64600	3.714770
seeking support	1.893	0.153	8.92547	3.302133
problem solving	1.812	0.166	10.35090	4.523160
cognitive avoidance	0.950	0.388	8.19250	3.829730
acceptance	2.246	0.108	6.17760	4.131770
alternative awards	0.949	0.389	6.78820	4.072620
emotional discharge	0.383	0.682	5.56830	3.616760

The hypothesis concerning coping styles, which didn't hypothesise statistically significant different coping styles between the three groups of students, is accepted.

There were significant differences found in actual and in ideal emotional support between students from different types of faculties (actual

emotional support:  $F=9.236$ ;  $df=2$ ;  $p < .05$ ; ideal emotional support:  $F=16.355$ ;  $df=2$ ;  $p < .05$ ; actual practical support:  $F=10.842$ ;  $df=2$ ;  $p < .05$ ; ideal practical support:  $F=14.111$ ;  $df=2$ ;  $p < .05$ ). The discrepancy between actual and ideal support was not significant when all types of students were compared (difference in emotional support:

F=1.653; df=2; p<.05; difference in practical support: F=0.579; df=2; p<.05). That is, if there was lower ideal support in a certain group of students, then the actual support was also lower, and vice

versa. Descriptive statistics for social support is added below (Table 3). Thus, the hypothesis regarding social support which hypothesised no significant differences in social support is rejected.

**Table 3.** ANOVA – descriptive statistics for SOS scale

	Type of Faculty	N	Mean	Std. Deviation
emotional support	Psychology	124	5.370	0.794
	Medicine	37	5.450	0.740
	Sport	75	4.890	0.940
ideal emotional support	Psychology	124	6.320	0.570
	Medicine	37	6.120	0.750
	Sport	75	5.730	0.840
practical support	Psychology	124	4.990	0.780
	Medicine	37	5.090	0.710
	Sport	75	4.500	0.870
ideal practical support	Psychology	124	5.800	0.670
	Medicine	37	5.750	0.710
	Sport	75	5.250	0.810
difference in emotional support	Total	236	0.8709	0.820
difference in practical support	Total	236	0.7614	0.750

Sport students had lower levels of all types of social support (actual and ideal, emotional and practical) compared with medical and psychology students (ANOVA – Bonferroni post-hoc test, mean differences are significantly lower at p<.05 level). Students of psychology and students of medicine don't differ significantly in the two aspects (ideal and practical) of emotional and practical support. Therefore hypothesis concerning social support is rejected (no differences were expected).

## DISCUSSION

As mentioned in the introductory section there is little clear research evidence on stress, social support and stress coping among different groups of students. Therefore the aim of this study was the comparison of stress coping, stress and social support.

Coping styles were not associated with the course of study. Reed and Giacobbi (2004), who studied coping mechanisms in sport students, suggested that they should be encouraged to use problem-focused and emotion-focused forms of coping with stress, which, however, is reasonable for all students. All types of coping strategies were

used comparably in all groups of students included in the present research.

Further, we hypothesised that the three groups of students didn't differ significantly in their burden with hassles.

Students of psychology have significantly higher number of hassles compared to medical students. Students of sport don't differ significantly from students of psychology but they have almost significantly higher number of hassles compared to medical students (p=.051). It is possible to interpret that there is more heterogeneous pattern of burden with hassles in psychology and sport students but the severity of these hassles is not significantly higher. Specific studies could have different demands, but that does not necessary mean higher stress burden in the sense of daily hassles. There is an important question of the concept of stress we take into account. In this study we decided to measure daily hassles, but there are other possibilities for measuring stress, some of them could be more specifically oriented toward academic stress. The types and number of stressors could be different but severity of stress is on the same level. As a further possibility for research it would be reasonable to specify in more detail the

types of stress characteristic for different groups of students. When we talk about pretentiousness of different studies, different concepts are probably mixed, for instance pretentiousness doesn't necessarily mean higher stress for students. Student's life doesn't mean academic stress only but general problems concerning housing, standard of life in general, etc.

It is possible to say that the pattern of stressors of specific group of students is different or specific. Moffat et al. (2004) reported that hassles in medical students are related more to medical training than to personal problems. On the other hand, Bjorksten et al. (1983) reported that medical students have the same spectrum of perceived problems as other students, but they complain more intensely about these problems. In our research we could not confirm this statement. Contrary to Bjorksten et al, Daly's research (Daly et al. 2002) showed that medical students (especially new medical graduates) have a tendency towards poor emotional sensitivity and/or expressiveness and externally oriented thinking (alexithymia), which could be a possible predictor of a residency with difficulties, leading to distress. Alexithymia is postulated to represent a personality trait or state induced by stressful circumstances and could indicate a coping mechanism midway through the stressful circumstances.

It is worth mentioning that the hassles and uplifts scales used in our research were not constructed specifically for student populations, nor do they deal specifically with academic hassles. There are, for instance, very few specific hassles considered to be typical of students included in these scales. The differential validity of these two scales is therefore lower than it would be if it were designed for student populations. It would be reasonable to use a specific hassles scale, which stresses, for instance, uncertainties about individual study, progress and aptitude, concerns about assessment, the availability of learning materials, etc.

Kanner et al. (1981) reported that the three studied groups (middle-aged participants, students and professionals) had the same most frequent items of hassles ("misplacing things", "physical appearance", "too many things to do"). In this

study students struggled mostly with academic and social hassles ("concerns about meeting standards", "being lonely"). Psychology students seem to be more similar to the group of "professionals" than to the group of students, because typical hassles for professionals in Kanner's study were similar to those of psychology students. Academic and social hassles (like "meeting standards", "being lonely"), which were typical of the student population in Kanner's study, were not typical of groups of students included in present research.

A more comparable study of students' hassles is Tyrrell's study of sources of stress among Irish psychology undergraduates (Tyrrell 1992), which reported that the most common hassles for psychology students were fear of falling behind with coursework, finding the motivation to study, time pressures, financial worries, and concerns about academic ability. It is not possible to compare these findings because of the different scales (or hassles) used.

We found that there are clearer differences between students of the three different faculties in regard to uplifts than hassles. Typical uplifts of sport students were to be expected given their study course. They liked to participate in recreational activities, exercise, to gain new skills and to be in good physical shape. On the other hand, typically they did not like to read or entertain and they did not like to give presents as much as the other two groups of students.

Medical students had a relatively small number of uplifts that were typical of them (significantly less than their student colleagues from the other two groups). They were more recognisable by what they did not like. They like to practise their hobbies less, to dream, to participate in recreational activities, to have free time and to socialise than their colleagues, especially in comparison with students of psychology, who are recognisable by their social orientation. They appeared to be more serious and introverted than psychologists, who liked to entertain, and sport students, who liked to exercise. Maybe that is an indirect sign of the possibility that they like all these activities but don't have time for them due to their engagement in study.

As mentioned previously, psychology students like to relax, to entertain, to socialise, to dream and to have free time more typically than their colleagues. These uplifts, which are hedonistic in nature, were also typical of students studied by Kanner (1981). Iwasaki (2003) found that leisure-coping beliefs predict lower levels of mental and physical illness and greater levels of psychological well-being and that leisure-coping strategies are associated with the perception of effectiveness in coping with stress and stress reduction (both positively correlated with leisure-coping beliefs).

It is worth mentioning the comparison of typical hassles and uplifts in sport students. They liked to be active (to exercise, to participate in recreational activities, to improve new skills etc.), but, on the other hand, they had troubles relaxing and sexual problems. It seems that their inclination to physical activities may be exaggerated.

Finally, we have to take into account that students of medicine group is smaller than the other two groups. Therefore the interpretation of number of hassles and uplifts is more informative. The main interpretation of hassles and of uplifts is the interpretation of mean values, which don't differ significantly among the three groups of students.

We found that sport students had a significantly lower degree of social support (emotional and practical) than the other two groups of students, but the difference between their actual and ideal support was not significantly higher than in their student colleagues.

The discrepancy score is the one that clients are most likely to complain about and which is the most critical to the client's emotional well-being (Power et al. 1988). So, it means that this difference, which was significant in fact, couldn't be interpreted as a difference that lowers the well-being of sport students.

The difference between actual and ideal emotional and practical support in our three groups of students was lower than that in normative groups. It ranged from .65 (difference in practical support for medical students) to .95 (emotional support in psychology students) in our three groups of students, which was lower than, for instance, 1.1 (in the symptom-free normative group or 1.7 in the depressed patients group).

Our conclusion is that sport students perceive their need of social support in a different way than medical or psychology students. Their need for social support is lower, but as said, still not critical in the sense of a discrepancy between both types (actual and ideal) of support.

Compared with normative data for the SOS (Power et al. 1988) it can be seen that the perception of their own needs for social support is significantly higher in our three groups of students.

The actual emotional support in our groups of students ranged from 4.9 in sport students to 5.45 in medical students, which was higher than in the normative groups (symptom-free group and the group of depressed clients), which scored 4.2.

Medical and psychology students had higher needs of emotional support than those in the normative groups. Ideal emotional support in the normative groups was 5.2, or 5.9 in depressed clients, which is approximately on the same level as in sport students.

Sport students' perception of practical social support was approximately on the same level as that of depressed clients in the normative sample, while again it was higher in students of psychology (5.0) and medical students (5.1).

The ideal practical support for our samples was higher than in the normative symptom-free group (4.8 in the normative symptom-free group and from 5.2 in sport students to 5.8 in psychology students). The ideal practical support for our samples was approximately at the same level as in the depressed clients normative sample (5.4), or even higher (in medical students and especially in psychology students).

These results show that all measures used in this study show no noticeable differences between groups of students of sport, psychology and medicine. This does not mean that there are no differences between students in certain characteristics, for instance the level of pretentiousness, in values of students and some characteristics which are associated with stress and stress coping, like personality, etc. But we can say that the differences in the specific types of stress and stress coping discussed in this article are not significant.

The results of this study could serve as a basis for further, more detailed studies of student

populations and differences between different groups of students.

There are some limitations to this study. We didn't measure some other variables which could mediate stress response, for instance personal standards of participants like perfectionism, personal hardiness and other personality characteristics. Further, there are many ways of measuring the variables included, like stress. There are many possibilities for which stress measure to choose; and maybe some other instruments, which are more specifically oriented toward academic stress, would be more appropriate. And, last but not least, the size of samples of students included in research could be better balanced.

## CONCLUSION

In conclusion, the findings of the study demonstrate that there are no significant differences in strategies for coping with stress between medical, sport and psychology students. There are some significant differences in the quantity of uplifts and hassles, but - what is also important - not in the severity of hassles or in frequency of uplifts. Finally, some significant differences in social support found don't affect the level of well-being of sport students, whose social support is perceived to be lower in general.

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