



MAX PLANCK INSTITUTE  
FOR THE STUDY OF  
CRIME, SECURITY AND LAW



# FAMILY STRAIN AND YOUTHS' EXTERNALIZING BEHAVIORS: THE MEDIATING AND MODERATING ROLE OF PERCEIVED SOCIAL SUPPORT. A LONGITUDINAL PERSPECTIVE ON RISK AND RESILIENCE

Silletti F.\*, Eisner, M., Ribeaud, D., Shanahan, L., Cassibba, R., Musso, P.

\*[fabiola,silletti@uniba.it](mailto:fabiola,silletti@uniba.it)

# AGENDA



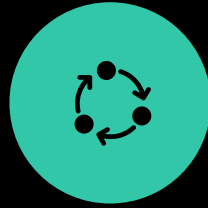
INTRODUCTION



AIM OF THE  
STUDY



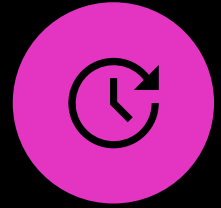
METHOD



RESULTS



DISCUSSION



STRENGTHS,  
LIMITATIONS &  
FUTURE  
DIRECTIONS

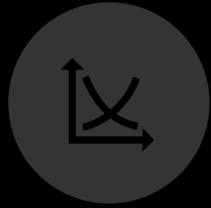
# AGENDA



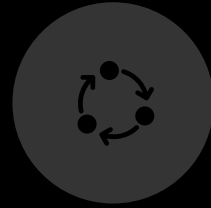
INTRODUCTION



AIM OF THE  
STUDY



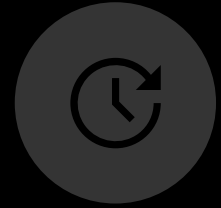
METHOD



RESULTS



DISCUSSION



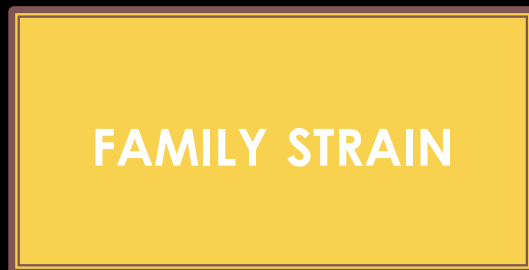
STRENGTHS,  
LIMITATIONS &  
FUTURE  
DIRECTIONS

# THEORETICAL NOTES

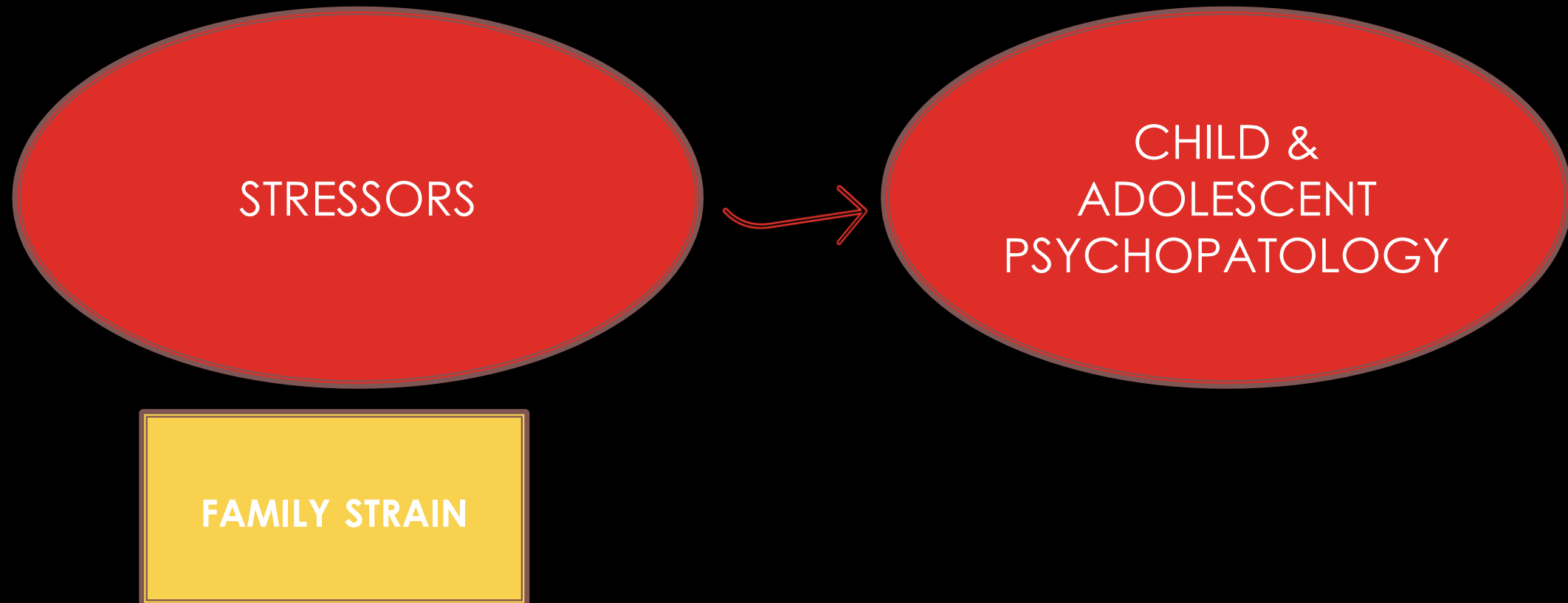


STRESSORS

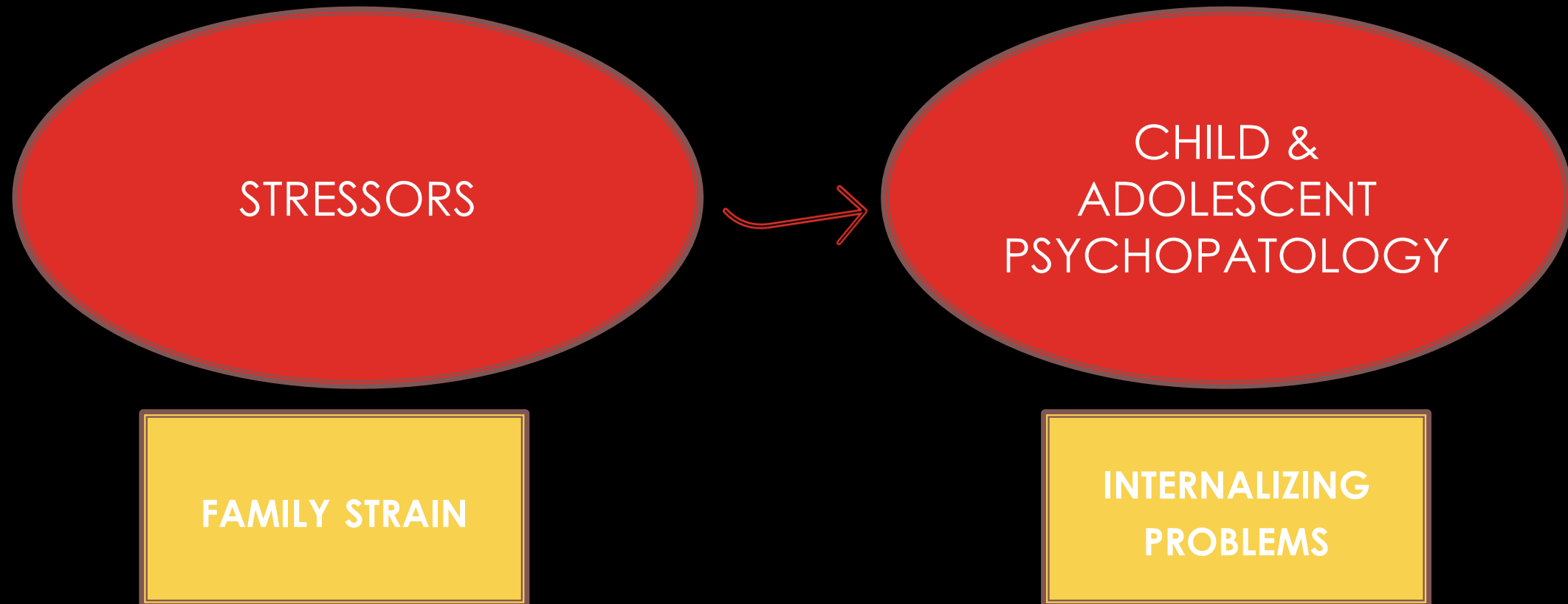
# THEORETICAL NOTES



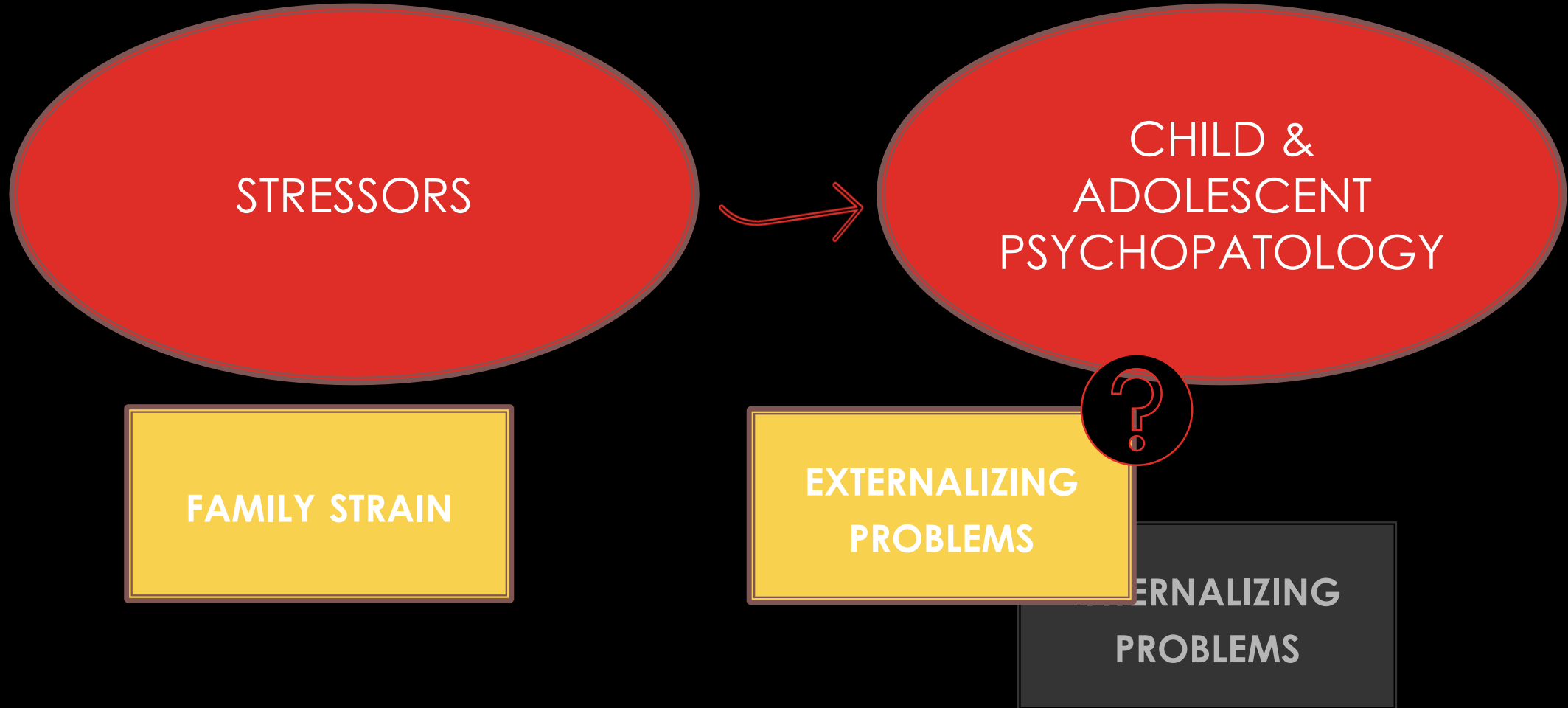
# THEORETICAL NOTES



# THEORETICAL NOTES

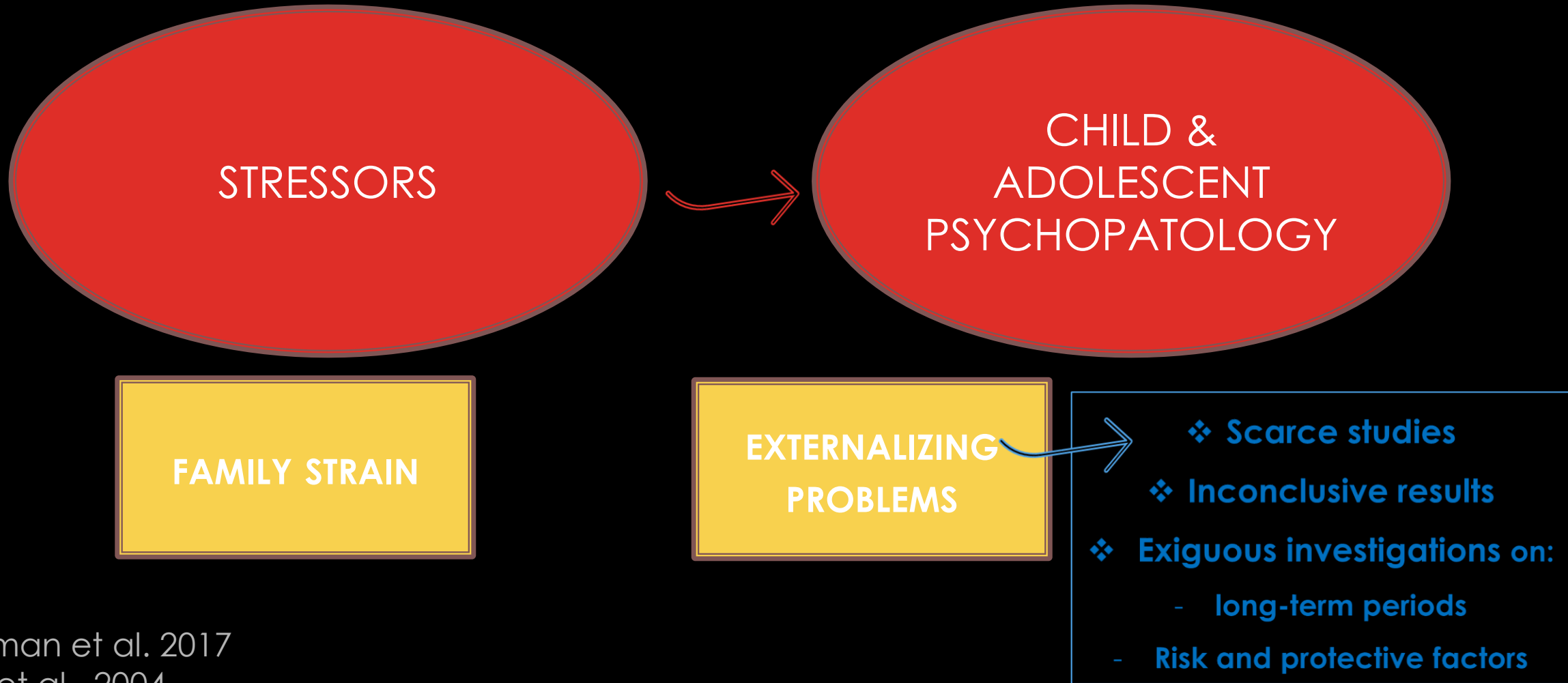


# THEORETICAL NOTES



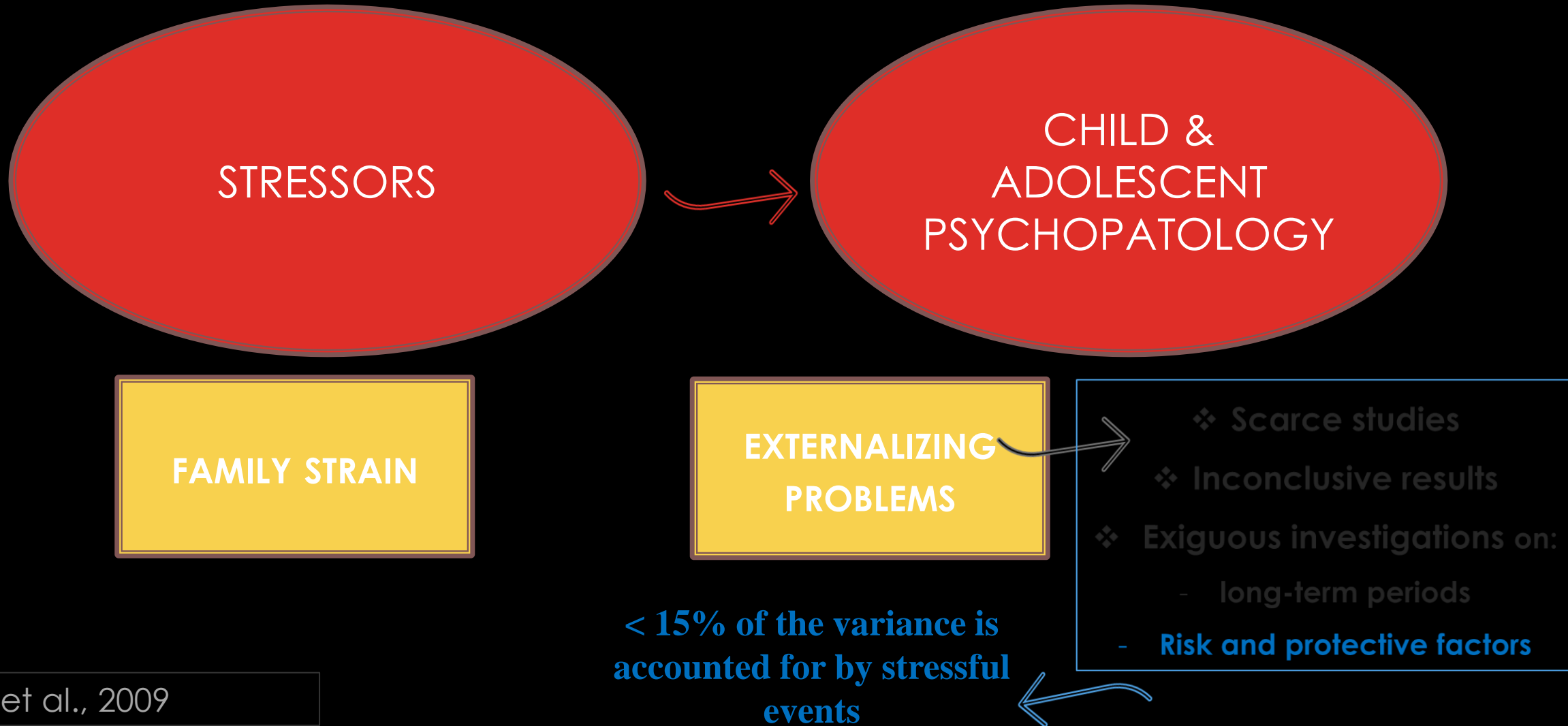


# THEORETICAL NOTES



Feigelman et al. 2017  
Grant et al., 2004  
Kim et al., 2003

# THEORETICAL NOTES



# SOCIAL-ECOLOGICAL THEORY OF DEVELOPMENT

(ROOTED IN BRONFENBRENNER'S ECOLOGICAL SYSTEMS THEORY)

SOCIAL ENVIRONMENT plays a crucial role in stressful life events and can determine the extent to which negative consequences influence adolescent development over time.

# SOCIAL-ECOLOGICAL THEORY OF DEVELOPMENT

(ROOTED IN BRONFENBRENNER'S ECOLOGICAL SYSTEMS THEORY)

**SOCIAL ENVIRONMENT** plays a crucial role in stressful life events and can determine the extent to which negative consequences influence adolescent development over time.

**SOCIAL SUPPORT** is mentioned most frequently in the literature as a factor that affects stress-related appraisals and coping mechanisms, moderating the impact of stressful events on health and adjustment.

Bronfenbrenner, 1979

Cohen, 2004

# SOCIAL-ECOLOGICAL THEORY OF DEVELOPMENT

(ROOTED IN BRONFENBRENNER'S ECOLOGICAL SYSTEMS THEORY)

**SOCIAL ENVIRONMENT** plays a crucial role in stressful life events and can determine the extent to which negative consequences influence adolescent development over time.

**SOCIAL SUPPORT** is mentioned most frequently in the literature as a factor that affects stress-related appraisals and coping mechanisms, moderating the impact of stressful events on health and adjustment.

Most research that has examined the protective impact of social support on adolescent adjustment has jointly considered a variety of support sources, including **FAMILY AND PEERS**, which represent critical social contexts for adolescents.

Bronfenbrenner, 1979

Cohen, 2004

Oliva et al., 2009

# LIMITATIONS OF PRIOR WORK

# LIMITATIONS OF PRIOR WORK

- most studies have focused on the protective effects of social support on **emotional adjustment** and only seldom on behavioral adjustment

# LIMITATIONS OF PRIOR WORK

- most studies have focused on the protective effects of social support on **emotional adjustment** and only seldom on behavioral adjustment
- a lot of studies considered **children**, but adolescence, with its several biological, psychological, and social changes and demands, represents a delicate phase of life characterized by increased interpersonal sensitivity and interpersonal stress, thus deserves credit for more investigations



# LIMITATIONS OF PRIOR WORK

- most studies have focused on the protective effects of social support on **emotional adjustment** and only seldom on behavioral adjustment
- a lot of studies considered **children**, but adolescence, with its several biological, psychological, and social changes and demands, represents a delicate phase of life characterized by increased interpersonal sensitivity and interpersonal stress, thus deserves credit for more investigations
- the few **results** on adolescents have been **inconsistent** since some studies have not found backing for a buffering effect of social support from family, while others do have
- Likewise, some studies found a buffering effect of social support from peers, whereas others do not.

# LIMITATIONS OF PRIOR WORK

- most studies with adolescents have focused only on a small segment of this timeframe, but considering the social tremendous changes occurring across adolescence, with family progressively competing with other sources of support (e.g., friends) that become more relevant, **wider periods** should be considered

# LIMITATIONS OF PRIOR WORK

- most studies with adolescents have focused only on a small segment of this timeframe, but considering the social tremendous changes occurring across adolescence, with family progressively competing with other sources of support (e.g., friends) that become more relevant, **wider periods** should be considered
- only one study has investigated the potential **mediating** role of perceived social support in the relationship between stress events and externalizing problems:
  - ❖ support from family mediates the relationships between exposure to community violence and externalizing problems,
  - ❖ the role of peer support was not investigated.

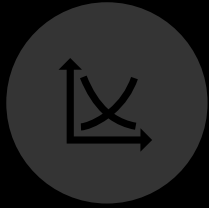
# AGENDA



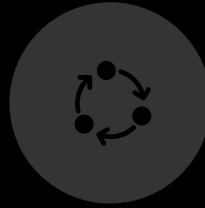
INTRODUCTION



AIM OF THE  
STUDY



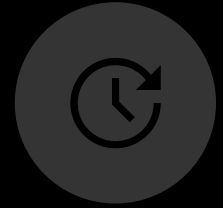
METHOD



RESULTS



DISCUSSION



STRENGTHS,  
LIMITATIONS &  
FUTURE  
DIRECTIONS

# AIM OF THE STUDY

RISK-AND-  
RESILIENCE  
FRAMEWORK

Early Adolescence

Middle Adolescence

Late Adolescence

Emerging Adulthood

STRESSFUL LIFE  
EVENTS:

Family Strain



EXTERNALIZING  
PROBLEMS:

Delinquency

# AIM OF THE STUDY

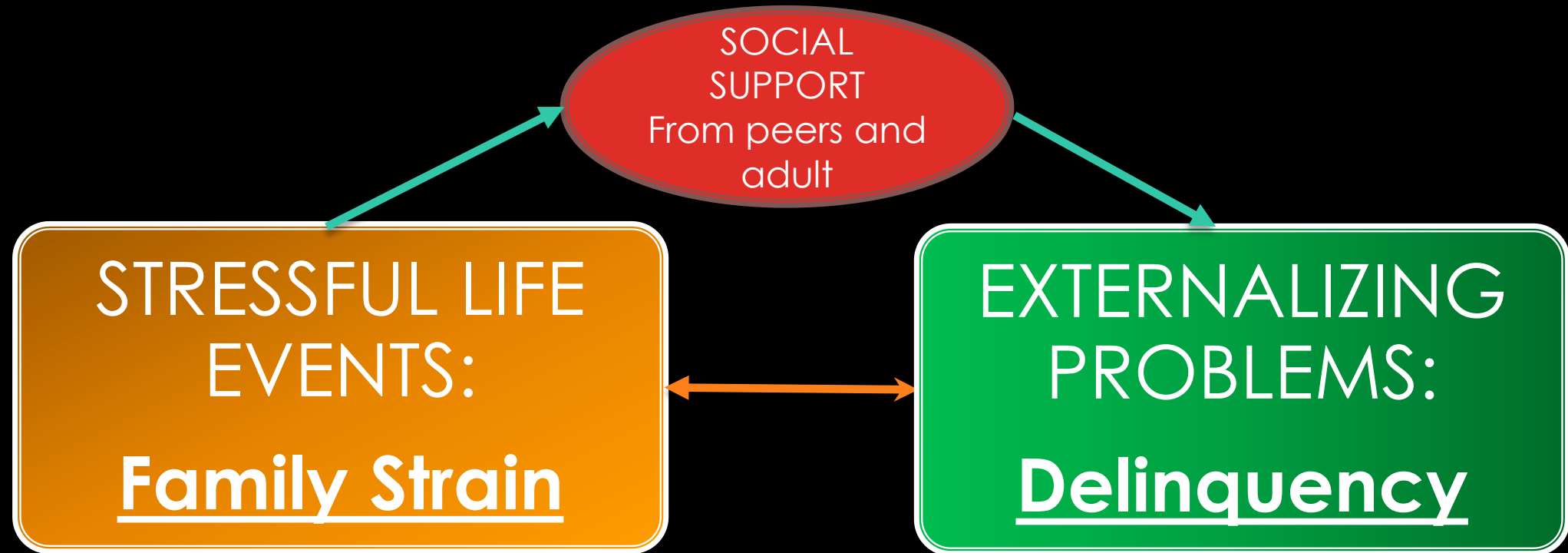
RISK-AND-  
RESILIENCE  
FRAMEWORK

Early Adolescence

Middle Adolescence

Late Adolescence

Emerging Adulthood



# AIM OF THE STUDY

RISK-AND-  
RESILIENCE  
FRAMEWORK

Early Adolescence

Middle Adolescence

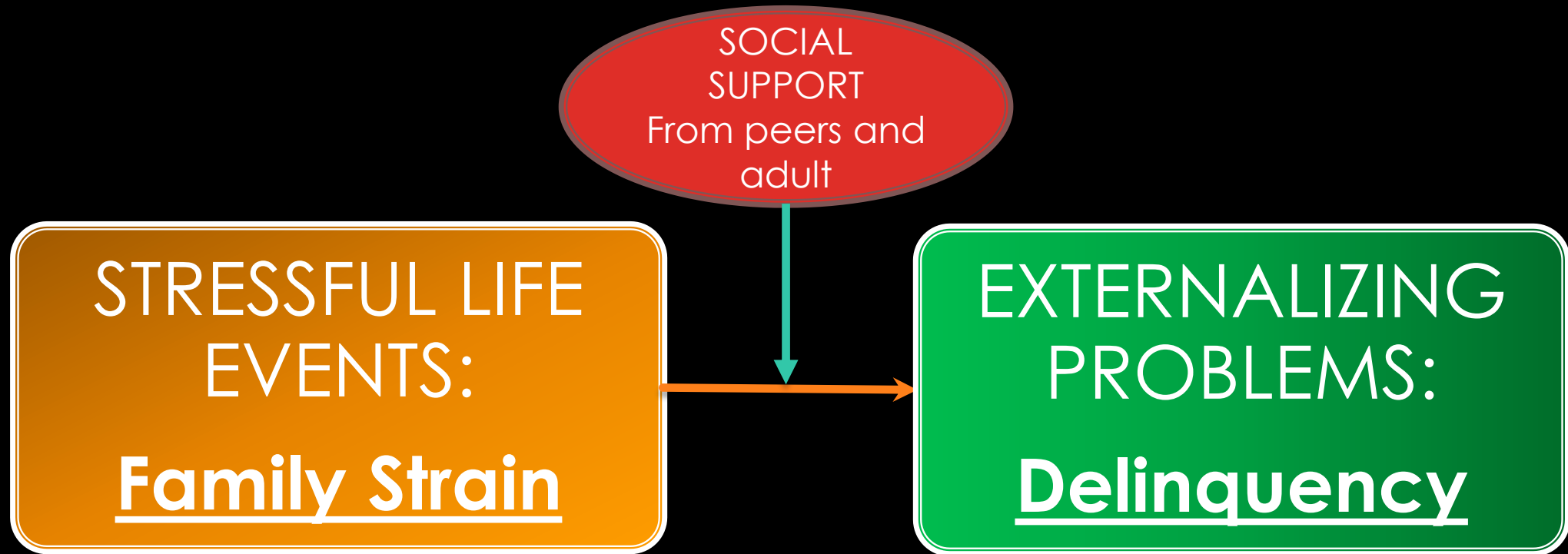
Late Adolescence

Emerging Adulthood

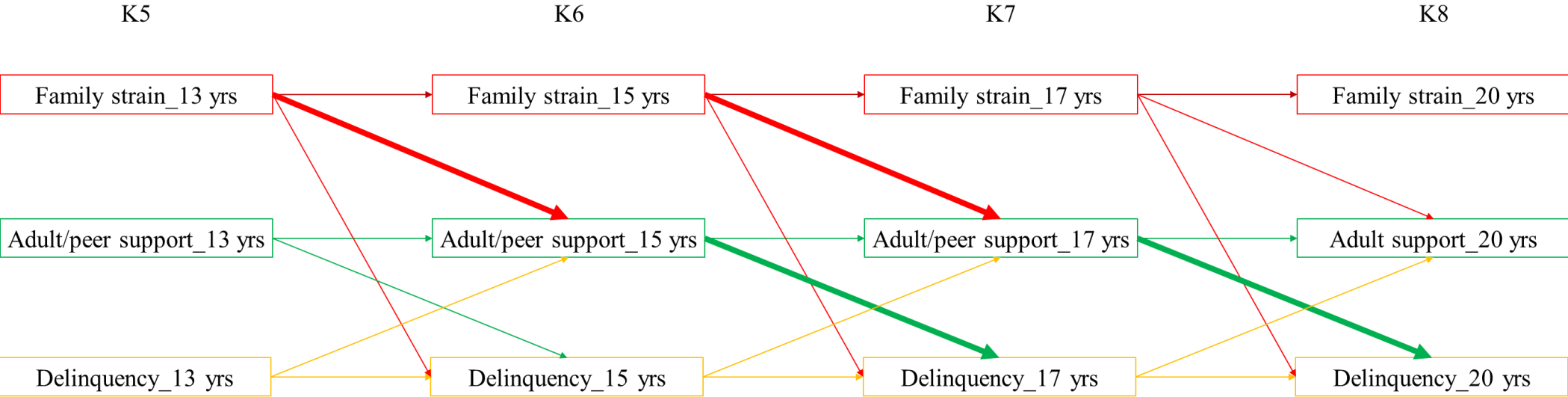
SOCIAL  
SUPPORT  
From peers and  
adult

STRESSFUL LIFE  
EVENTS:  
Family Strain

EXTERNALIZING  
PROBLEMS:  
Delinquency



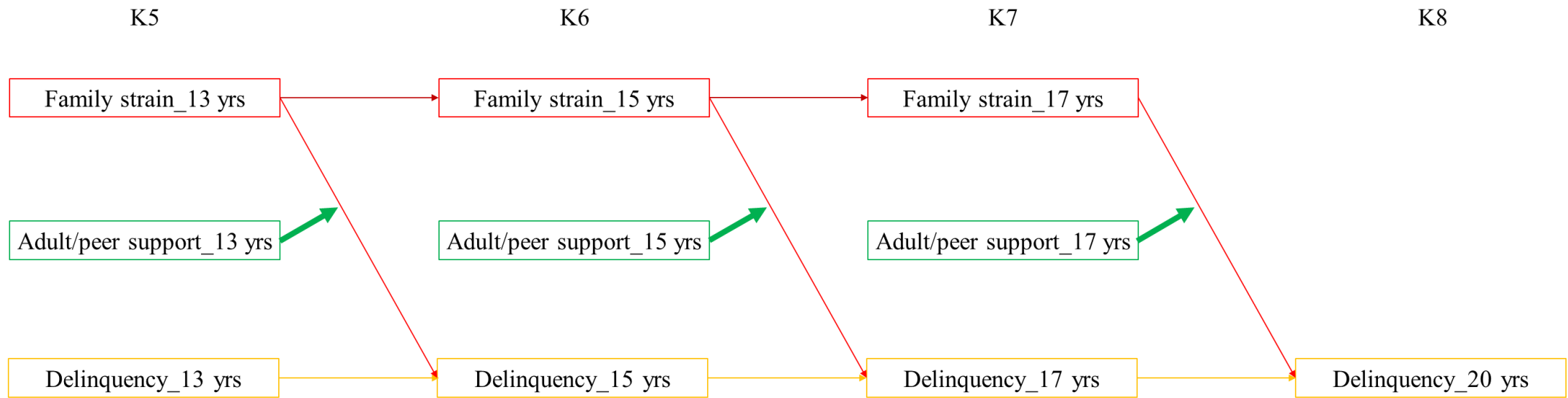
# MEDIATION MODEL



Within-time correlations are considered, but not reported for sake of clarity



## MODERATION MODEL



# WHY IS IT IMPORTANT?

Providing answers to these questions may lead to an in-depth understanding of the etiology of problem behavior and provide insights into when, for whom, and how the risk of **externalizing behaviors**, which are acknowledged **globally as major international public health concerns**, highly prevalent in adolescents, particularly boys (Costello et al., 2011), could be reduced.

# HYPOTHESES

- Based on previous literature, we expected as follows:
  - (1) a link between stressful life events and externalizing behaviors;
  - (2) social support to be a moderator of the link between stressful life events and youth's subsequent externalizing problems.
  - (3) We assumed an exploratory perspective as regards mediation

# AGENDA



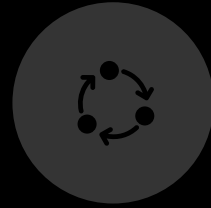
INTRODUCTION



AIM OF THE  
STUDY



METHOD



RESULTS



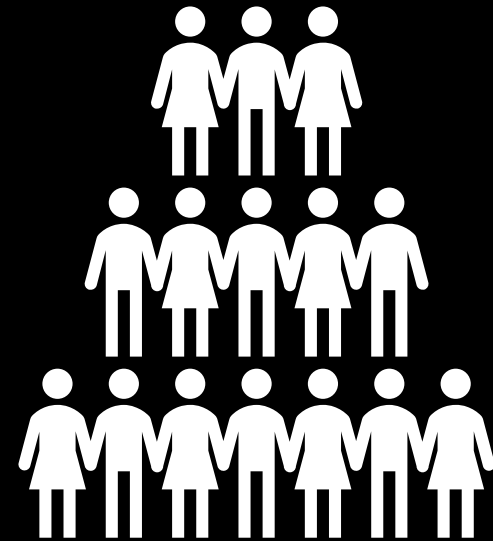
DISCUSSION



STRENGTHS,  
LIMITATIONS &  
FUTURE  
DIRECTIONS

# PARTICIPANTS

- Data were drawn from the z-proso project (Ribeaud et al., 2022);
- $N = 1363$  adolescents from Zurich, Switzerland;
- 4 waves: 13, 15, 17, 20 years (from 2011 onwards).



**(SELF-REPORTED)  
MEASURES:**

**Family Strain**

**Social support from  
adults and peers**

**Delinquency**

## Life Events Scales (LES): Family Strain

- Family strains were reported at ages 13, 15, 17, and 20.
- The adolescents were presented with a list of events and asked to indicate whether an event had occurred during the past two years (at ages 13–17) or three years (at age 20).
- These recall time frames allowed to assess all stressful events since the previous interview.
- Dichotomous (yes/no) items

## FAMILY STRAIN\_LIFE EVENT SCALE (K5-K9)

- 1) Your father or your mother spent several days in hospital because they were **ill** or because they had an **accident**.
- 2) Your sister or your brother spent several days in hospital because they were ill or because they had an accident
- 3) Your grandfather or grandmother **died**.
- 4) Your sister or your brother died.
- 5) Your mother, father, or a different adult who cares for you at home died (e.g., your stepmother or your mother's partner)
- 6) Another person you were close to died
- 7) Primary caregiver died
- 8) Pet you liked died
- 9) Parent **Lost job**
- 10) Your parents **divorced or separated** and one of them moved away from home



## Social support (Resiliency)

- Participants were asked questions about the extent to which they had people in everyday life whom they could rely on in case of personal problems and whom they admired. This type of social support was conceptualized to be part of the participants' resiliency.
- Two different types of social support were included:
  - (1) social support by **peers** (until K7);
  - (2) social support by **adults**.
- 4-point scale (from "fully untrue" to "fully true")

## Social support

### **a. PEER SUPPORT (K5-7):**

1. I have one or more good friends.
2. I have friends that I can trust.
3. I get along well with my friends.

### **b. ADULT SUPPORT (K5-K8):**

1. There are adults I can talk to about my problems
2. Out of the adults that I know, there are some who I admire.
3. I discuss my problems with adults.
4. There are adults I can trust.

## EXTERNALIZING PROBLEMS: Delinquency

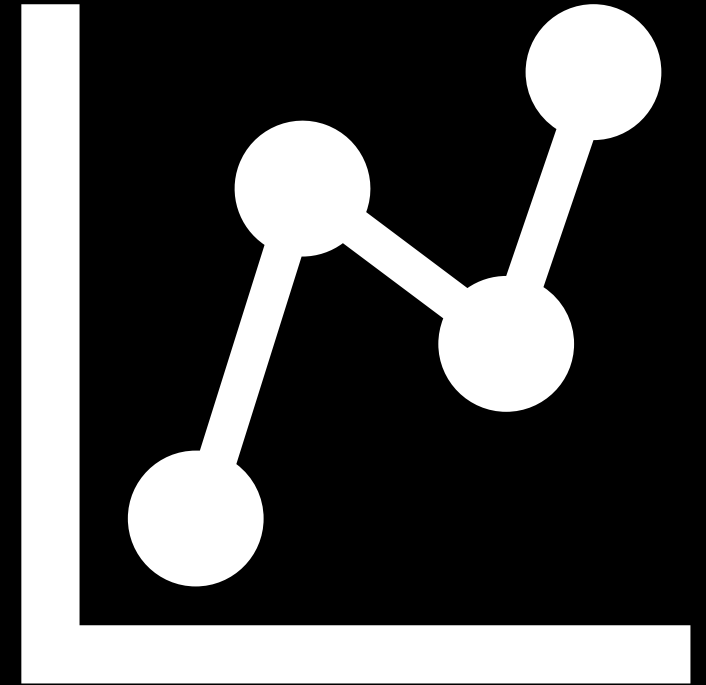
- Participants reported on their experiences with committing crimes in the **past year**
- The types of delinquency that were covered varied between the waves. This was partly due to the changing age and, consequently, daily circumstances in which participants found themselves (e.g., “~~theft at school~~”- “theft at work”).
- A variety index was created from the items, indicating how many of the 14 types of deviant or delinquent acts a respondent committed.

## ITEM DELINQUENCY (K5-K8)

- 1) stolen something at home?
- 2) stolen something at school/workplace?
- 3) shoplifted something from a shop or kiosk that was worth *less* than 50 CHF?
- 4) shoplifted something from a shop or kiosk that was worth *more* than 50 CHF?
- 5) stolen a bicycle or another vehicle?
- 6) driven a motor vehicle (car, motorbike) without having a valid driving licence?
- 7) broken into a car or a building (e.g., house, shop) to steal something from there?
- 8) sold drugs (e.g., hashish, cocaine, ecstasy)?
- 9) sprayed graffiti on buildings or on public transport, or made "tags"?
- 10) purposely damaged windows, phone booths, seats on the tram, train, or bus, or other similar things?
- 11) carried a weapon or other dangerous object to protect yourself or to threaten others or attack them?
- 12) threatened anyone with violence to obtain money or goods?
- 13) taken money or things from someone using violence
- 14) purposely hit, kicked, or cut someone, and injured him or her in the process?

## ANALYTICAL STRATEGY:

1. We performed **multigroup cross-lagged mediation models** in Mplus 7 (Muthén & Muthén, 2012), with gender as a grouping variable, given that literature suggest differences in levels of delinquency between males and females.
2. Furthermore, performed **moderation analyses in the framework of multigroup cross-lagged models** in Mplus 7 (in this model the initial mediator was considered as a moderator).



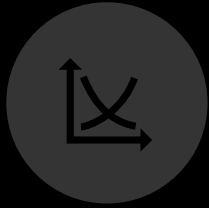
# AGENDA



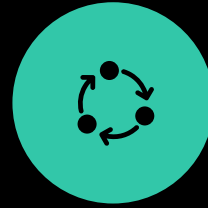
INTRODUCTION



AIM OF THE  
STUDY



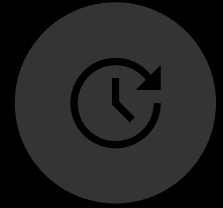
METHOD



RESULTS



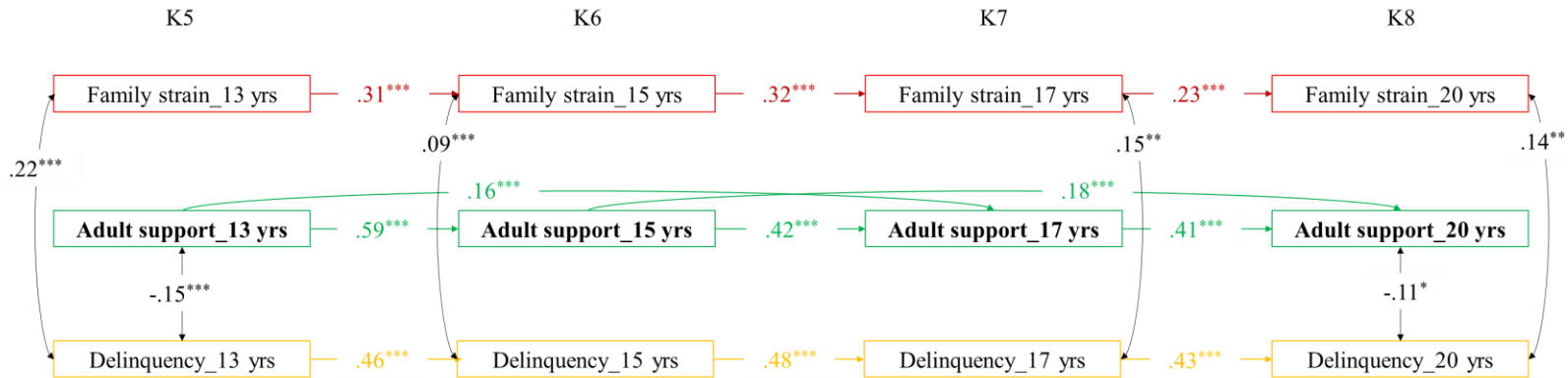
DISCUSSION



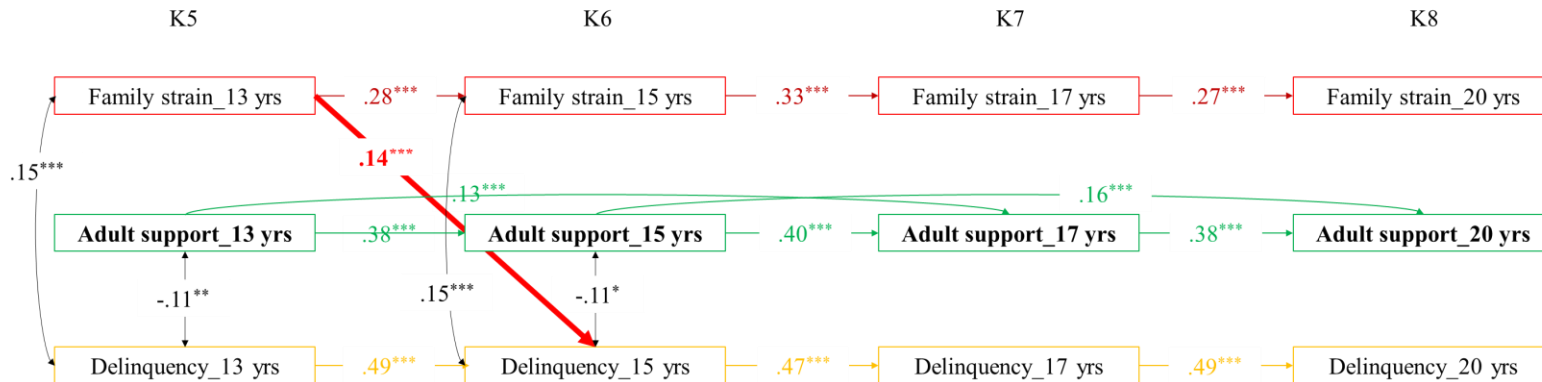
STRENGTHS,  
LIMITATIONS &  
FUTURE  
DIRECTIONS

# MULTIGROUP CROSS-LAGGED MEDIATION (**ADULT SUPPORT**) MODEL - RESULTS

Male group = 700



Female group = 663



Good fit for the more parsimonious model:

$\chi^2(91) = 169.49, p = .000, CFI = .958, RMSEA = .036, SRMR = .053$

## MULTIGROUP CROSS-LAGGED MEDIATION (**PEER SUPPORT**) MODEL - RESULTS

We obtained similar results as previously reported when considering peer support as a mediator

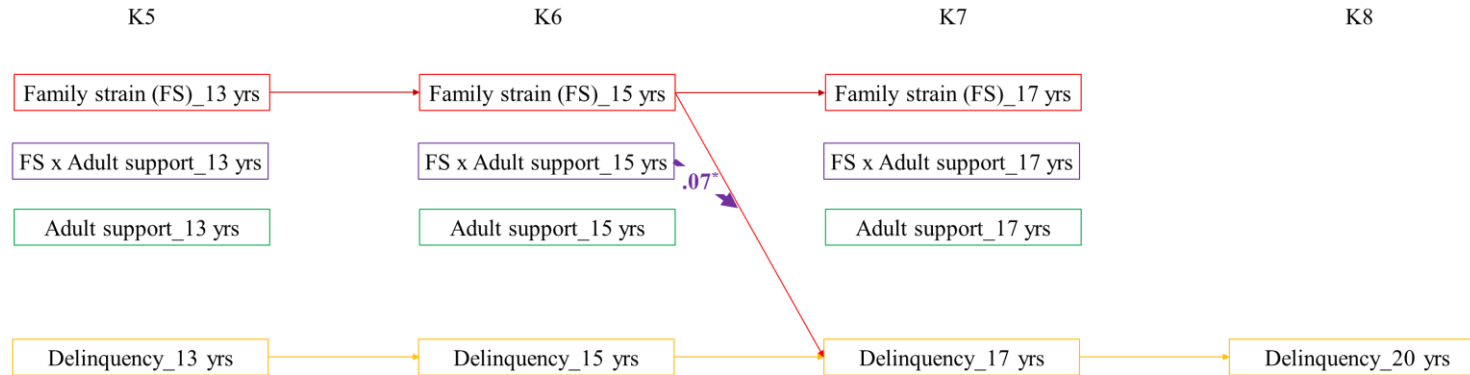
**Good fit for the more parsimonious model.**

**$\chi^2(75) = 120.62, p = .000, CFI = .966, RMSEA = .030, SRMR = .049$**

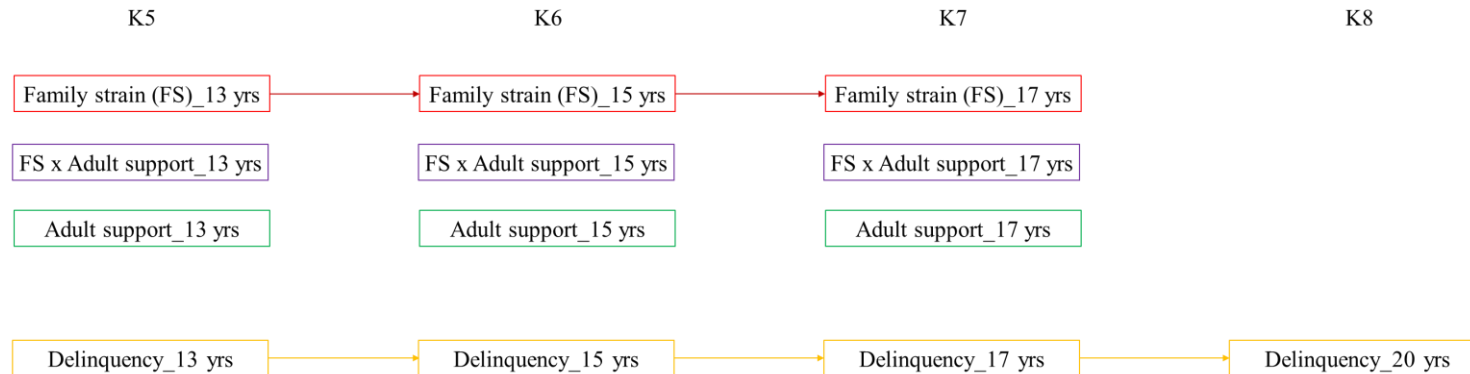


# MULTIGROUP CROSS-LAGGED MODERATION (**ADULT SUPPORT**) MODEL - RESULTS

**Male group = 700**



**Female group = 663**



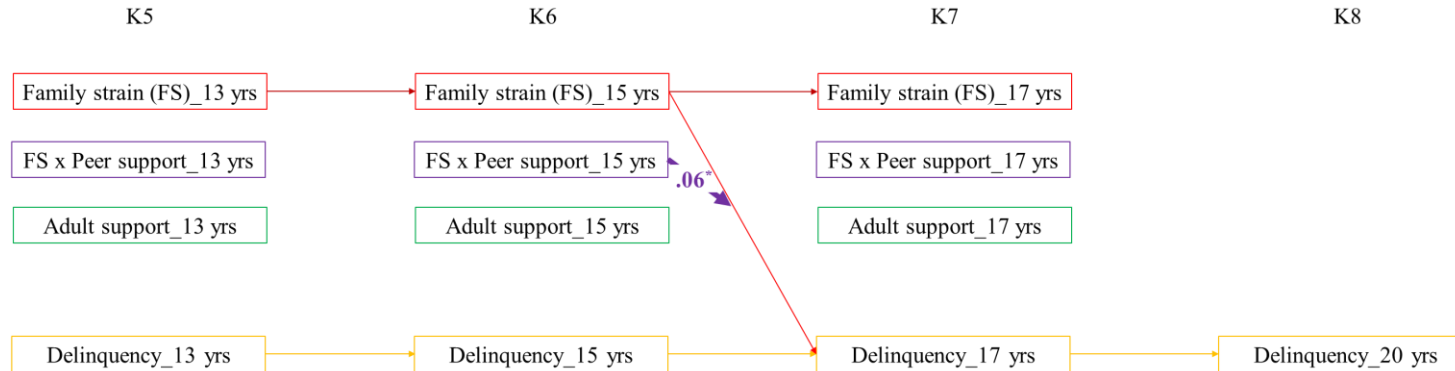
**We run three models, one for each interaction term at the different waves.**

**Acceptable fits for all the more parsimonious models:**

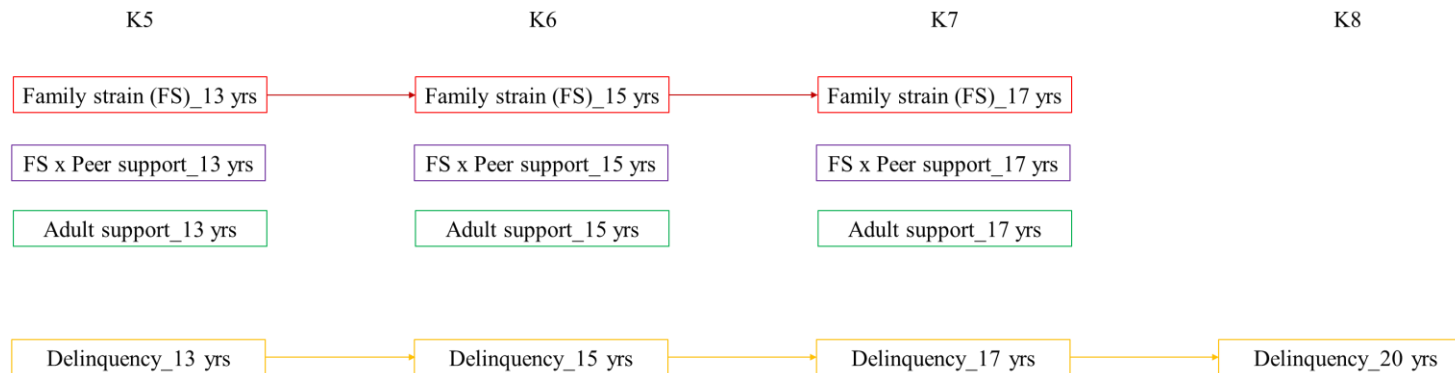
**CFI > .970-.995, RMSEA = .018-.045, SRMR = .043-.070**

# MULTIGROUP CROSS-LAGGED MODERATION (**PEER SUPPORT**) MODEL - RESULTS

**Male group = 700**



**Female group = 663**

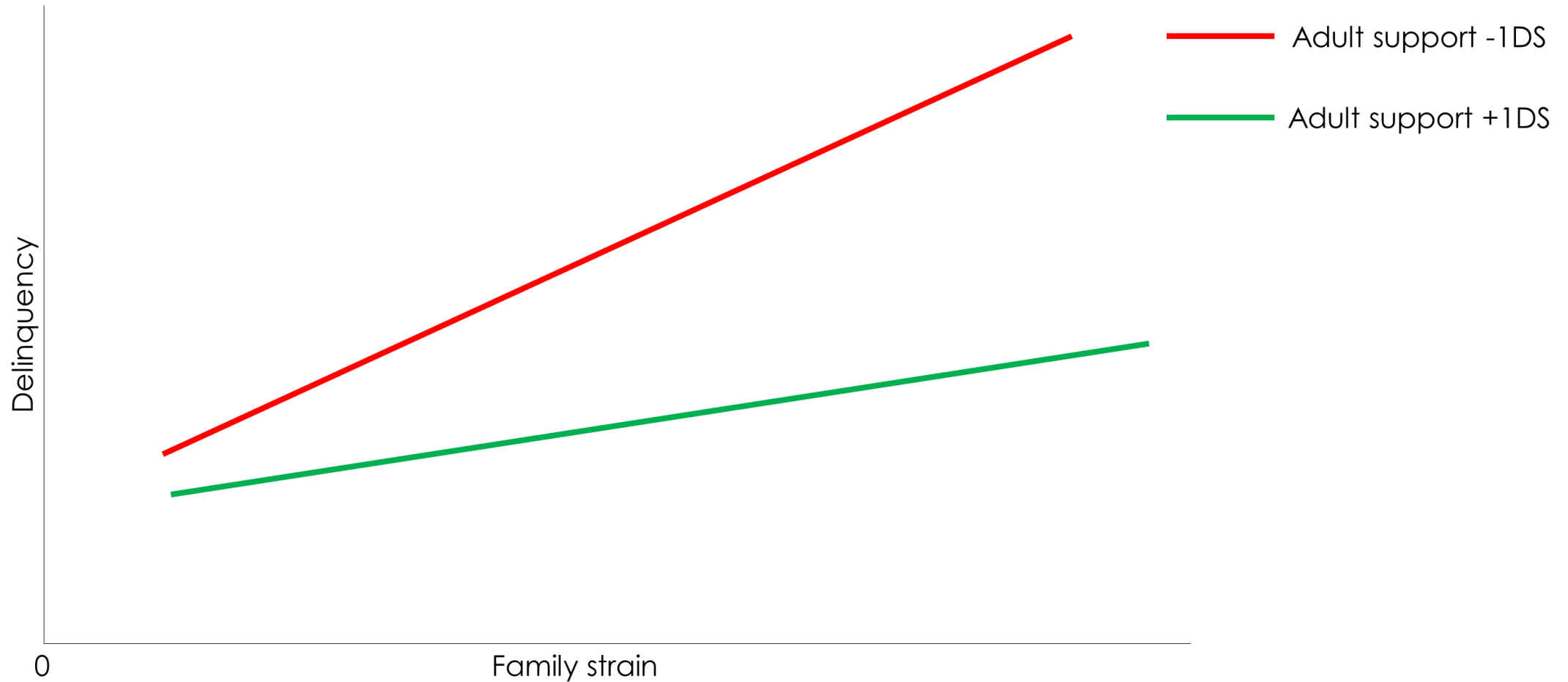


**We run three models, one for each interaction term at the different waves.**

Acceptable fits for all the more parsimonious models:

CFI > .951-.992, RMSEA = .024-.045, SRMR = .043-.074

## PLOT FOR MODERATION (ADULT SUPPORT) AT K6 - RESULTS



A similar plot was obtained for peer support at K6

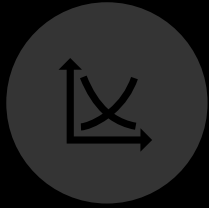
# AGENDA



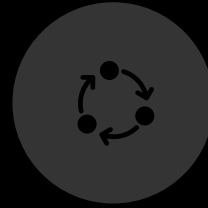
INTRODUCTION



AIM OF THE  
STUDY



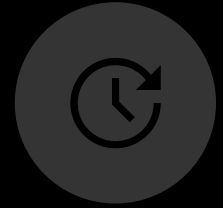
METHOD



RESULTS



DISCUSSION



STRENGTHS,  
LIMITATIONS &  
FUTURE  
DIRECTIONS

- Family strain at 13 years is associated with delinquency at 15 years in females, but not in males.

**Early adolescence** represents a period of enormous emotional, cognitive, and behavioral changes. There is a **misalignment** between the accelerated biological push of puberty and the self-regulation and self-control resources which are still not fully built.

Therefore, serious critical life events in this phase of life (such as the death of close relatives or their hospitalization) can disfavor the normal path of realignment between the aforementioned processes and indeed fuel externalizing behavioral problems that unfold in the nearest subsequent years.

This potential mechanism appears to characterize **girls** rather than boys. The greater emotional and reflective sensitivity of women compared to men is well-known and probably, at least in the early stages, critical life events can have a greater impact on girls rather than boys.

- Both adult and peer supports are moderators of the link between family strain at 15 years and delinquency at 17 years in males, but not in females. **The higher the support, the lower the impact of family strain on future delinquent acts.**

Full adolescence is known for more risk-taking, but also for increased social sensitivity. These two factors appear to interact in some way with each other. On the one hand, especially in **boys**, delinquent behaviors tend to increase in adolescence; on the other hand, the perception of social support from the close adults and peers (in a moment of high sensitivity) can dampen this tendency towards delinquent acts, constituting a protective factor.

- No mediation effects were evidenced.

# AGENDA



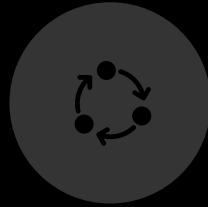
INTRODUCTION



AIM OF THE  
STUDY



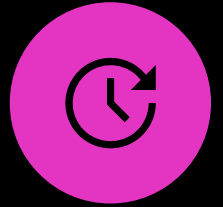
METHOD



RESULTS



DISCUSSION



STRENGTHS,  
LIMITATIONS &  
FUTURE  
DIRECTIONS

# Strengths

- ✓ the large sample of adolescents
- ✓ the longitudinal design
- ✓ implications for practice: For instance, good strategies to reduce the likelihood of delinquent acts are to support adolescents to belong to positive and supportive communities and to structure encouraging relationships with adults (e.g., parents, teachers, leaders of educational groups).



# Limitations & Future Directions

- a **time lag of 2-3 years** is unrealistically long for causal effects
- the study included a **sample** of young people growing up in Zurich: **not representative of the general adolescent population**. Future research needs to consider other different socio-economic and cultural contexts.
- the study was based on self-report measures, subject to **response bias**. Future studies may use multi-informant or multi-method approaches

# SELECTED REFERENCES

- Bronfenbrenner U. (1979). *The ecology of human development: Experiments in nature and design*. Harvard University Press.
- Hatch, V., Swerbenski, H., & Gray, S. A. (2020). Family social support buffers the intergenerational association of maternal adverse childhood experiences and preschoolers' externalizing behavior. *American journal of orthopsychiatry*, 90(4), 489.
- Kim, K. J., Conger, R. D., Elder Jr, G. H., & Lorenz, F. O. (2003). Reciprocal influences between stressful life events and adolescent internalizing and externalizing problems. *Child development*, 74, 127-143.
- Licitra-Kleckler, D. M., & Waas, G. A. (1993). Perceived social support among high-stress adolescents: The role of peers and family. *Journal of Adolescent Research*, 8(4), 381-402.
- Liu, C., Huang, N., Ahmed, F., Shahid, M., Wang, X., & Guo, J. (2021). The reverse buffering effects of social support on the relationships between stresses and mental health: a survey of Chinese adults during the COVID-19 lockdown. *European journal of psychotraumatology*, 12(1), 1952777.
- Oliva, A., Jiménez, J. M., & Parra, A. (2009). Protective effect of supportive family relationships and the influence of stressful life events on adolescent adjustment. *Anxiety, Stress, & Coping*, 22(2), 137-152.
- Scholte, R.H.J., Van Lieshout, C.F.M., & Van Aken, M.A.G. (2001). Perceived relational support in adolescence: Dimensions, configurations, and adolescent adjustment. *Journal of Research on Adolescence*, 11, 71-94.
- Somerville, L. H. (2013). The teenage brain: Sensitivity to social evaluation. *Current directions in psychological science*, 22(2), 121-127.
- Zhang, R., Qiu, Z., Li, Y., Liu, L., & Zhi, S. (2021). Teacher support, peer support, and externalizing problems among left-behind children in rural China: Sequential mediation by self-esteem and self-control. *Children and Youth Services Review*, 121, 105824.
- Zhang, W., & Wang, Z. (2022). Negative life events and adolescents' externalizing problems: a moderated mediation model. *Current Psychology*, 1-11. <https://doi.org/10.1007/s12144-022-03109-8>



THANK YOU FOR  
YOUR ATTENTION