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Rainstorm and flood caused natural catastrophe in a Transylvanian village (Lupeni/Farkaslaka, Romania) Cultural anthropological approach to coping with posttraumatic stress

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Abstract

Lupeni/Farkaslaka (a village with 1860 Hungarian inhabitants in Eastern Transylvania – Romania) was destroyed by a 30-minute rainstorm and flood August 23, 2005. Three females perished their life, the family property damage loss surpassed 1.430000 new LEU (RO currency). All bridges and five houses were destroyed in the village. Hundred and forty-three houses became inhabitable, required major renovation. Survivors' narrative on the flood and their looses was analyzed according to Gottscak–Gleser (1969), and according to Ehmann (2002b). Four survivors' interviews are presented here.

Theoretical background of research

In Sequential-transformative model of psychological content analysis

- Content analytic codes are regarded as psychological variables which follow a three-step invariant sequence:
  (1) A hypothetic variable is introduced, and its values are systematically searched,
  (2) thereby transforming latent data into manifest ones. [type of story, composition, coherence, full wit emotion, self-involvement, argumenteness, quality of experience,
  (3) Quantitative analysis: these manifest data are counted and prepared for psychological scaling.
- The posttraumatic memories were analyzed according to coherence, and self-involvement.

[Deductive qualitative variables may be psychological constructs from either academic psychology or narrative psychology (Laszló et al., 2000).]

Sample and methods

- Eye witnesses and survivors were asked about their subjective experience evoked by the event one-three weeks after-, and 2-3 years later (N=10). The testimonies were video-typed.
- Two old females (80- ,and 73-year-olds), and two middle ageed males agreed to publish their testimonies with their photos.
- The verbal material was content analyzed according to Gottschalk and Gleser (1969). [quantitative approach]
- Narrative psychological variables (Ehman, 2002b), such coherence of the stories, and self-referring components in the stories on survived event (flood, life-danger, escape, or loosing relatives, properties) were added. [qualitative approach]

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Results

Gottschalk – Gleser (1969) content analysis results:

Table 1. Gottschalk – Gleser (1969) Anxiety scale results for flood victims in Farkaslaka accoding to their self-reports (2005 and 2008)

Subjects	Death Anxiety	Mutilation Anxiety	Separation Anxiety	Guilt Anxiety	Shame Anxiety	Diffuse Anxiety	Total scores
Subject 1: 80 y. female **Lost all belongings**	8	33	27	0	0	26	94
Subject 1: 3 years later	11	22	22	0	0	9	64
Subject 2: 73 y. female **Lost her house**	18	9	16	0	0	14	57
Subject 3: Middle-age male, **Lost two relatives**	27	17	41	0	0	35	120
Subject 4: Middle-age male, Pension Owner, Eye witness **with the least material loss**	12	12	36	2	0	27	89

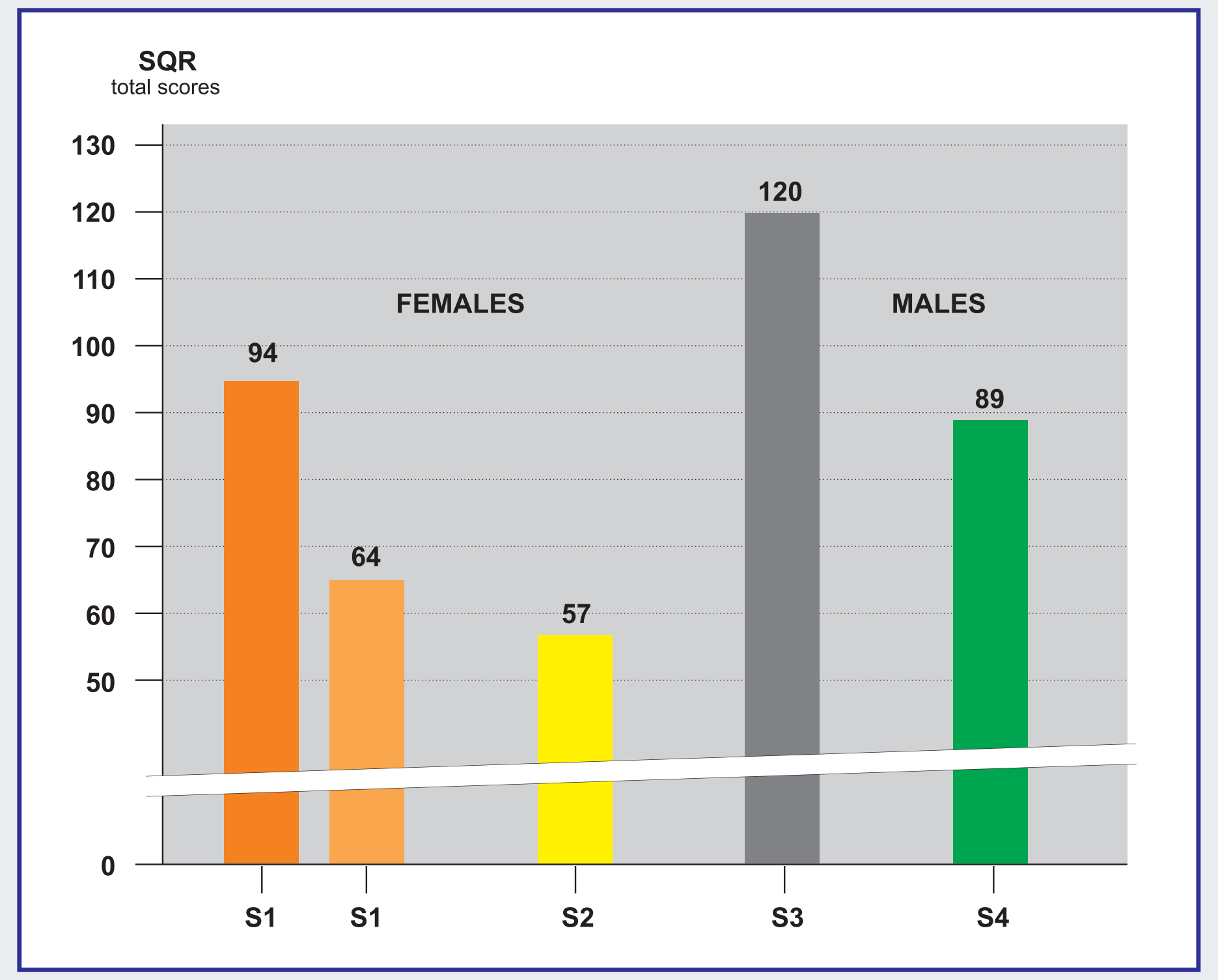

Figure 1. SQR total scores for flood victims (N=4)

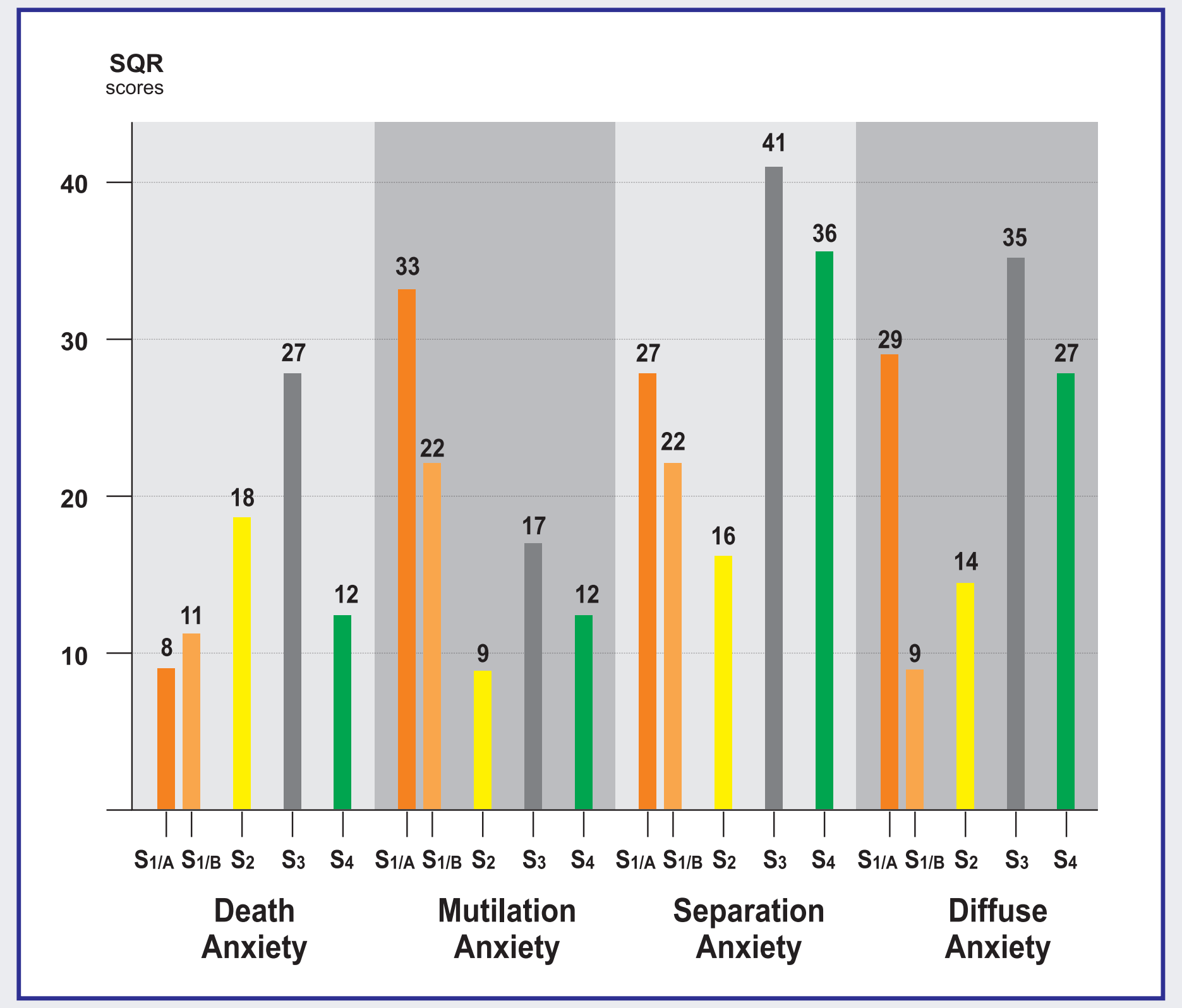

Figure 2. SQR detailed anxiety scale results for flood victims (N=4)

The highest anxiety (SQR total score: 120) was found fopr that middle age male who lost two relatives in the flood and his wife was also in mortal danger.

The emotionally most stable old female (SQR total score: 54) lost her house in the food. In this and all other anxiety measures (see Figure 2), she had the lowest content analytic anxiety indexes.

The posttraumatic stress decreased with 31.9% after three years (SQR total score from 94 changed to 64) for that 83 year-old female who lost all her properties in the flood.

Death anxiety, separation anxiety, and diffuse anxiety scores reached the highest level in the narrative on the flood given by that middle age male who lost two close relatives in it.

Comparison of the (two) old female flood victims:

While the 80-year-old female survived mortal danger, the 73-year-old female had to realize the disappearance of her house in the food.

- Mutilation Anxiety,

- Separation Anxiety and

- Diffuse Anxiety as well varied from 33 to 27 points for that old female who was escaped from the flooded house by her grand son. The same anxiety measures equaled with 18, 9, 16, and 14 in the second person's narrative on the flood.

Middle age eye witness of the flood (with no long lasting property loss consequences) spoke about the catastrophe with extremely low (12, 12) death anxiety and mutilation anxiety, and medium to high Separation-, and Diffuse anxiety (36, 27)

Narrative psychological data

Table 2. Number of nouns connected to first person singular in possessive case (my mother…) in narratives on the flood given by four survivors [The linguistic marker of the self-reference (Ehmann, 2002a)]

Order of the possessive nouns in first person singular	**Subject A** 80-year-old female survivor (lost all belongings)		**Subject B** 73-year-old female (her house was swept away by the flood)	**Subject C** Middle-age male inhabitant (lost two female relatives in the flood)	**Subject D** (male) Owner of the pension, member of the church committee
	Interview 3 weeks after the flood	Interview 3 years later			
1	my prayer books	my prayer books	my house)	***our grandparents**	**my mother**
2	my carpets	our house	my house	**my son**	in my life
3	my knee	**my daughter in law**	**my brother**	**my son**	
4	my knee	**my daughter in law**	my house	**my wife**	
5	**my daughter in law**	**my grandson**	my neighbor	**my wife**	
6	**my grandson**	**my grandson**	**my father**	**my brother in low**	
7	with my hand	my colander	**my father**	**my sister in law**	
8	my force		**my mother**	**my brother in law**	
9	my program		**my brothers**	**my wife**	
10	my rosary		**(my father)**	**my grand parents**	
11	**my grandson**		**my father**	my firewood	
12	my thorax		**my brothers**	my dept	
13	**my daughters**			my time	
Number of mentioned relatives / generations	**3 Subjects (two times who saved her life) (one generation)**	**2 Subjects (two times who saved her life) (one generation)**	**3 Subjects (eight times) (two generations)**	**5 Subjects (nine times) (three generations)**	**1 Subject (once mentioned) (one generation)**

** Relatives in the narratives are signed by bold letters.*

The self-reference/ self-involvement markers (number of the mentioned subject) reveal the different level of the emotional stress. Loosing properties (3 Ss.), loosing the house (3 Ss.), loosing relatives (5 Ss.) result in mentioning 3-5 subjects. The eye witness's story contains only one relative.

Illustration

S. A / 80-year old female survivor's narrative (lost all belongings)

(1) 2-weeks later: "Once I heard it was thundering and lightning. I took out some holy water and sprinkled the wall of the house. ... when I returned, I lay down and I kept praying again. … When they took me I grabbed the wooden jamb of the door with my hands. I did not want to leave my house at all. … Then they took me and brought me upstairs. … There I prayed again in the attic and asked God to save me. … The rosaries from the table were moved up to the top of the electric meter and they stayed there."

["És egyszer hallom, hogy dereg, villámlik. Szentelt vizet vittem ki, s úgy megsprickoltam a ház oldalát….. visszajöttem és ledőltem é, s megint imádkoztam tovább. … Ők megfogtak, s én az ajtófélfát megtámasztottam a két kezemmel. Semmiképpen nem akartam kimenni. Aztán ők ketten megfogtak és felvittek a lépcsőn. … S ott imádkoztam a padláson és kértem a Jóistent, hogy mentsen meg. …. Az asztal tetejéről az olvasók (rózsafüzérek) fékerültek a villanyórára, s ott megmaradott."]

(2) 3 years later: "I reckoned I put those things what could be saved up on the table or up on the bed. … I saw that [the flood] was braking, not braking, but tearing up trees by the roots from the bank of Nyikó [small river in the village], big walnut-trees, big beech-trees, big alder trees, and swept them away. … The water level in the yard reached 2 meters 19 centimeters. … It reached the ceiling in the room … Everything what was earlier in this room was all gone, nothing left. … Praised be to God that He saved me!"

[„…Hát gondoltam, ami menthető azt felrakom az asztalra, vagy az ágyra. …láttam, hogy a Nyikó partról a nagy diófákat, a bükkfákat vagy az egerfákat törte ki, nem kitörte, kicsavarta a töviből, és vitte. … A víz 2 méter 19 centi volt az udvaron. A szobában …itt egészen a plafonig ért. … minden ami addig volt ebben a szobában semmi, abból semmi sincs meg, … Legyen áldott szent neve Istennek, hogy engemet megőrizett."]

S. B/ 73-year-old female (her house was swept away by the flood)

" …when I came out of our gateway the flood had already been running through the village. I didn't dare to go away because I was afraid that something would knock me down. …I headed to the bridge. … I went across and returned on the other side … to my neighbors … they took me upstairs. We were watching [what was going on], believe me, it was like a sea, a real mud sea. ….I looked up in the direction of Gyergyó [a mountain] and saw an empty land, but I had never thought that the flood would have taken my house. … The house was over there where the rocks are. …My house disappeared. … There was a huge rain in 1913 too, but neither buildings nor people were swept away.

"… amikor kijöttem a kapunkon a víz már ment keresztül a falun.. S nem mertem elmenni, hogy nehogy valami elüssön. … Lekerültem a hídhoz … keresztülmentem és a Nyikó mellett jöttem vissza… a szomszédokhoz. …Kiszedett és felvitt az emeletre. Ott néztük, és tessék elhinni, hogy tiszta tenger volt, sártenger. …Én felnéztem Gyergyó felé és láttam, hogy olyan üresség van, de hát halvány fogalmamba se lett volna, hogy a házamat elvitte a víz. … a ház itt volt szembe, ahol a kövek vannak, innen az enyémet is elvitte. …-.(19)13-ban is volt nagy eső, de ilyen hogy épületet, vagy valakit elvigyen ilyen nem volt, nem."

S. C / Middle-aged man's interview fragments after the rainstorm – flood. Lost two close relatives.

We were really unlucky on that catastrophic day. Our grandparents had never talked about such an extreme or any similar event. … While I was watching what was happening I realized there was no escape. I suffered so much … the flood started to move everything among the houses, I knew that it would smash everything to pieces … I was really afraid that our house would be swept away with my wife inside. Then it finally turned out that my wife's sister disappeared in the water, at the age of 49 … The house was completely demolished by the flood. … Nobody knows what kind of death was theirs. The house collapsed because it was hit by the falling pole. And when the flood reached them they were still conscious. It is impossible to cope with such a trauma. My wife is very depressed she has no joie de vivre at all. Everything is gone what we had put together during 18 long years.

"Azon a katasztrofális napon sajnos elég szerencsétlenül jártunk. …Nagyszüleink visszamenőleg soha se emlegették, hogy valami ekkora, vagy ehhez hasonlódolog történt volna. … Olyan katasztrófán mentem keresztül, amíg láttam, nincs mentség. … a víz kezdett mindent áthozni az épületek között , tudtam, hogy tör-zúz mindent, akkor én azt mondtam a házat is viszi, és a feleségem is ott van. Így is a feleségem testvérét elvitte a víz, 49 évesen. …Az áradat a házat úgy mindenestül vitte. … Azt, hogy ők milyen halt éltek át azt senki se tudja … A ház megomlott, mert ugye rádőlt az oszlop, amikor bekezdte a víz a házat, akkor még észnél voltak. … Feldolgozni se lehet. A feleségem úgy van, hogy semmi életkedve nincs. Amit gyűjtöttünk 18 év alatt az oda van minden."

S. D / Owner of the pension, member of the church committee, male. Eye witnessed the destruction of the village.

In the neighborhood everywhere in the gardens there was 2,5-3 meter high water …where we are now four buildings are missing… Religious people could say it was a punishment from God, but the Székely (i.e. Magyar of Eastern Transylvania) people have got backbone and working hard from dawn till dusk. So five weeks later – as you can see – we try to get back on the ground. Thanks to God it didn't happen at night because lots of people could not have been saved …the water came with such power…and I will always remember how the flood demolished here the houses and everything… the water level suddenly increased one meter …then it was the most dangerous moment because we could see that there was no way to escape.

"… minden ember udvarán itt a környékben, ami látszik legalább 2 és fél három méteres víz rohant be. … ahol most vagyunk, hiányzik négy épület … Aki vallásos ember, az azt tudja mondani, hogy ez egy fenyítés volt a Jóistentől, de hát a székely ember olyan hogy gerinces, talpal reggeltől estig és megpróbáltunk, már az ötödik héten – már amennyire itt látszik – talpra állni. … S még hálát adunk a Jóistennek, hogy nem éjszaka történt, mert akkor a sok embernek nem lett volna menekvése … a víz akkora erővel jött, … hogy mindig ez marad fent mindig az életemben, hogy láttam ezeket, a házakat, hogy ütötte szét. …hirtelen egy métert nőtt szintje a vízállásnak … akkor volt a legsúlyosabb, mert akkor már láttuk, hogy menekvés nincs.."

Comparison of quantitative and qualitative content analysis methods

The Gottschalk and Gleser quantitative content analysis results and the narrative psychological qualitative content analysis describe similarly the two levels of the posttraumatic stress experience. The first gives more detailed picture both about the traumatic event and the psychological stress reaction (right after the flood and three years later). The narrative content analysis gives new insights into the psychological processes by the help of linguistic way of thinking.

Conclusions

In practical psychological work and research on coping with stress both approaches have their solid positions. The application of these two paradigms together seem to be fruitful

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