

# Exploring victimization patterns with Latent Class Analysis: new approaches to elder abuse

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# Background

- Elder abuse as a public health issue.
- Associated with adverse health and social outcomes.
- Findings are often complex and contradictory.
- Abuse as a multidimensional:
  - different abusive behaviours, victims, perpetrators and settings.
- Interventions efficacy can be enhanced by identifying patterns and configurations.

## Objective

Identify victimization patterns and distinct elder abuse configurations

- abusive behaviours
- relationship with the perpetrator

# Methods

## Study design and setting

	Population based survey	Victims' survey	
Sample	<b>Sampling</b>	Probability sample stratified by seven geographic regions	Convenience sample of individuals using the services of four institutions
	<b>Sample size</b>	1123	510
Data collection	<b>Method</b>	Telephone interviews	Face-to-face interviews
	<b>Instruments</b>	Structured questionnaire	Structured questionnaire
	<b>Time period</b>	October 2012	November 2011 to March 2013

### Ageing and violence study (2011-2014)

Departamento de Epidemiologia, Instituto Nacional de Saúde Doutor Ricardo Jorge  
Fundação para a Ciência e a Tecnologia (FCT) (PTDC/CS-SOC/110311/2009)

# Methods

## Measures

Stealing or using property without consent  
Undue household appropriation



Financial

Physical aggression  
Hindering of speaking or meeting someone



Physical

Threatening  
Verbal aggression, insulting, humiliating  
Ignoring or refusal to talk



Psychological

Perpetrators

Spouse/partner

Children/grandchildren

Others (other family members, friends, neighbours, work colleagues,  
paid professionals and volunteers)

# Methods

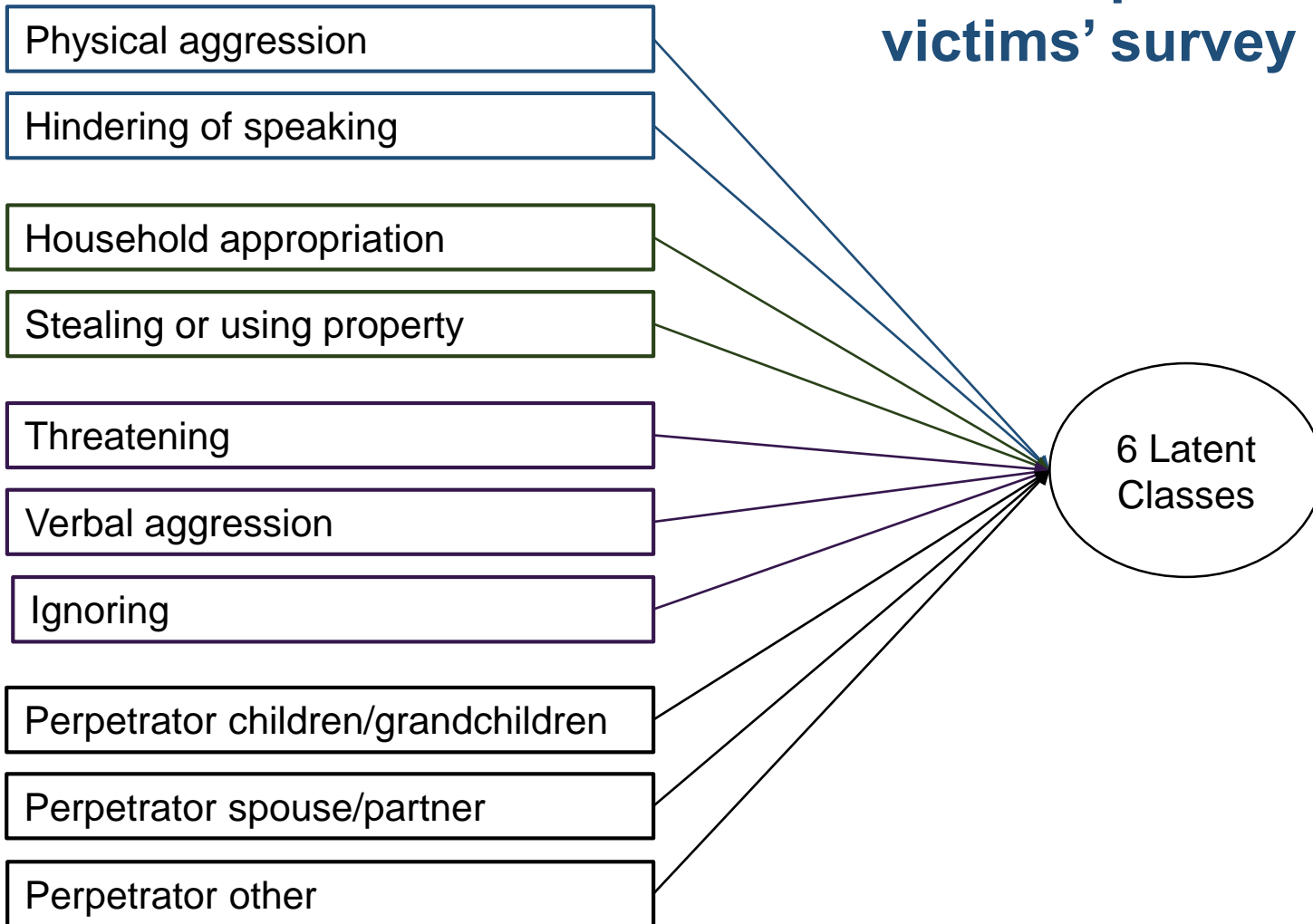
## Statistical analysis

Latent Class Analysis (LCA) was used to categorize victimization

- in the population-based (N=245) and in the victims' sample (N=510);
  - using 7 items measuring abuse and appointed perpetrators (3 items).
1. The number of distinct abuse subtypes (classes,  $k$ );
  2. The relative size of each subtype (proportion of self-reported victims within each class); and
  3. The distribution of characteristics within each subtype (probability of each of the items based on class membership,  $\rho$ ).

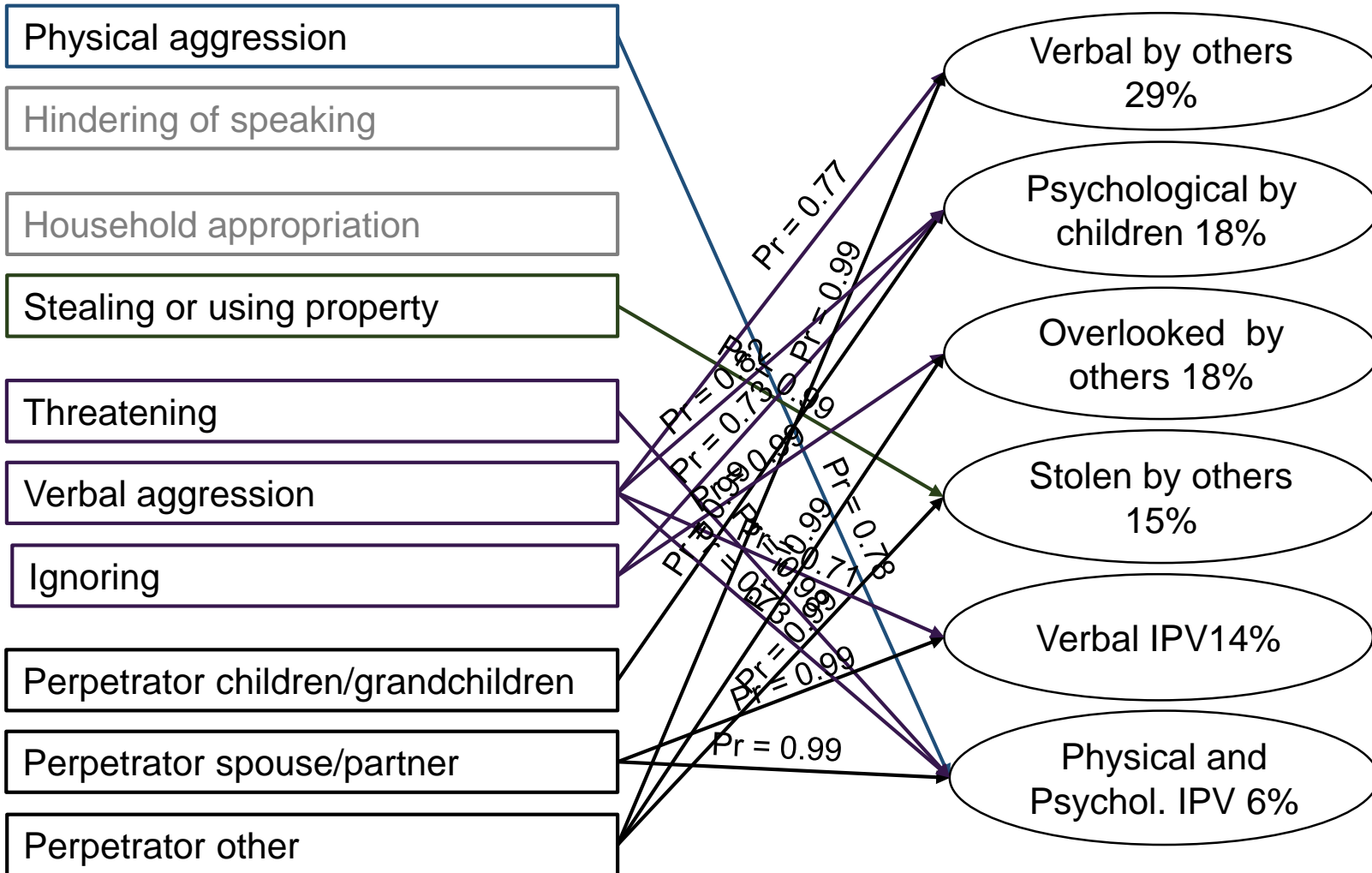
# Results

## LCA: Population-based and victims' survey



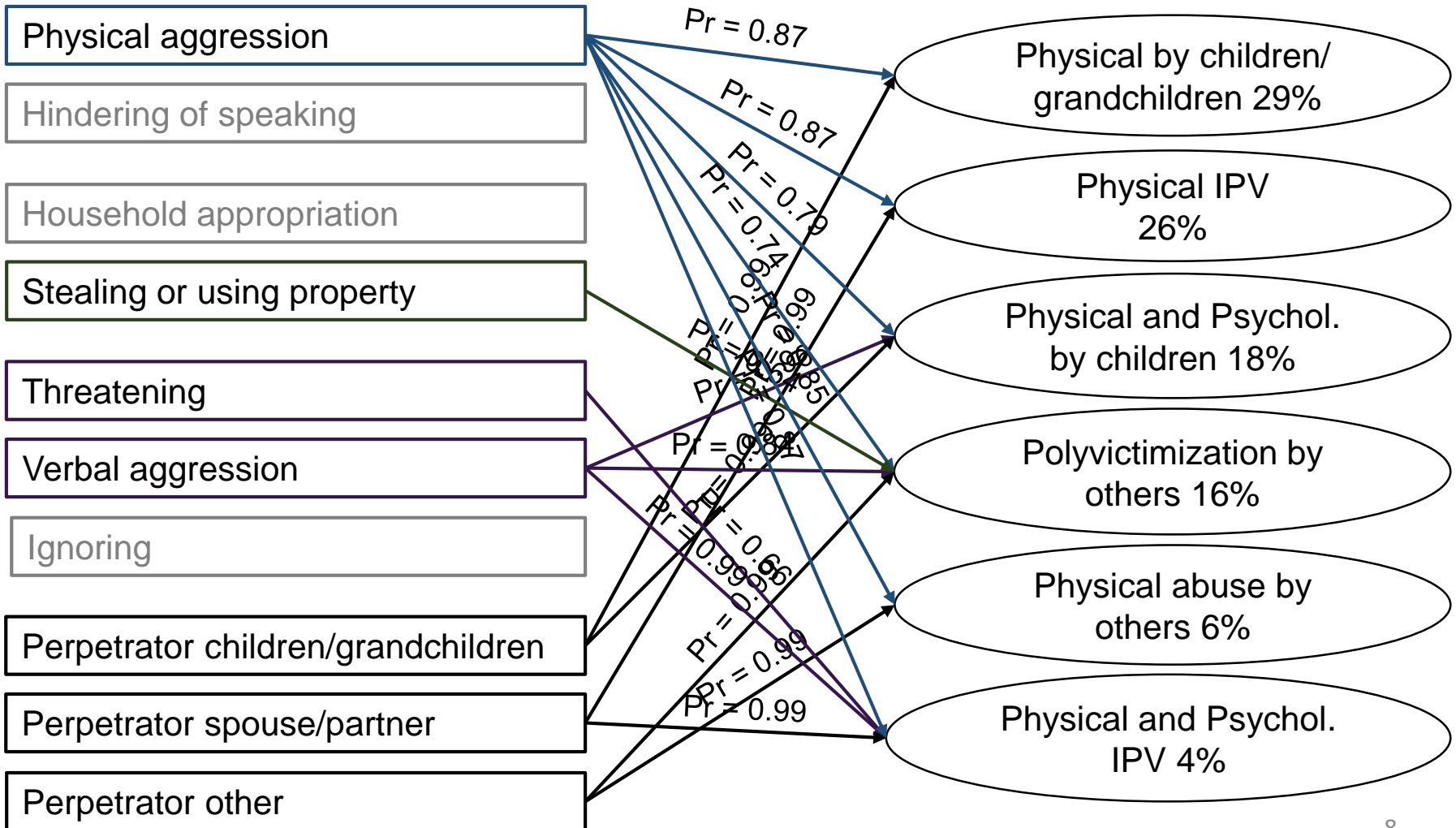
# Results

## LCA: Population-based survey



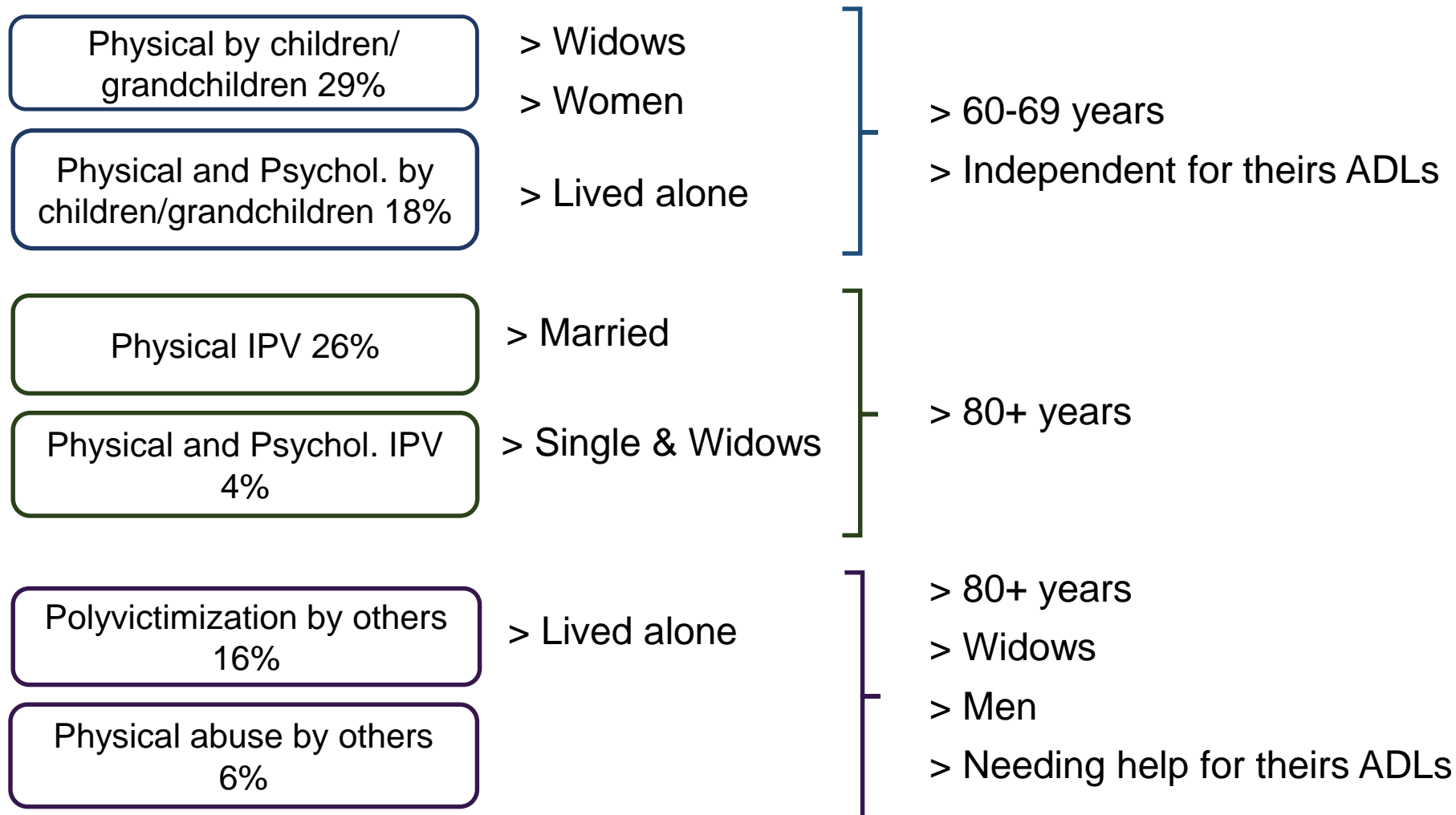
# Results

## LCA: Victims' survey



# Results

## LCA victims' survey and victims characteristics



# Discussion

- Statistically and plausibly distinct **six different latent classes** (Population-based and victim' survey).
- **Distinct victims' groups:** elder abuse victims seeking help and individuals included in population-based studies.
- Appointed **perpetrators** may be the most relevant aspect
- **Victimization experiences associated with different victims' characteristics.**
  - Women living alone being physically abused by their children and grandchildren.
  - Abuse grown old and IPV in older age?
  - Older males with dependency for their ADLs might be vulnerable to victimization experiences, particularly by individuals outside the nuclear family.

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Epidemiologia  
em um  
Contexto Global

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Setembro  
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LISBOA

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PORTUGUESA DE  
EPIDEMIOLOGIA

SE  
SOCIEDAD  
ESPAÑOLA DE  
EPIDEMIOLOGIA

Obrigada  
Gracias  
Thank you

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# Results

## Sample characterization

		Population N=245	Victims N=510
<b>Physical</b>	Physical aggression	14.8%	84.7%
	Hindering of speaking or meeting someone	7.8%	22.5%
<b>Financial</b>	Stealing or using property without consent	26.5%	36.4%
	Undue household appropriation	7.8%	25.8%
<b>Psychological</b>	Threaten	19.7%	38.6%
	Verbal aggression, insulting, humiliating	46.5%	62.0%
	Ignoring or refusal to talk	43.6%	36.6%
<b>Perpetrator</b>	Spouse/ partner	26.8%	48.2%
	Children/grandchildren	21.0%	42.3%
	Other	62.5%	9.5%

# Results

## LCA models population-based sample

Number of classes	3	4	5	6
Class membership probability	55%, 25%, 20%	18%, 27%, 28%, 27%	15%, 18%, 19%, 28%, 21%	15%, 14%, 18%, 29%, 6%, 18%
Log-likelihood	-1070.64	-1092.14	-1012.31	-995.23
G <sup>2</sup> Values	392.70	435.71	276.07	241.90
Entropy	92%	85%	91%	92%
AIC	456.71	521.72	384.07	371.90
BIC	568.75	672.27	573.14	599.49
SSABIC	467.31	535.96	401.96	393.43
df	991	980	969	958
BRLT ( <i>p</i> )	3*4 (.01)	4*5 (.01)	5*6 (.01)	6*7 (.08)

# Results

## LCA population-based sample

	Verbal by others		Psychological by children/ grandchildren		Overlooked by others		Stolen by others		Verbal IPV		Physical and psychological IPV	
	29%(N=70)		18%(N=44)		18%(N=44)		15%(N=38)		14%(N=35)		6%(N=14)	
	P	SE	P	SE	P	SE	P	SE	P	SE	P	SE
Physical aggression	0.18	0.05	0.09	0.04	< 0.005	< 0.005	< 0.005	< 0.005	0.23	0.07	0.78	0.14
Hindering of speaking/meeting	0.03	0.02	0.05	0.03	0.03	0.03	0.06	0.04	0.13	0.06	0.50	0.14
Threaten	0.29	0.06	0.29	0.07	0.01	0.02	< 0.005	0.01	0.01	0.05	0.98	0.05
Verbal aggression	0.77	0.06	0.82	0.08	0.01	0.02	0.01	0.03	0.71	0.08	0.73	0.14
Ignoring or refusing to speak	0.38	0.06	0.73	0.08	0.99	0.03	0.08	0.11	0.15	0.07	0.30	0.13
Stealing	0.12	0.04	0.35	0.07	0.02	0.09	0.99	0.02	0.03	0.03	0.21	0.11
Undue household appropriation	0.16	0.05	0.07	0.04	0.06	0.04	< 0.005	0.00	0.06	0.04	< 0.005	0.01
Spouse/partner	0.17	0.05	< 0.005	0.01	< 0.005	0.01	0.02	0.01	0.99	0.01	0.99	0.03
Children/ grandchildren	< 0.005	0.01	0.99	0.01	< 0.005	< 0.005	< 0.005	0.01	< 0.005	0.01	0.22	0.11
Other	0.99	< 0.005	0.18	0.06	0.99	0.01	0.99	0.01	0.02	0.06	0.01	0.04

# Results

## LCA models victim' survey sample

Number of classes	3	4	5	6	7
Class membership probability	24%, 48%, 28%	10%, 20%, 29%, 42%	10%, 20%, 28%, 17%, 26%	6%, 26%, 28%, 17%, 26%, 4%	6%, 18%, 4%, 17%, 26%, 3%, 26%
Log-likelihood	-2571.42	-2480.86	-2417.12	-2399.65	-2383.25
G <sup>2</sup> Values	641.79	460.66	333.19	298.24	265.45
Entropy	92%	92%	91%	91%	90%
AIC	705.79	546.66	441.19	428.24	474.45
BIC	841.29	728.74	669.85	703.48	739.26
SSABIC	739.71	592.25	498.45	497.15	498.03
df	991	980	969	958	947
BRLT ( <i>p</i> )	3*4 (.01)	4*5 (.01)	5*6 (.01)	6*7 (.04)	7*8 (.07)

# Results

## LCA victim' survey sample

	Physical by children/ grandchildren		Physical IPV		Physical and psychological by children		Polyvictimization by others		Physical abuse by others		Physical and psychological IPV	
	29%(N=148)		26%(N=133)		18%(N=96)		16%(N=85)		6%(N=29)		4%(N=19)	
	P	SE	P	SE	P	SE	P	SE	P	SE	P	SE
Physical aggression	<b>0.87</b>	0.04	<b>0.87</b>	0.04	<b>0.79</b>	0.04	<b>0.74</b>	0.12	<b>0.85</b>	0.08	<b>0.79</b>	0.03
Hindering of speaking/meeting	0.10	0.03	0.22	0.05	0.19	0.04	0.33	0.12	0.05	0.05	0.35	0.04
Threaten	0.01	0.03	0.08	0.03	0.61	0.05	0.57	0.16	0.01	0.03	<b>0.66</b>	0.06
Verbal aggression	0.03	0.06	0.25	0.10	<b>0.96</b>	0.04	<b>0.84</b>	0.13	0.08	0.10	<b>0.99</b>	0.01
Ignoring or refusing to speak	0.16	0.04	0.16	0.04	0.50	0.05	0.48	0.15	0.02	0.05	0.56	0.05
Stealing	0.31	0.06	0.20	0.05	0.55	0.05	<b>0.63</b>	0.13	0.31	0.10	0.32	0.04
Undue household appropriation	0.24	0.05	0.15	0.04	0.42	0.04	0.23	0.11	0.10	0.06	0.23	0.04
Spouse/partner	< 0.005	< 0.005	<b>0.99</b>	< 0.005	< 0.005	< 0.005	0.04	0.02	0.02	0.01	<b>0.99</b>	< 0.005
Children/ grandchildren	<b>0.99</b>	< 0.005	< 0.005	< 0.005	<b>0.99</b>	< 0.005	0.03	0.01	0.02	0.01	< 0.005	< 0.005
Other	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	<b>0.99</b>	0.02	<b>0.99</b>	0.01	< 0.005	< 0.005