

From Crisis to Resilience: Learnings from Experiences of Flood Survivors in Pakistan

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Background of the studies

- A Series of studies were conducted to understand the socio-political dynamics of super 2010 riverine flood and 2022 monsoon floods in Pakistan
- Sequential Mixed Methods Studies were conducted to determine which factors best predict life recovery of flood survivors, effects of flood experience (exposure) on level of trust (institutional, social, political) and community bonding.
- Qualitative study were conducted to explore the lived experiences of flood survivors particularly emergent social processes due to disaster aid distribution

Background of the studies

- Disaster Recovery, a contested concept
- Definitional and dimensional/multisectoral aspects of recovery
- Instead of utilising a ‘top-down’ approach—that is, measuring recovery technically using aerial images and remote sensing—researchers should employ a bottom-up methodology, measuring recovery at the individual or household level (Gismondi, 2012)

Background of the studies

- Aggregated measures are misleading as well
- We our study involved a more individual level/subjective recovery *Life recovery*
- Life recovery captures the social aspect of recovery at the level of the individual rather than of the community (Nakagawa and Shaw, 2004; Olshansky and Chang, 2009; Ruiter, 2009).
- Life recovery involves a self-assessment of the recovery of everyday life, health, livelihoods, and quality of life. The concept has three dimensions: (i) **life readjustment**; (ii) **life quality**; and (iii) **optimism** about the future (Tatsuki and Hayashi, 2000).

Materials and methods

- ***Survey (Semi-structured interview schedule)***
- ***In-depth interviews and focus group discussions, key informant interviews, personal observation***

Materials and methods

- **Control variables** (gender, annual income, education, family size, number of livestock heads, occupation, landholding, period of return to home and home-stability).
- **Flood experience/exposure measure**
 - Psychological /subjective trauma
 - Material loss

Materials and methods

- **Post-disaster social support scale** (Akbar and Aldrich, 2018; Kaniasty and Norris, 2000, Norris et al.,2001; Kaniasty, 2012)
- **Post-flood social trust scale** (Nakagawa and Shaw ,2004)
- **Post-flood political trust scale** (Nakagawa and Shaw ,2004)
- **Post-flood Formal aid scale** (Ahmad and Ma, 2021, Muzamil et al.,2021)
- **Community cohesion scale** (Kaniasty, 2012).

Materials and methods

- **Interview guide** (personal accounts before, during and after, previous flood experience, effects of flood on family, damages caused by floods, coping strategies, disaster assistance/aid)

Data analysis

- Statistical analysis (inferential statistics)
- Thematic analysis

Statistical analysis

Predictor variables	Model 1	Model 2	Model 3	Model 4
Gender	0.134*** (0.000)	0.100** (0.001)	0.133*** (0.000)	0.101** (0.001)
Education	0.099* (0.016)	0.069 (0.059)	0.109* (0.005)	0.080* (0.023)
Occupation	-0.255*** (0.000)	-0.194** (0.000)	-0.247*** (0.000)	-0.190*** (0.000)
Landholding	-0.001 (0.975)	-0.002 (0.942)	-0.036 (0.271)	-0.029 (0.321)
Family size	0.063 (0.053)	0.075* (0.010)	0.063* (0.041)	0.075* (0.007)
Livestock heads	0.061 (0.064)	0.077** (0.008)	0.036 (0.255)	0.055* (0.054)
Annual income	0.173*** (0.000)	0.147*** (0.000)	0.181*** (0.000)	0.155*** (0.000)
Stability of home	0.446*** (0.000)	0.308*** (0.000)	0.336*** (0.000)	0.217*** (0.000)
Trauma experience	0.126*** (0.000)	0.078** (0.007)	0.113*** (0.000)	0.069* (0.013)
Material loss	-0.107*** (0.000)	-0.036 (0.225)	-0.144*** (0.000)	0.073* (0.012)
Level of trust post flood	–	0.345*** (0.000)	–	0.329*** (0.000)
Social support received post flood	–	–	0.215*** (0.000)	0.192*** (0.000)
F-statistic	80.776***	101.272***	84.744***	105.616***
R-squared	0.648	0.718	0.681	0.744
N	449	449	449	449

Statistical analysis

Predictor variables	Model 1	Model 2	Model 3	Model 4
Education	0.234*** (.000)	0.177*** (.000)	0.23*** (.000)	.182*** (.000)
Landholding	0.10 (.008)	0.003 (.316)	0.011** (.002)	.005 (.166)
Family size	0.025* (.034)	.024* (.025)	0.024* (.043)	.023* (.030)
Livestock heads	0.024 (.071)	0.242 (.999)	0.019 (.166)	-.004 (.732)
Annual income	3.418*** (.000)	3.151*** (.000)	3.568*** (.000)	3.275*** (.000)
Period of return to home	-.006** (.007)	-.007*** (.000)	-.005* (.035)	-.006** (.003)
Trauma Experience	0.09** (.008)	.08** (.009)	0.087** (.010)	.078* (.010)
Material loss	-.181*** (.000)	-.205*** (.000)	-.175*** (.000)	-.200*** (.000)
Social support	-----	.468*** (.000)	-----	.0461*** (.000)
Formal support	-----	-----	.513** (.002)	.049** (.005)

Findings

- Statistical analysis showed that *period of return to home* and *material loss* had a **negative** effect on the life recovery of flood victims. While **annual income** of the respondents, **family size** and social capital (*social support*) had a **positive effect** on their life recovery feelings.
- Analysis also revealed that *formal disaster support* had a very **negligible effect** on the life recovery the respondents as compared to received social support.
- The effects of **annual income** on life recovery feelings remained almost constant and significant in all the regression models which depicts the importance of personal resources to recover from disaster.

Results of qualitative studies

- *Personal resilience*
- *Belief systems*
- *Activation of bonding social capital*
- *Formal support*
- *Previous flood experience (indigenous knowledge)*

Results of qualitative studies

- Targeting the right beneficiaries
- Cultural issues (social stigma/shame/guilt, women head of the household, casteism, tribalism)
- Loss/unavailability of CNIC/ownership documents
- Issues of damage assessment
- Delay in assistance provision makes it less effective
- Political/feudal patronage

Key take away for today

- Like disaster aid/assistance, the **water** is also a scarce resource
- We found that access to disaster aid was preferential and politically motivated.
- The processes involved in disaster aid distribution were entangled in power structure.
- A policy of “ **water diplomacy**” involving all the stakeholders (landlords, tenants, revenue clerk (anhar-patwari), politicians, local social leaders) may work well to tackle the water scarcity .
- **Role of panchayat/jirga**

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- Assessing the role of socio-demographic characteristics, social support and formal disaster assistance in predicting the subjective recovery of flood survivors in Pakistan (Submitted to Journal)

Thank you for attention!