



A person-centered approach to doctoral completion: *“Do motivational profiles predict persistence?”*

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Content:

- 1. Theoretical framework**
- 2. What are the different motivation profiles among phd students?**
- 3. To what extent doctoral completion varies from one profile to another?**
- 4. Discussion**



1. Theoretical framework

- Rationales
- Aims of the study

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The doctoral completion issue

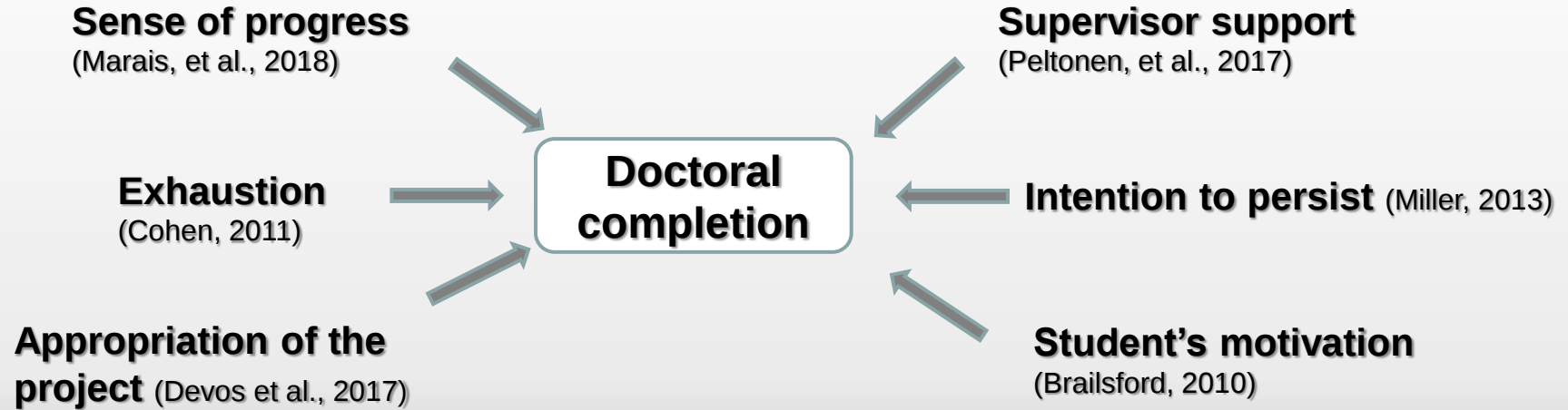
- **The doctoral paradox**

- Phd students = high achievers (Jairam & Kahl, 2012)
- But,
 - The lowest completion rate of higher education degrees (Ampaw & Jaeger, 2011)
 - Worldwide high attrition rate of 30 to 50% (Peltonen, Vekkaila, Rautio, Haverinen & Pyhältö, 2017)
- **In our Belgian context** (Wollast et al., 2018):
 - After 8 years, only 50% obtained doctoral degree
 - The highest dropout rate occurs during the first 2 years



Doctoral completion literature

« Why so many bright Phd students dropout from the doctoral studies? »

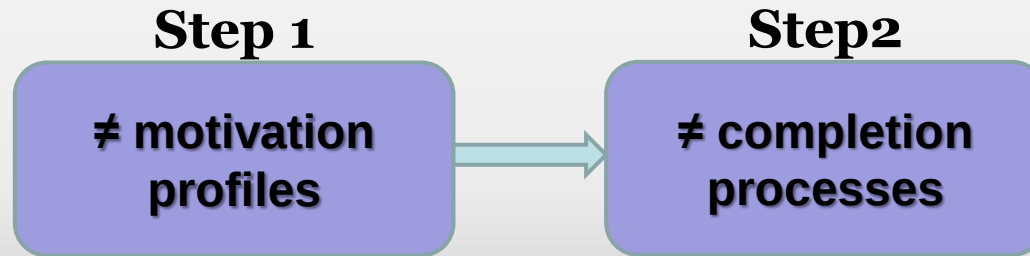


Limitations of the literature

- Three main limitations:
 - Investigation of the issue mostly qualitative (London et al., 2014)
 - Lack of multivariate consideration of the issue (Wollast et al., 2018)
 - Motivation layer of doctoral process overlooked (Mason, 2012)
- Aim of the study:
 - **Endorse a multivariate and motivational approach of doctoral completion process**

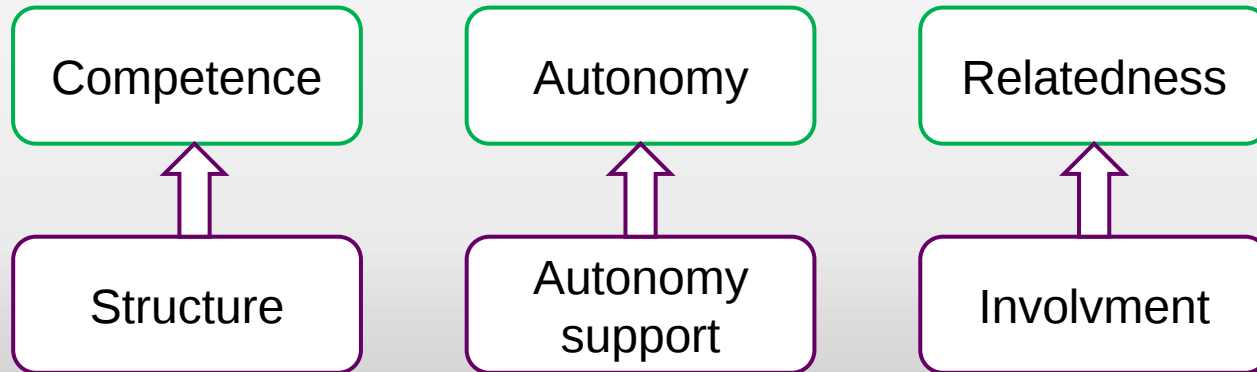
2 research questions

- *What are the different motivation profiles among phd students?*
- *To what extent doctoral completion varies from one profile to another?*



Self-determination approach

- *Self-Determination Theory* (Ryan & Deci, 2017)
 - Deserve more attention in doctoral completion issue (Mason, 2012)
 - Used in high school and higher education to explore student's motivation profiles (Hayenga and Corpus, 2010)



2. What are the different motivation profiles among phd students?

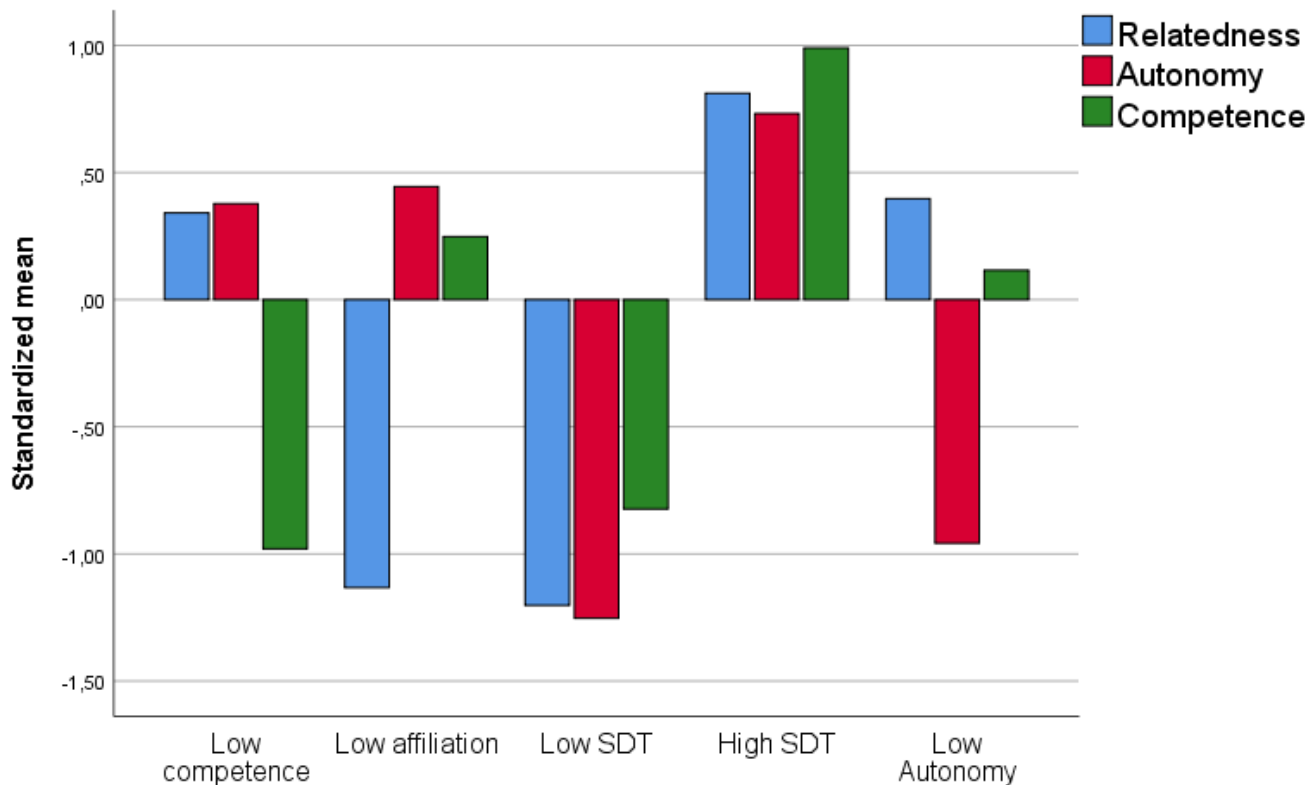
- Procedure
- Results

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Procedure

- N= 945 Phd students
- Self-completion questionnaires (Van Der Linden et al., 2018)
 - **Competence** (4 items, $\alpha=.794$)
 - I have confidence in my ability to finish my PhD
 - **Autonomy** (4 items, $\alpha=.721$)
 - I can influence the development of my thesis' project
 - **Relatedness** (4 items, $\alpha=.770$)
 - I get along well with the members of my team
- K-mean clustering: "focus on combinations of variables as they exist within individuals rather than taking each variable itself as the focal point" (Hayenga & Corpus, 2010, p. 372)

Results: Optimal division in 5 clusters

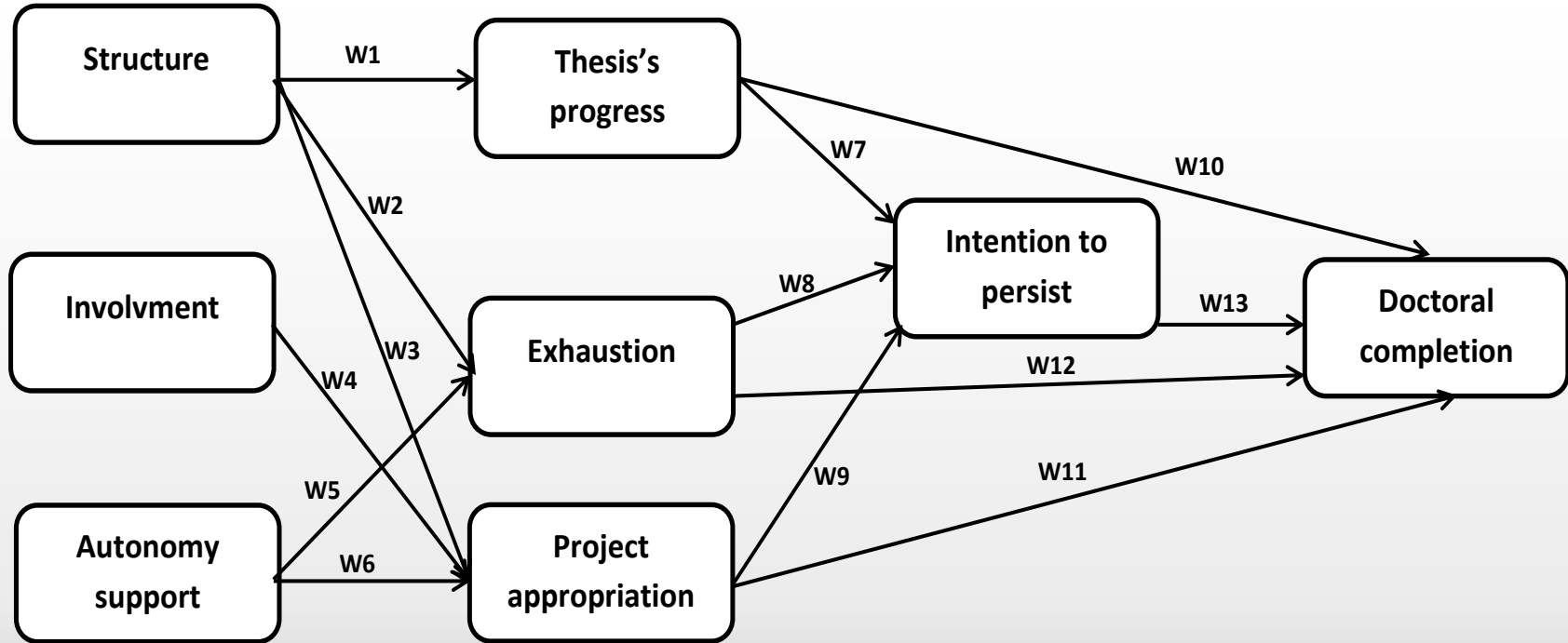


2. To what extent doctoral completion varies from one profile to another?

- Procedure
- Results

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A framing of doctoral completion process



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Grounded in self-determination theory and doctoral completion literature



Measures

- **Supervisor's support** (Van der Linden et al., 2018):
 - **Structure (7 items: alpha= .883)**
 - My mentor defines clear objectives for me
 - **Autonomy support (7 items: alpha= .712)**
 - My mentor directs my work a lot, without really asking for my opinion (R)
 - **Involvement (7 items: alpha= .887)**
 - My mentor shows that he/she respects me and values me
- **Thesis's progress (6 items: alpha= .812)**
 - I think that my thesis is not moving forward (R)
- **Project appropriation (6 items: alpha= .867)**
 - I feel personally responsible for my doctoral project.
- **Exhaustion (10 items: alpha= .888)**
 - When I think to my thesis, I feel in despair
- **Intention to persist (6 items: alpha= .854)**
 - I seriously consider to quit doctoral studies (R)

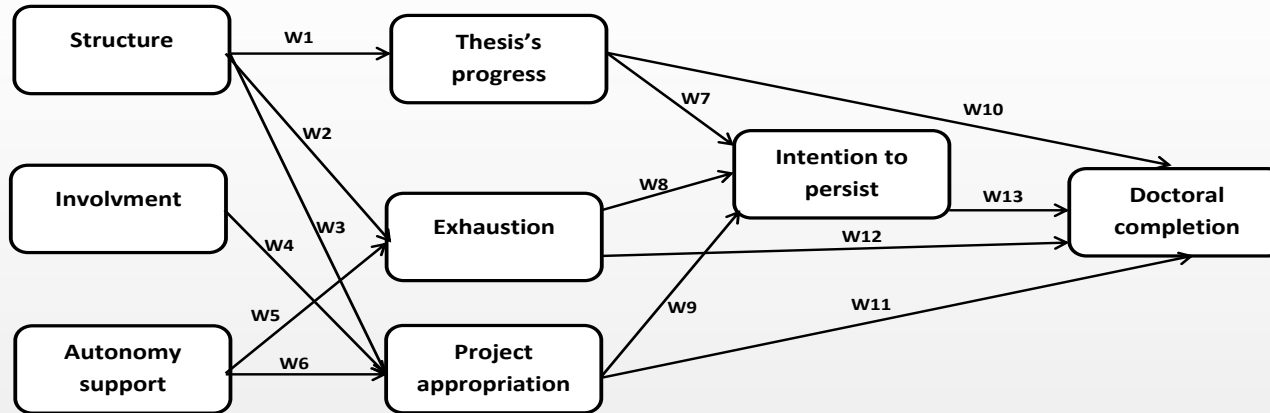


Procedure

- Multigroup analysis (structural equation modeling)
 - Amos 20
- Indices (Kline, 2011):
 - χ^2 & χ^2_{diff}
 - RMSEA (<.08 → OK)
 - CFI (>.90 → OK)
 - AIC (the lowest)
 - PCFI (<.60 → OK)
 - SRMR (<.05 → OK)
- Three stages procedure:
 - Test the fit of the overall model → Is the model a good framing of doctoral process?
 - Identify the variations in the model across the profiles → Measurement invariance analysis
 - Examine in details the variations identified → Critical ratio of differences test

The fit of the overall model

The overall theoretical model provides the best fit

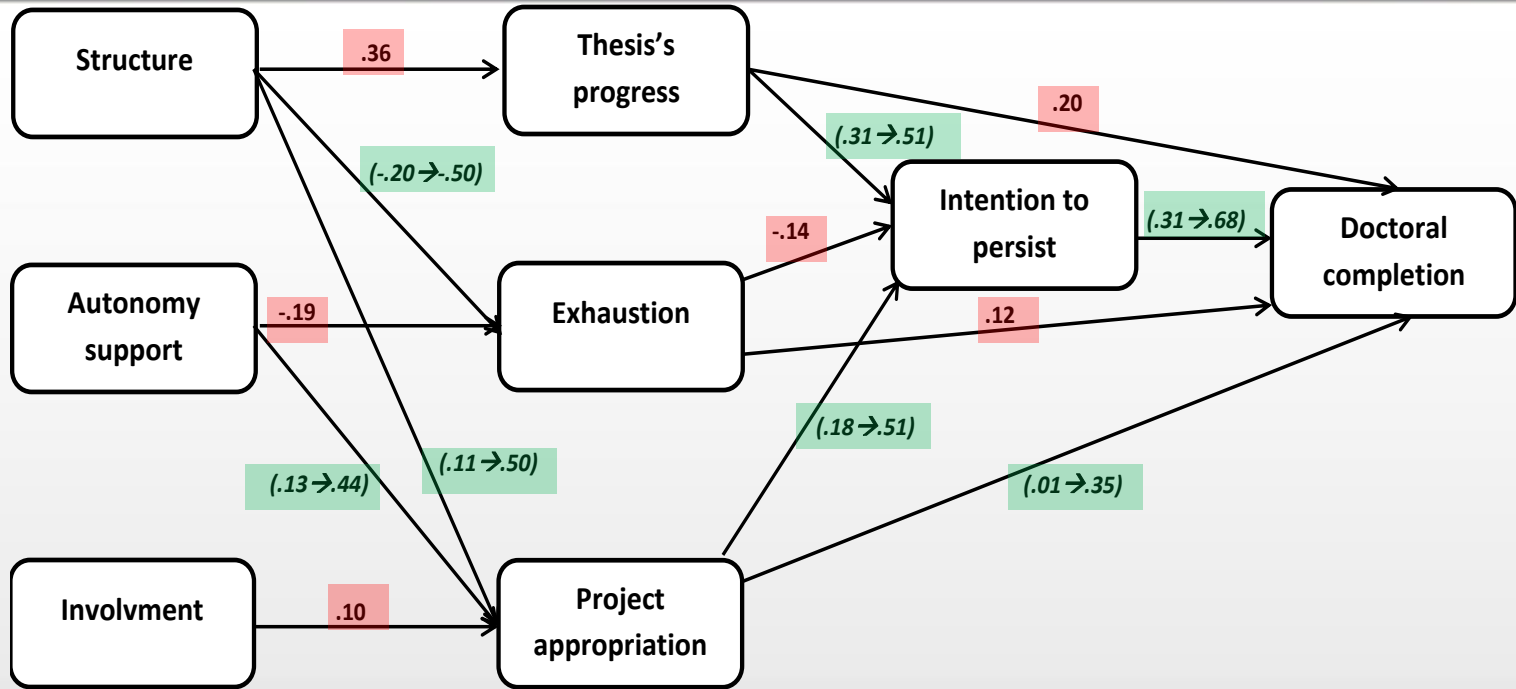


Path analysis results : overall model comparison

	χ^2	df	AIC	RMSEA	CFI	PCFI	SRMR	P-Close
Theoretical model	382.34***	11	448.34	.058	.978	.384	.033	.004
Alternative model	3354.65***	9	3424.65	.194	.805	.259	.090	.000

*p<.05;**p<.01;***p<.001

The variation of the process across the profiles



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Table 4
Path analysis results : multigroup model comparisons

	χ^2	df	χ^2_{diff}	RMSEA	CFI	PCFI	SRMR	P-Close
Final model	574.42***	83	53.05***	.024	.970	.575	.033	1



Where are the difference?

Critical ratio of differences test : paths' weight pairwise comparisons across the profiles

	<i>Struct</i> → <i>Exhaust</i>	<i>Struct</i> → <i>Apppr</i>	<i>Auto</i> → <i>Apppr</i>	<i>Progress</i> → <i>Persist</i>	<i>Apppr</i> → <i>Persist</i>	<i>Apppr</i> → <i>Completion</i>	<i>Persist</i> → <i>Completion</i>
1. Low SDT	-.50 ^{***} _a	.50 ^{***} _b	.41 ^{***} _a	.51 ^{***} _b	.18 [*] _a	n.s.	.51 ^{***} _a
2. Low affiliation	-.39 ^{***} _{ab}	n.s.	.32 ^{***} _a	.50 ^{***} _b	.24 ^{***} _a	n.s.	.68 ^{***} _b
3. Low competence	-.20 ^{***} _b	.24 ^{***} _{ab}	.43 ^{***} _a	.48 ^{***} _b	.20 ^{***} _a	n.s.	.41 ^{***} _a
4. Low autonomy	-.24 ^{***} _b	.36 ^{***} _b	.44 ^{***} _a	.31 ^{***} _a	.51 ^{***} _b	.35 ^{***}	.67 ^{***} _b
5. High SDT	-.23 ^{***} _b	.22 ^{**} _a	n.s.	.31 ^{***} _a	.24 ^{***} _a	n.s.	.31 ^{***} _a

Note: a & b= group categorization with pairwise comparisons

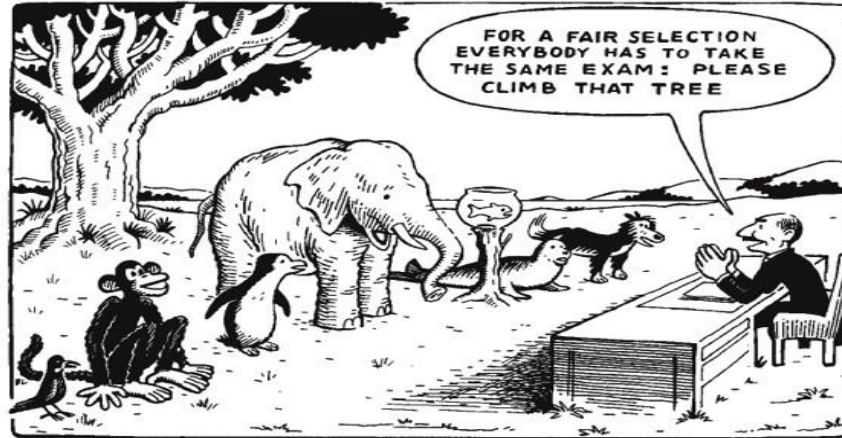


Discussion

1. Doctoral motivation profiles with specific weaknesses can be identified
2. Doctoral process differs regarding to motivation profiles
 - Main effect of structure on thesis's progress
 - Main effect of thesis's progress and exhaustion on completion
3. Several specific levers have been identified
 - Providing structure is very important for deprived student's
 - Low affiliation students are really sensitive to consideration of quitting Phd.
 - Low autonomy students really need to appropriate their project.



Thank you for your attention!



Do you have any question?

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