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Prevention of child mental health problems in Southeastern Europe – Adapt, Optimize, Test, and Extend Parenting for Lifelong Health (PLH)



Hunger in vulnerable families in Southeastern Europe: Associations with health and violence

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Background

Food insecurity and hunger are major public health concerns, especially in families with children. Hunger can co-exist with other determinants of child health, such as economic hardship, violence within the family, maternal (mental) health and lack of social capital^[1]. Together these social and environmental factors may reflect a context of family adversity^[2]. While the majority of research has been conducted in high income countries with vulnerable populations, less is known about the circumstances in low-and-middle-income countries in Southeastern Europe.

Aim

This study simultaneously examined associations between four sets of risk factors – lack of financial, mental, social and familial resources – and the experience of hunger in vulnerable families in North Macedonia, Republic of Moldova and Romania.

Methods

Study Design & Participants

- Pilot feasibility study – baseline data, structured interview
- N=140 families with children aged 2-9 years old, living in North Macedonia, Republic of Moldova or Romania (see Table 1)
- Recruited for a parenting intervention targeting child behavioural problems; through flyers; referrals (e.g. psychologist, teachers); Facebook pages; radio/TV advertisement; word-of-mouth; NGOs/ governmental organisations working with children and parents.

Measures

- Experience of hunger (3 items, e.g. “In the past 30 days, did you run out of money to buy food for your home?”)
- Harsh parenting (physical and emotional abuse, neglect; 14 items)
- Intimate partner violence (IPV: victimisation, perpetration; 19 items)
- Parent mental health (21 items) & well-being (5 items)
- Emotional support (8 items) & family functioning (12 items)

Table 1: Sample characteristics separated by country (N = 140)

	Macedonia n (%) or M (SD)	Moldova n (%) or M (SD)	Romania n (%) or M (SD)
Child age	5.7 (1.8)	6.3 (2.1)	5.5 (2.1)
Child gender (female)	26 (52.0)	26 (60.5)	25 (53.2)
Parent age	36.7 (4.3)	34.3 (7.5)	34.6 (9.8)
Parent gender (female)	47 (94.0)	43 (100)	47 (100)
Education level (no university/college)	18 (36.0)	15 (34.9)	35 (74.5)
Literacy level (cannot/only read with difficulty)	6 (12.0)	4 (9.3)	22 (46.8)
Number of children living in the household	2.2 (1.7)	1.9 (0.9)	2.6 (1.7)
Harsh parenting ^a – physical (yes)	36 (72.0)	32 (74.4)	31 (66.)
Harsh parenting ^a – emotional (yes)	49 (98.0)	41 (95.3)	43 (91.5)
Harsh parenting ^a – neglect (yes)	11 (22.0)	7 (16.3)	13 (27.7)
Victimisation ^b	Mdn 2, IQR 7	Mdn 1, IQR 7	Mdn 2, IQR 7
Perpetration ^b	Mdn 2, IQR 4	Mdn 1.5, IQR 6	6Mdn 2, IQR 8
Well-being score ^c	50.3 (15.4)	54.9 (21.2)	54.3 (20.2)
Depression, anxiety, stress score ^d	29.8 (18.5)	32.6 (19.5)	30.8 (20.4)
Family functioning score ^e	1.9 (0.4)	2.1 (0.5)	1.8 (0.5)
Emotional support score ^f	4.0 (0.6)	3.0 (1.1)	3.8 (1.2)
1. Run out of money to buy food (yes)	11 (22)	15 (35)	25 (53)
2. Cut size or skip meal (yes)	10 (20)	10 (23)	13 (28)
3. Child or parent go to bed hungry (yes)	8 (16)	4 (9)	11 (23)
Experienced at least one form of hunger in past 30 days ^g (yes)	9 (18)	12 (28)	23 (49)

Note: Statistically significant group differences at p < 0.05 are presented in bold; tested with ANOVA for continuous variables and chi-square test for categorical variables
^a Based on ISPCAN Child Abuse Screening Tool-Intervention scale (ICAST-I) and the Child Maltreatment Screener
^b Adapted from the Brief Screening Instrument for Partner Maltreatment and the revised Conflict Tactics Scale
^c WHO-5 Well-Being Scale
^d Depression, Anxiety and Stress Scale
^e General functioning subscale of the Family Assessment Device short form
^f Emotional support subscale of the Medical Outcome Study Social Support Survey
^g Based on the Hunger Scale

Table 2: Hierarchical logistic regression for the experience of hunger

Variables	With IPV victimisation				With IPV perpetration			
	B	W _X ²	OR	95% CI	B	W _X ²	OR	95% CI
Step 1 – socio-economic / demographic	Nagelkerke R ² = 0.58				Nagelkerke R ² = 0.58			
Education level (university)	2.63	9.31*	13.79	2.56-74.44	2.61	8.94*	13.59	2.46-75.17
Literacy level (can read)	2.23	5.80*	9.33	1.52-57.39	2.39	6.78*	10.90	1.81-65.80
Number children in household	0.58	6.20*	1.79	1.13-2.82	0.58	6.30*	1.78	1.14-2.80
Country 1 (Moldova vs. other)	-0.39	0.16	0.68	0.10-4.71	-0.11	0.01	0.90	0.14-5.97
Country 2 (Romania vs. other)	-1.58	2.78	0.21	0.03-1.32	-1.38	2.20	0.25	0.04-1.56
Step 2 – family violence	Nagelkerke R ² = 0.64				Nagelkerke R ² = 0.63			
Child neglect (previous neglect)	-1.21	1.74	0.30	0.05-1.80	-1.06	1.41	0.35	0.06-2.00
IPV (log transformed)	1.14	1.58	3.11	0.53-18.29	0.91	1.17	2.49	0.48-13.07
Step 3 – mental health	Nagelkerke R ² = 0.68				Nagelkerke R ² = 0.67			
Depression, anxiety, stress score	0.05	4.21*	1.05	1.00-1.10	0.05	4.50*	1.05	1.00-1.11
Well-being score	-0.01	0.35	0.99	0.94-1.03	-0.01	0.14	0.99	0.95-1.04
Step 4 – social support	Nagelkerke R ² = 0.74				Nagelkerke R ² = 0.74			
	Goodness of fit χ^2 (df) = 92.45 (11)*				Goodness of fit χ^2 (df) = 92.04 (11)*			
Family functioning score	-0.14	0.02	0.87	0.12-6.52	0.25	0.06	1.28	0.17-9.44
Emotional support score	-1.52	7.37*	0.22	0.07-0.66	-1.59	7.86*	0.20	0.07-0.62

Note: Only variables that showed a significant univariate relationship with experience of hunger were included in the hierarchical logistic regression model.
 Abbreviations: B= unstandardised regression coefficient; W_X²= Wald χ^2 -test; OR= Odds ratio; 95% CI= 95% CI for Odds ratio.
 * p < 0.05, presented in bold.

Discussion

- Hunger is an issue for families participating in a parenting intervention in 3 low-and-middle-income countries
- 31% of the total sample experienced at least one type of hunger in the past month, while 6% experienced all three forms
- 5 risk factors remained simultaneously significantly associated with the experience of hunger (see Table 2) – 3x socio-demographic, 1x mental health, 1x social and family support
- Family adversities have been shown to cluster (e.g. economic hardship, food insecurity, depression, family violence, child behaviour problems) [3, 4, 5]
- In adapting parenting interventions to address child behaviour problems, hunger and its associations with mental health, social support and family violence should be considered
- Modelling of complex interrelationships is warranted with larger samples
- Use of audio-CASI helped with low literacy and prevent underreporting
- Translated/back-translated questionnaires were valid in our sample

References & Acknowledgements

[1] Jackson et al. Health Educ Behav 2018;45(5):756-763; [2] Chilton et al. Public Health Nutr 2015;18(14):2643-2653; [3] Hernandez et al. Womens Health 2014;23(1):29-37; [4] Anderson et al. Soc Psychiatry Psychiatr Epidemiol 2016;51(7):961-970; [5] Melchior et al. Pediatrics 2009;124(4):e564-572

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