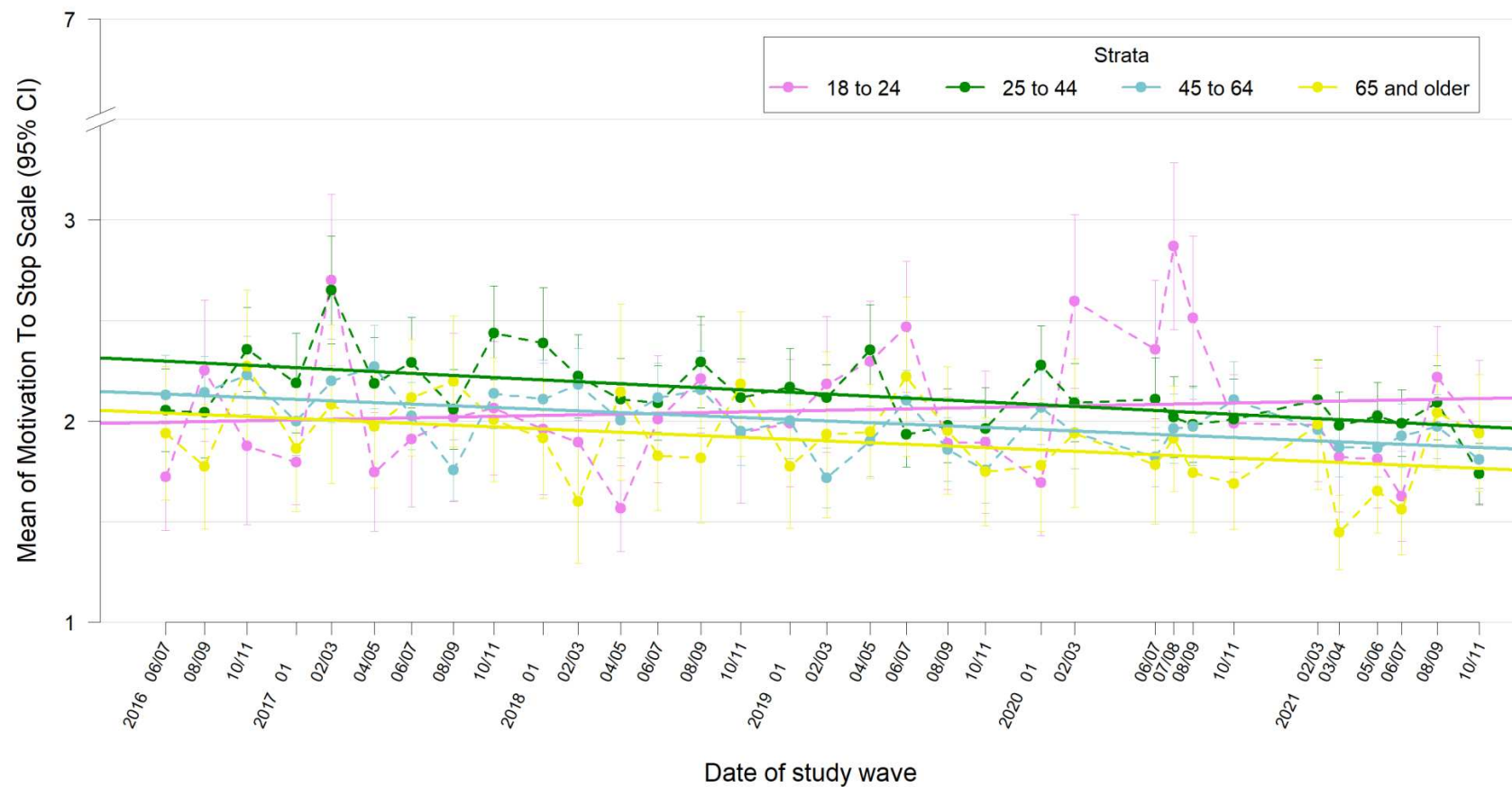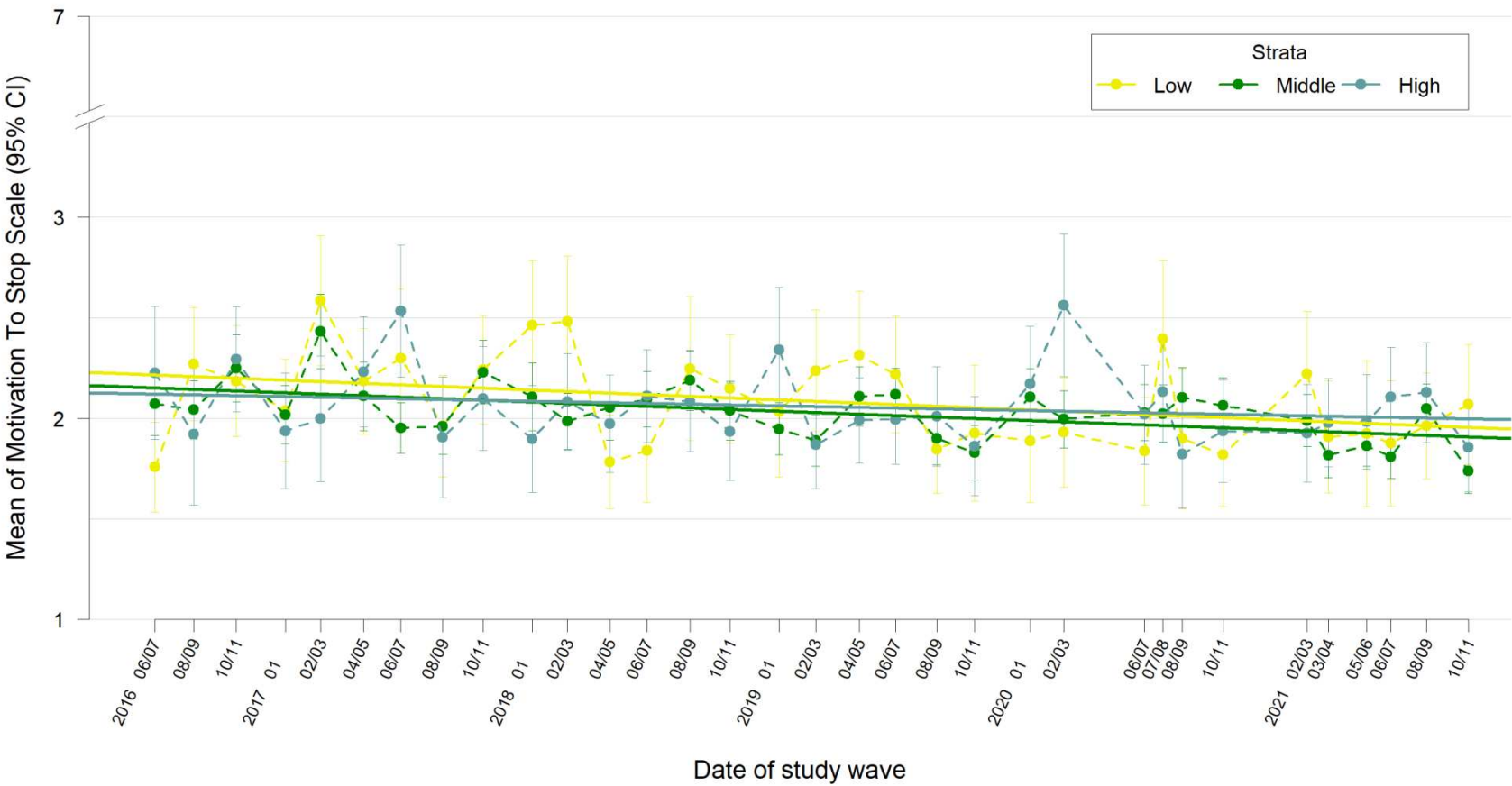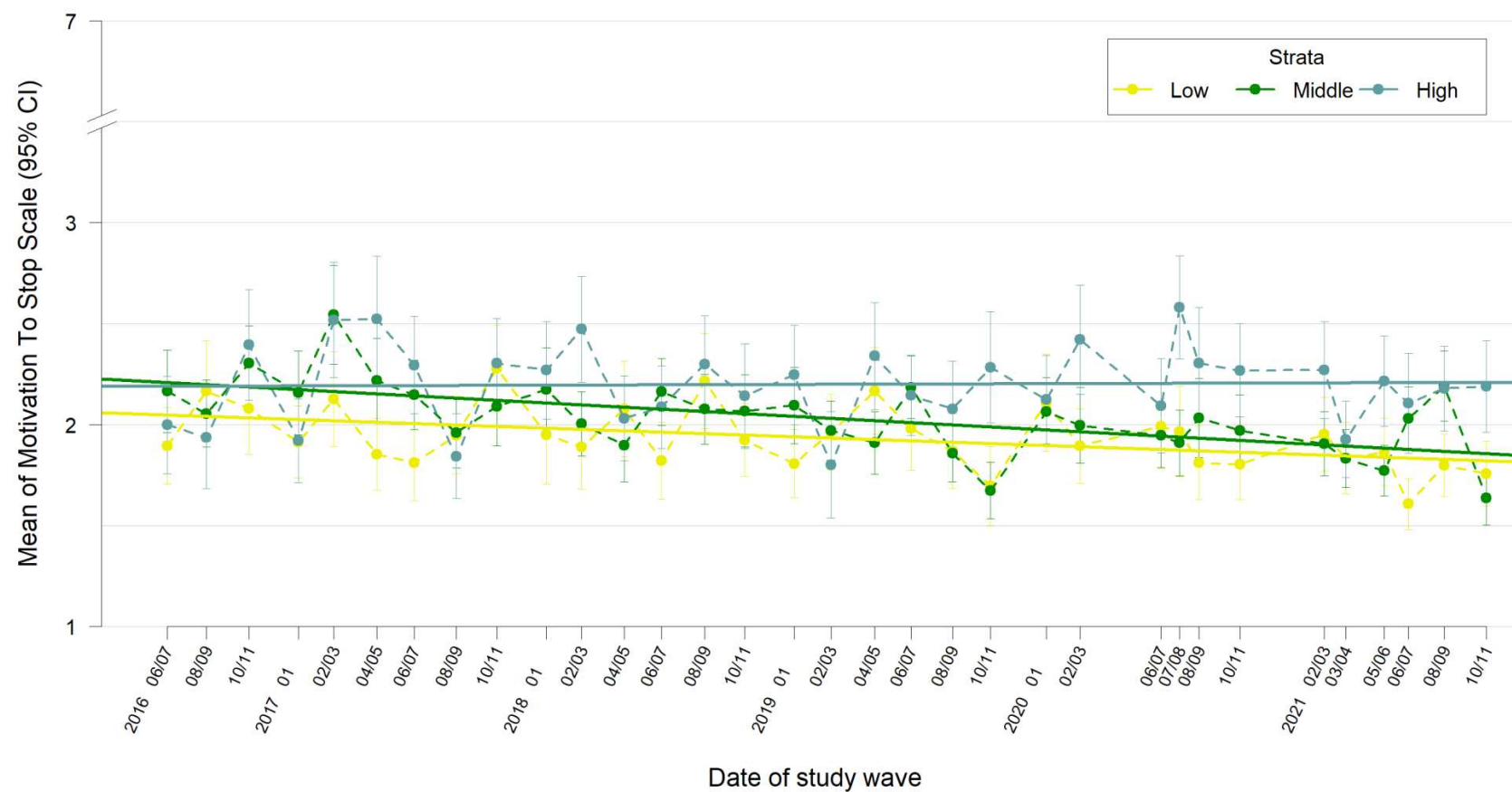**Online supplemental figure 1A - Trend of motivation to stop smoking among adult tobacco smokers in Germany stratified by gender**

(weighted data, n=18,299)

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Online supplemental figure 1B - Trend of motivation to stop smoking among adult tobacco smokers in Germany stratified by age (weighted data, n=18,303)

Online supplemental figure 1C - Trend of motivation to stop smoking among adult tobacco smokers in Germany stratified by level of income (weighted data, n=18,290)

Online supplemental figure 1D - Trend of motivation to stop smoking among adult tobacco smokers in Germany stratified by level of education (weighted data, n=18,039)

For online supplemental figures 1A to 1D: The markers on the x-axis present the accurate mean date of each study wave. Trend lines (linear regression) presented as solid lines. Due to lockdowns caused by the COVID-19 pandemic, no surveys waves could take place in April/May 2020 and Janaury 2021.

Analysis for adolescent tobacco smokers

Methods: The regression analysis as well as the description of trends were repeated for respondents aged 14 to 17 (inclusive). Both were initially planned to be identical to the analysis of adult tobacco smokers. Due to a smaller sample size (n=177 for waves 1 to 33) and incomplete data in some variables, we had to modify our planed regression model (see study protocol https://osf.io/qn6ts/) to a more parsimonious one and reduce the amount of stratification for the description of trends. Therefore, we excluded the variables level of education (73%/ n=134 missing values) and number of cigarettes per day (8%/ n=14 mising values), which had the most missing data, in the regression analysis as well as refrained from a subsample analysis including HTP and waterpipe use (data from wave 13 onwards, n=116) and a sensitivity analysis with imputed data. The description of trends were presented by study year and limited to all adolescent smokers combined and stratification by gender only.

Results: In adolescent tobacco smokers, at least one quit attempt 0-6 months ago vs. no quit attempt in the past 12 months was associated with a higher motivation to stop smoking (OR_{adj}=6.10; 95%CI 2.54-14.68). No other statistical significant associations were among the outcomes (see online supplemental table 2).
Online supplemental figures 2 and 3 present the trend of motivation to stop smoking in adolescents.

Online supplemental table 1 – Sample characteristics in total and by level of motivation to stop smoking (all adolescent tobacco smokers[a],

unweighted data)

	All smokers (n = 182[b])	MTSS Level 1 (n = 79)	MTSS Level 2 (n = 41)	MTSS Level 3 (n = 24)	MTSS Level 4 (n = 11)	MTSS Level 5 (n = 16)	MTSS Level 6 (n = 1)	MTSS Level 7 (n = 5)
Age in years, mean (SD)	16.2 (0.9)	16.4 (0.8)	16.0 (0.9)	16.4 (1.0)	16.4 (1.1)	16.1 (0.9)	15.0 (0.0)	15.6 (1.1)
Gender								
Men	54.4 (99)	58.2 (46)	43.9 (18)	50.0 (12)	81.8 (9)	56.3 (9)	0.0 (0)	40.0 (2)
Women	45.6 (83)	41.8 (33)	56.1 (23)	50.0 (12)	18.2 (2)	43.8 (7)	100.0 (1)	60.0 (3)
Level of education								
Low	39.6 (19)	45.5 (10)	40.0 (4)	37.5 (3)	0.0 (0)	25.0 (1)	0.0 (0)	0.0 (0)
Middle	54.2 (26)	54.5 (12)	60.0 (6)	50.0 (4)	100.0 (3)	25.0 (1)	0.0 (0)	0.0 (0)
High	6.3 (3)	0.0 (0)	0.0 (0)	12.5 (1)	0.0 (0)	50.0 (2)	0.0 (0)	0.0 (0)
Income[d], mean (SD)	0.9 (0.7)	0.8 (0.6)	0.9 (0.7)	1.1 (0.8)	1.1 (1.0)	1.0 (0.4)	1.0 (0.0)	1.1 (1.1)
Number of cigarettes per day, mean (SD)	7.1 (6.4)	7.9 (6.6)	5.7 (6.0)	7.6 (7.3)	6.1 (5.9)	8.2 (6.3)	10.0 (0.0)	3.6 (4.7)
Recent quit attempts								
No attempt in the past 12 months	81.7 (138)	88.3 (68)	88.9 (32)	77.3 (17)	54.5 (6)	60.0 (9)	100.0 (1)	60.0 (3)
At least one attempt 7-12 months ago	4.1 (7)	6.5 (5)	0.0 (0)	0.0 (0)	9.1 (1)	6.7 (1)	0.0 (0)	0.0 (0)
At least one attempt 0-6 months ago	14.2 (24)	5.2 (4)	11.1 (4)	22.7 (5)	36.4 (4)	33.3 (5)	0.0 (0)	40.0 (2)
Time spent with urges to smoke, mean (SD)	2.6 (1.1)	2.7 (1.2)	2.6 (0.9)	2.6 (0.9)	2.4 (1.1)	2.7 (0.9)	3.0 (0.0)	2.0 (1.4)
Strength of urges to smoke, mean (SD)	1.4 (1.0)	1.4 (1.1)	1.5 (0.8)	1.5 (0.9)	1.4 (1.0)	1.4 (0.7)	2.0 (0.0)	1.2 (1.8)
Use of e-cigarettes								
Never	50.0 (91)	53.2 (42)	46.3 (19)	37.5 (9)	54.5 (6)	56.3 (9)	0 (0)	60.0 (3)
Ex-experimental	29.7 (54)	27.8 (22)	24.4 (10)	37.5 (9)	18.2 (2)	37.5 (6)	100.0 (1)	40.0 (2)

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Ex-regular	7.7 (14)	7.6 (6)	9.8 (4)	16.7 (4)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
Current	12.6 (23)	11.4 (9)	19.5 (8)	8.3 (2)	27.3 (3)	6.3 (1)	0.0 (0)	0.0 (0)
Use of HTP[c]								
Never	84.0 (100)	88.2 (45)	86.7 (26)	64.7 (11)	83.3 (5)	85.7 (6)	0.0 (0)	100 (5)
Ex-experimental	14.3 (17)	11.8 (6)	13.3 (4)	29.4 (5(	0.0 (0)	14.3 (1)	0.0 (0)	0.0 (0)
Ex-regular	0.8 (1)	0.0 (0)	0.0 (0)	5.9 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
Current	0.8 (1)	0.0 (0)	0.0 (0)	0.0 (0)	16.7 (1)	0.0 (0)	0.0 (0)	0.0 (0)
Use of waterpipe[c]								
Never	47.9 (57)	51.0 (26)	46.7 (14)	47.1 (8)	66.7 (4)	28.6 (2)	0.0 (0)	40.0 (2)
Ex-experimental	21.0 (25)	25.5 (13)	16.7 (5)	11.8 (2)	16.7 (1)	28.6 (2)	0.0 (0)	20.0 (1)
Ex-regular	5.0 (6)	3.9 (2)	3.3 (1)	11.8 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
Current	26.1 (31)	19.6 (10)	33.3 (10)	29.4 (5)	16.7 (1)	42.9 (3)	0.0 (0)	40.0 (2)

Numbers present percentage (number), unless otherwise stated

[a] Data from DEBRA waves 1 to 33, except for use of HTP and waterpipe, for which only data from waves 13 to 33 were used

[b] 2.7 % (n=5) had missing data for the MTSS

[c] 119 adolescent tobacco smokers included from waves 13 to 33 of whom 2.5% (n=3) had missing data for the MTSS, column sums differ accordingly

[d] Range from 0 (0 Euro income) to 7 (7,000 or more Euro income)

DEBRA, German Study on Tobacco Use; HTP, heated tobacco products, MTSS, Motivation To Stop Scale

Supplemental material

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Online supplemental table 2 – Multivariable ordinal regression model of associations with level of motivation to stop smoking among current adolescent tobacco smokers in Germany (unweighted data)

|	Higher rating on the MTSS (1-7) Full sample analysis** (wave 1-33, n = 165)[a] OR_{adj} [95% CI][*]
Age (per 1 year)	0.73 [0.52-1.03]
Gender	
Men (ref)	1.00
Women	1.25 [0.69-2.27]
Income[b]	1.34 [0.86-2.08]
Recent quit attempts	
No attempt in the past 12 months (ref)	1.00
At least one attempt 7-12 months ago	0.70 [0.13-3.62]
At least one attempt 0-6 months ago	6.10 [2.54-14.68]
Time spent with urges to smoke	0.79 [0.49-1.28]
Strength of urges to smoke	1.01 [0.60-1.68]
Use of e-cigarettes	
Never (ref)	1.00
Ex-experimental	1.08 [0.54-2.16]
Ex-regular	0.85 [0.27-2.65]
Current	0.77 [0.30-2.01]

* Odds ratio of a higher level on the MTSS (1-7) for a one-unit increase in a continuous predictor or change in level for a categorical predictor

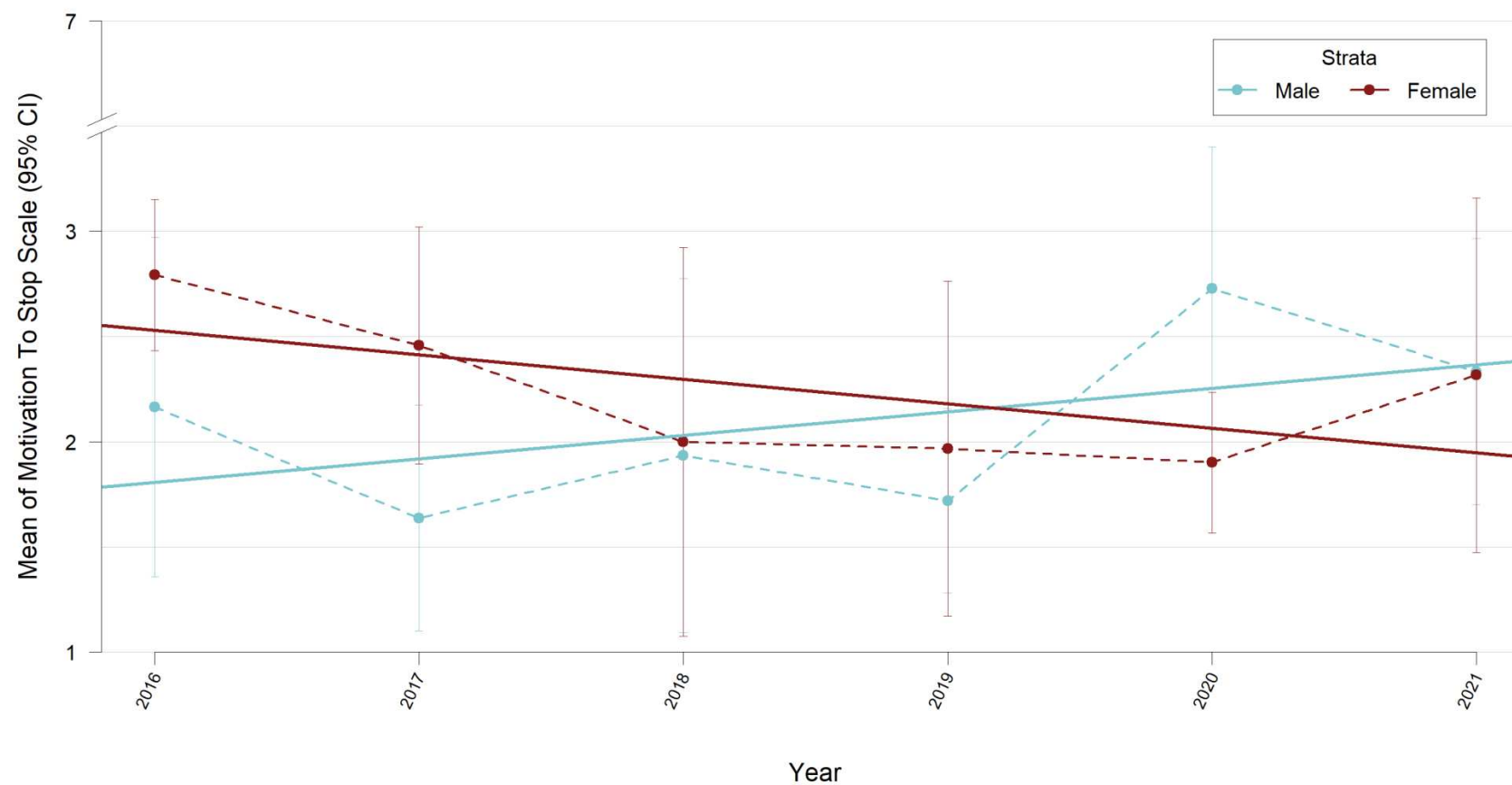** Year of the survey added as a design factor

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[a] 7.2% (n=12) of cases had to be exluded due to missing data in at least one independent variable

[b] Range from 0 (0 Euro income) to 7 (7,000 or more Euro income)

MTSS, Motivation To Stop Scale
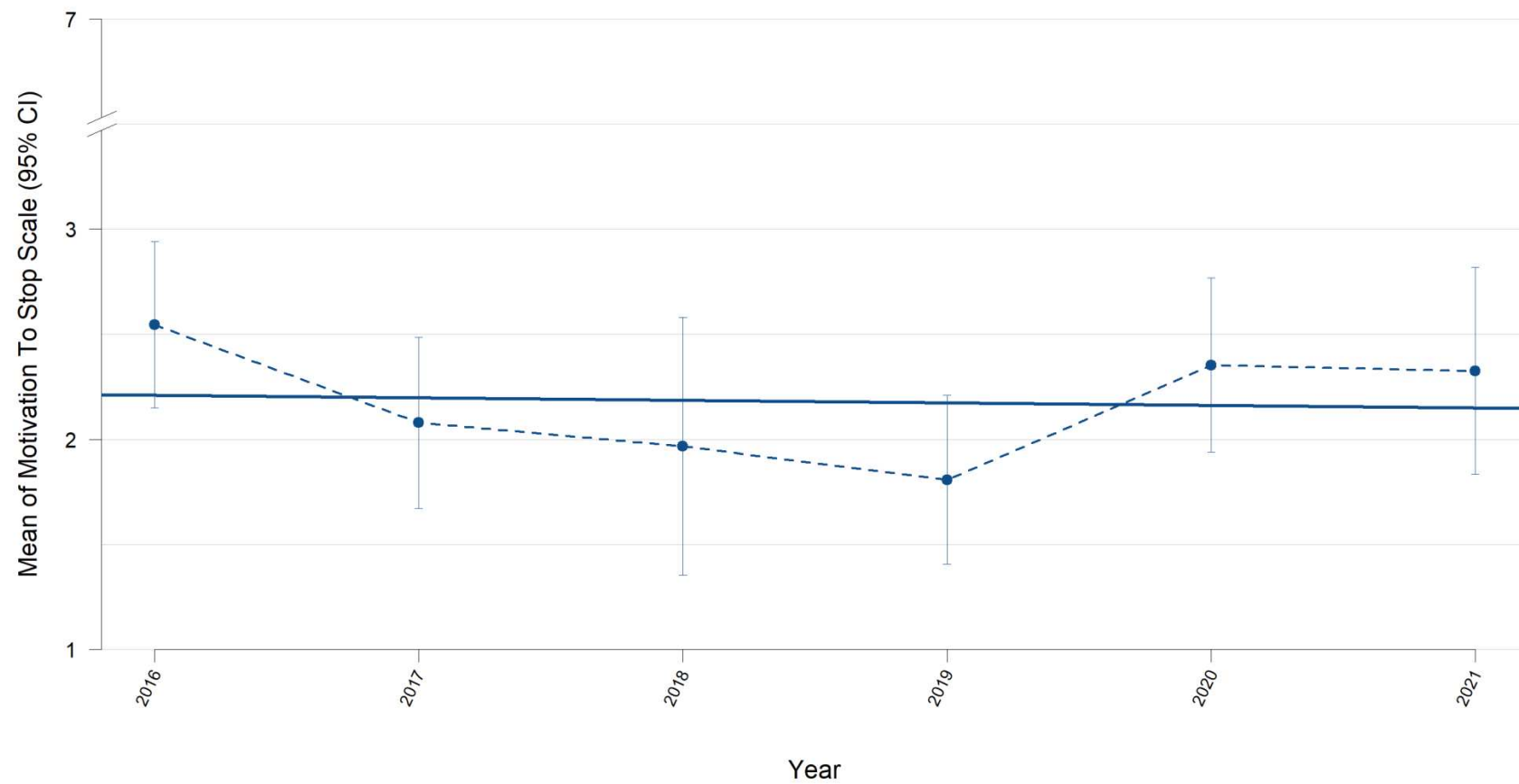
Online supplemental figure 2 - Trend of motivation to stop smoking among adolescent tobacco smokers in Germany (weighted data,

n=228). Trend line (linear regression) presented as solid line.

Supplemental material

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Online supplemental figure 3 - Trend of motivation to stop smoking among adolescent tobacco smokers in Germany stratified by gender (weighted data, n=228). Trend lines (linear regression) presented as solid lines.