

Basic Psychological Needs In Motivation, Learning and Flourishing: Research and Applications Using Self-Determination Theory

- **Richard M. Ryan, Ph.D.**
- *Professor, Institute for Positive Psychology and Education*
 - *Australian Catholic University*



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SDT Basic Research Areas

Intrinsic Motivation: Cognitive Evaluation Theory

Internalization: Organismic Integration Theory

Individual Differences in Motivation: Development and Impact

Well Being: Basic Need Theory and Hedonic versus Eudaimonic Processes

Culture and Gender: Universal Needs versus Cultural or Gender Specific Motives

Intrinsic and Extrinsic Life Goals: Acquisition and Effects

Energy and Vitality: Dynamics, Determinants and Relations to Health

Mindfulness: Interventions and Relations to Self-regulation and Well-being

Nature: Impact of Natural Environments on Well-being and Energy

Physiology and Neuropsychology of Autonomous and Controlled Motivation

Aggression and Prosocial Behaviors: Proximal and Ultimate Causes

SDT Applied Research

Psychotherapy Motivation

Educational Practice

Health Care

Exercise and Physical Activity

Sport Motivation and Performance

Organizational Behavior and Work Performance

Religious Internalization and Motivation

Environmental Footprints and Consumer Behaviors

Virtual Environments, Video Games, Media

What do people really need to flourish?

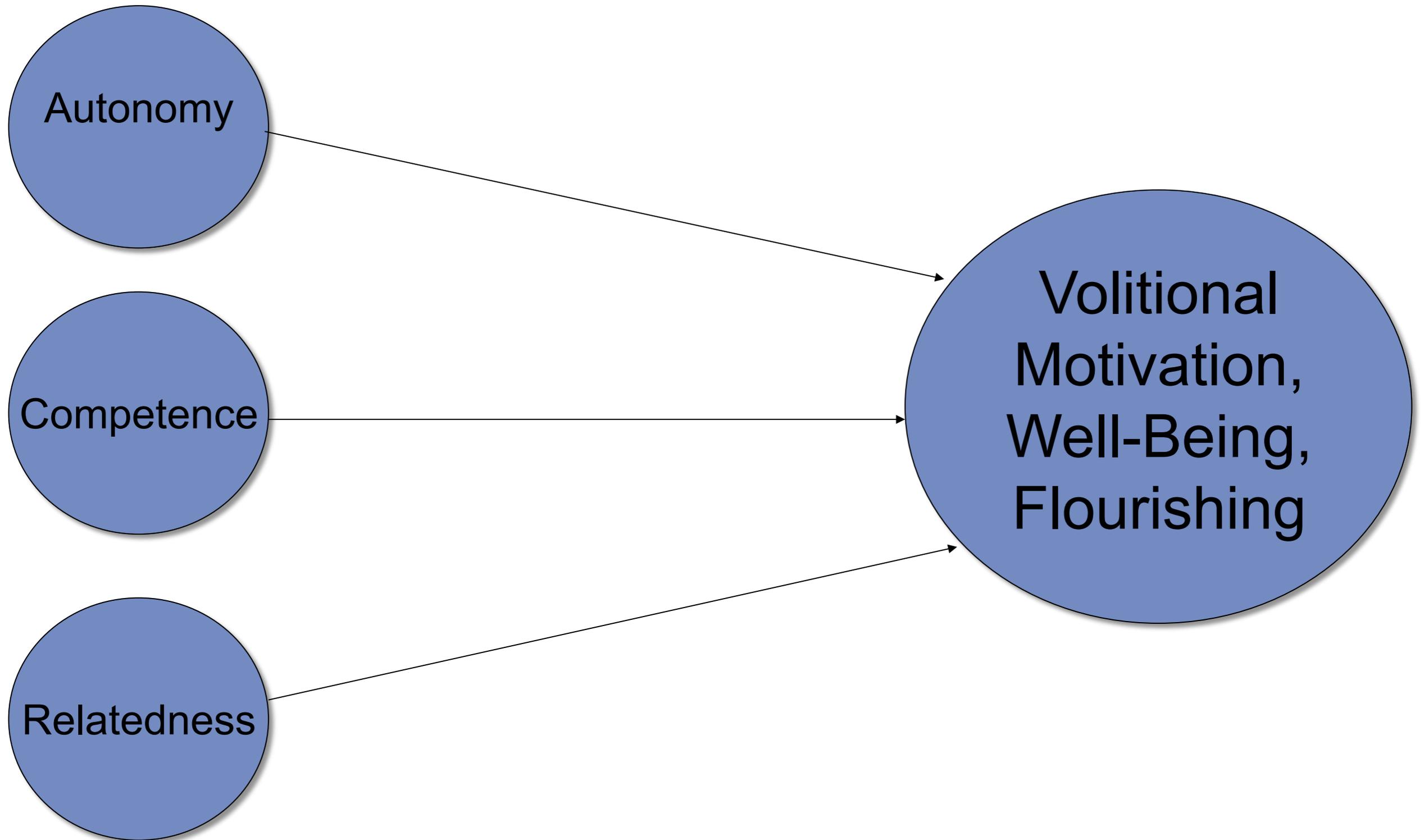


It's in our “nature” to flourish

- To flourish is to develop, to become both more differentiated and integrated, and to become more fully functioning
- But it is by no means automatic
- It requires nutriment



Basic Psychological Needs Underlying Volitional Motivation and Well Being



Need:

Something essential to a living entity's growth, integrity and well being

- when deprived, entity shows evidence of stagnation, degradation or harm; when satisfied, evidence of thriving

Basic Psychological Needs:

Satisfaction is essential for psychological growth, integrity and wellness

- natural rather than acquired
- universal rather than culturally specific
- not necessarily consciously valued or pursued



SDT's Three Basic Psychological Needs

Autonomy



Behavior is in accord with abiding values and interests; actions are self-endorsed; congruence between implicit and explicit motives

Competence



Sense of effectance & competence in one's context

Relatedness



Feeling cared for, connected to, sense of belonging with others

What autonomy is not

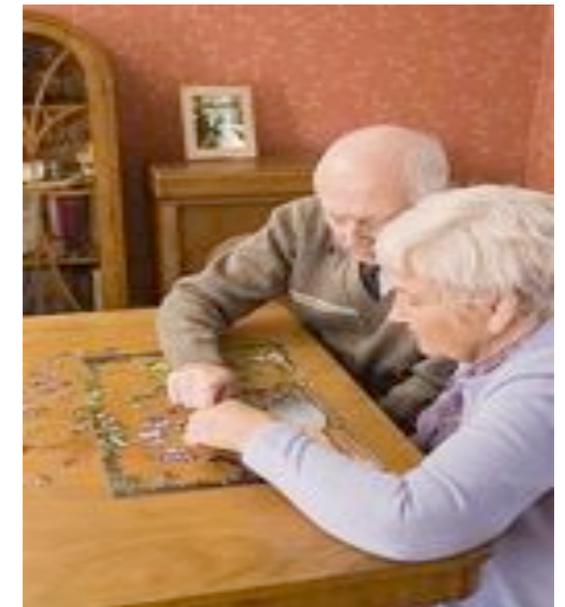
- It is not independence; one can be autonomously dependent or autonomously interdependent
- It is not about individualism vs. collectivism; nor is it about self-interest (i.e., selfishness)
- It does not require an absence of external inputs, or demands, but rather an endorsement of them or of their legitimacy
- It is not the same as “freedom”



What is intrinsic motivation?



- IM is doing something because of the inherent satisfactions the activity yields
- Children's play is a prototype of intrinsic motivation
- IM continues across the lifespan as an important impetus to learning and revitalization



Intrinsic Motivation and Learning

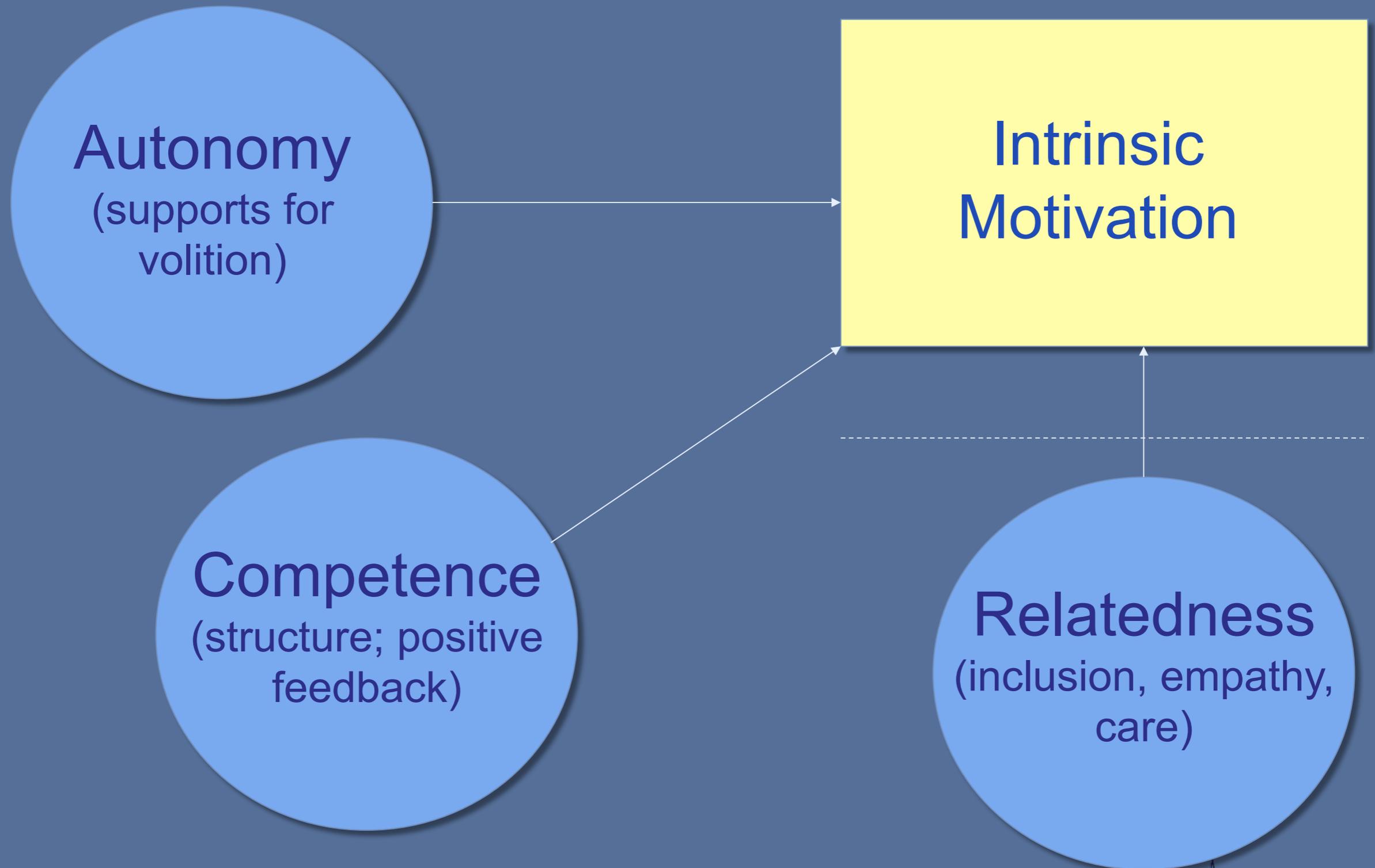


- Most learning is by nature intrinsically motivated; it is a deeply evolved basis of cognitive growth and discoveries of meaning





Factors Associated with the Facilitation of Intrinsic Motivation



Conditions that *Facilitate* Intrinsic Motivation

Autonomy-Relevant

- Absence of Pressure/Control
- Goal/Strategy Choice
- Task Involvement
- Promotion of Task Interest

Competence-Relevant

- Optimal Challenge
- Pos. Feedback
- Informational Rewards

Relatedness-Relevant

- Empathy
- Warmth
- Acknowledge Emotions

Conditions that *Undermine* Intrinsic Motivation

Autonomy-Relevant

- Pressure toward outcomes
- Punishment contingencies
- Goal/Strategy Imposition
- Deadlines
- Controlling rewards
- Ego-involvement
- Surveillance

Competence-Relevant

- Non-Optimal Challenges
- Negative Feedback

Relatedness-Relevant

- “Cold” Interactions
- Lack of Positive Involvement

Effects of Choice on Vegetable Children's Intake

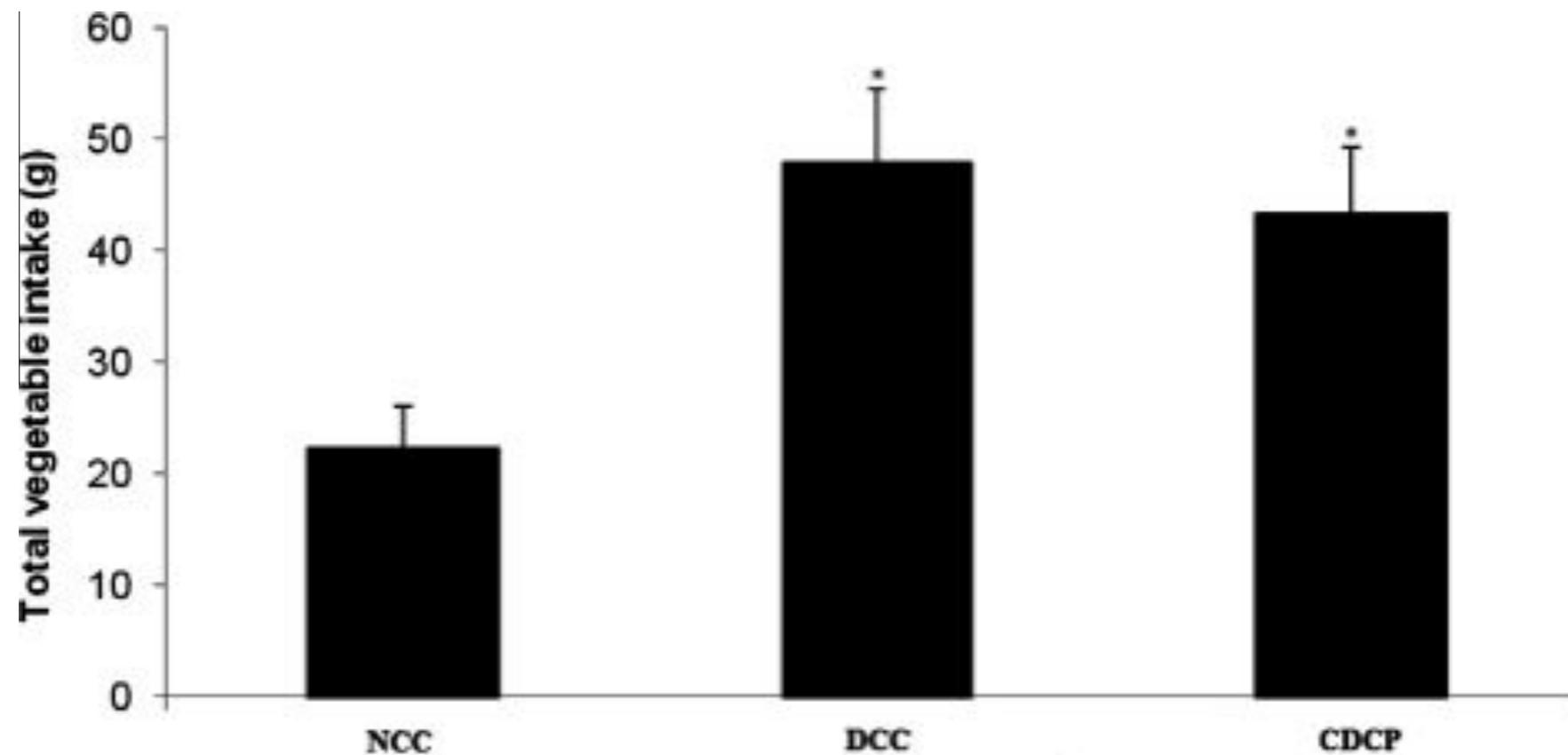
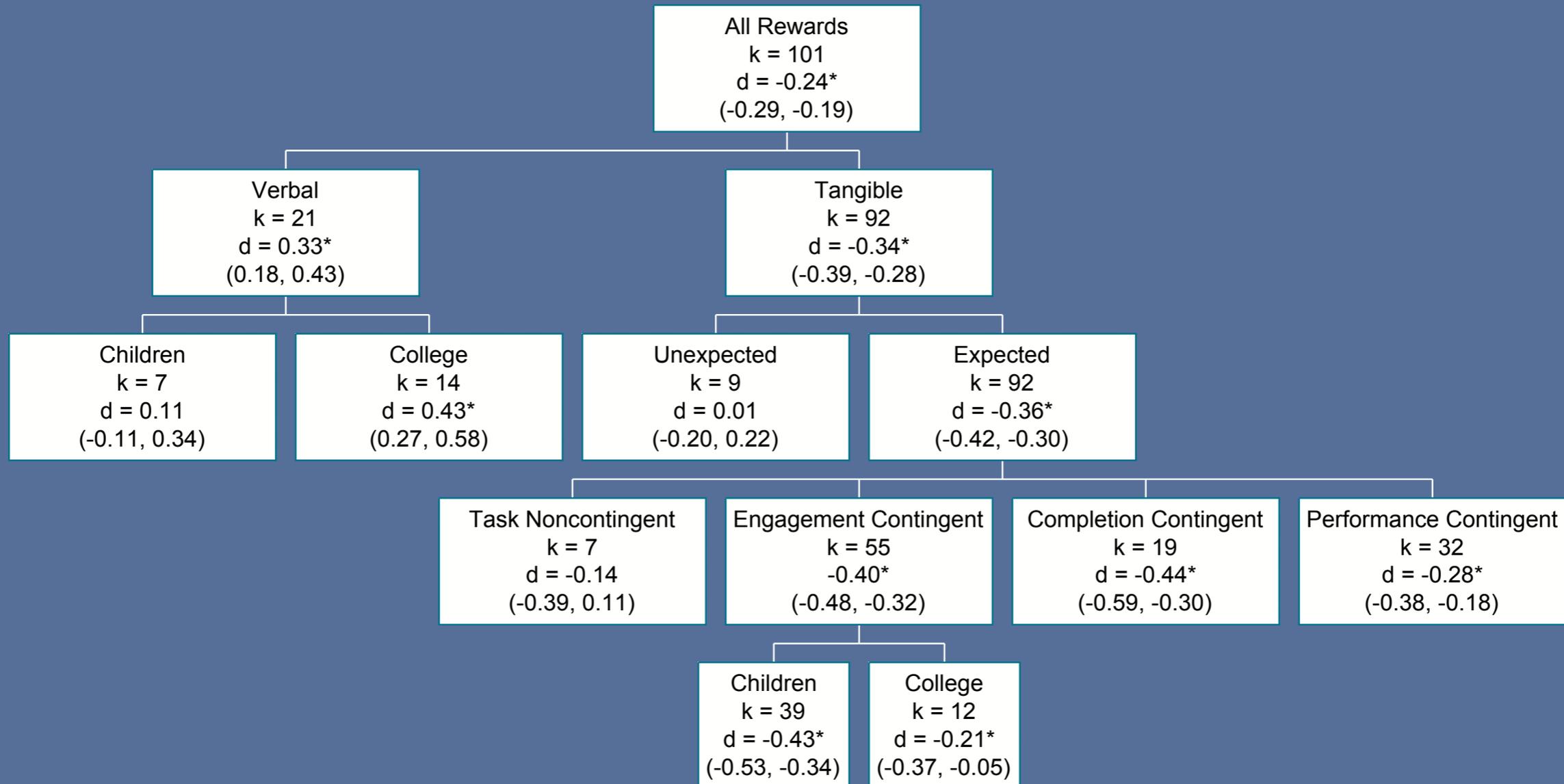


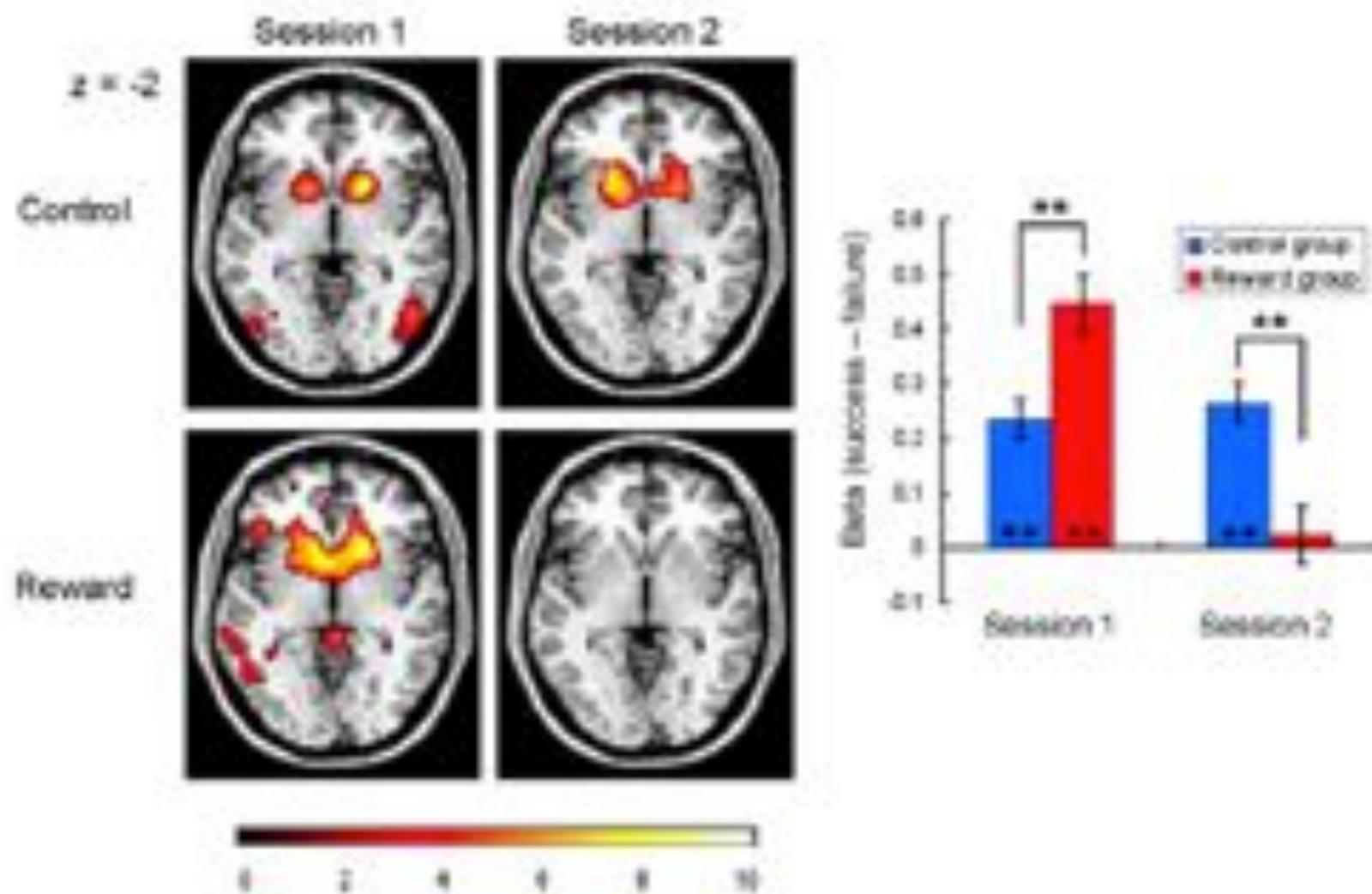
Fig. 1. Means and standard error means of total vegetable consumption, including one or two vegetables, depending on the condition ($p < 0.05$).

The Effects of Rewards on Free-Choice Behavior: Controlling Rewards Undermine; Informational Do Not



Deci, E. L., Koestner, R., & Ryan, R.M. (1999). *Psychological Bulletin*, 125, 627-668.

The Undermining Effect: Deactivation of Bilateral Striatum as a Function of Prior Rewards



Right LPFC Changes During Reward and Post-Reward Sessions

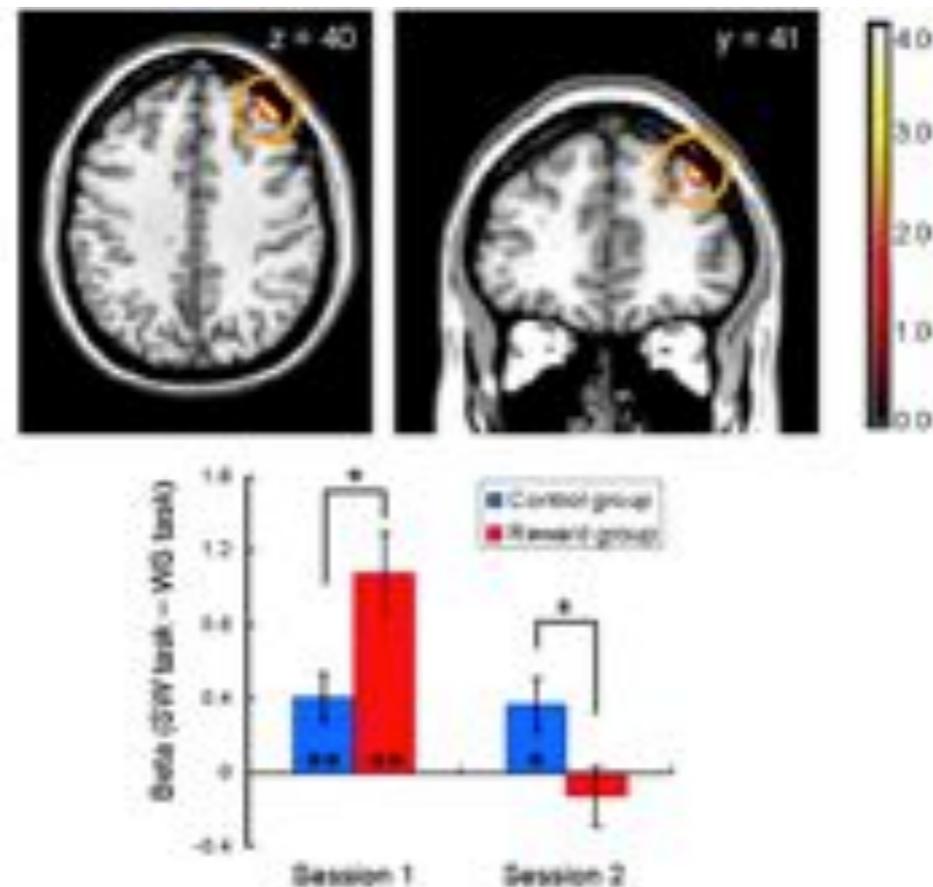


Fig. 4. Right LPFC activation (peak at 39, 41, 40) detected in the session-by-group interaction during the task cue period ($P < 0.05$, small-volume-corrected; image is shown at $P < 0.001$, uncorrected for display). Neural responses are displayed in transaxial and coronal formats. The bar plot represents mean contrast values and SDs for each session/group. During the first session, the LPFC in the reward group showed significantly larger activation than that in the control group (two-sample $t_{28} = 2.62$, $P < 0.05$). However, the activation became significantly smaller in the reward group than in the control group during the second session (two-sample $t_{28} = 2.27$, $P < 0.05$).

But in more typical situations, not all students receive rewards.....

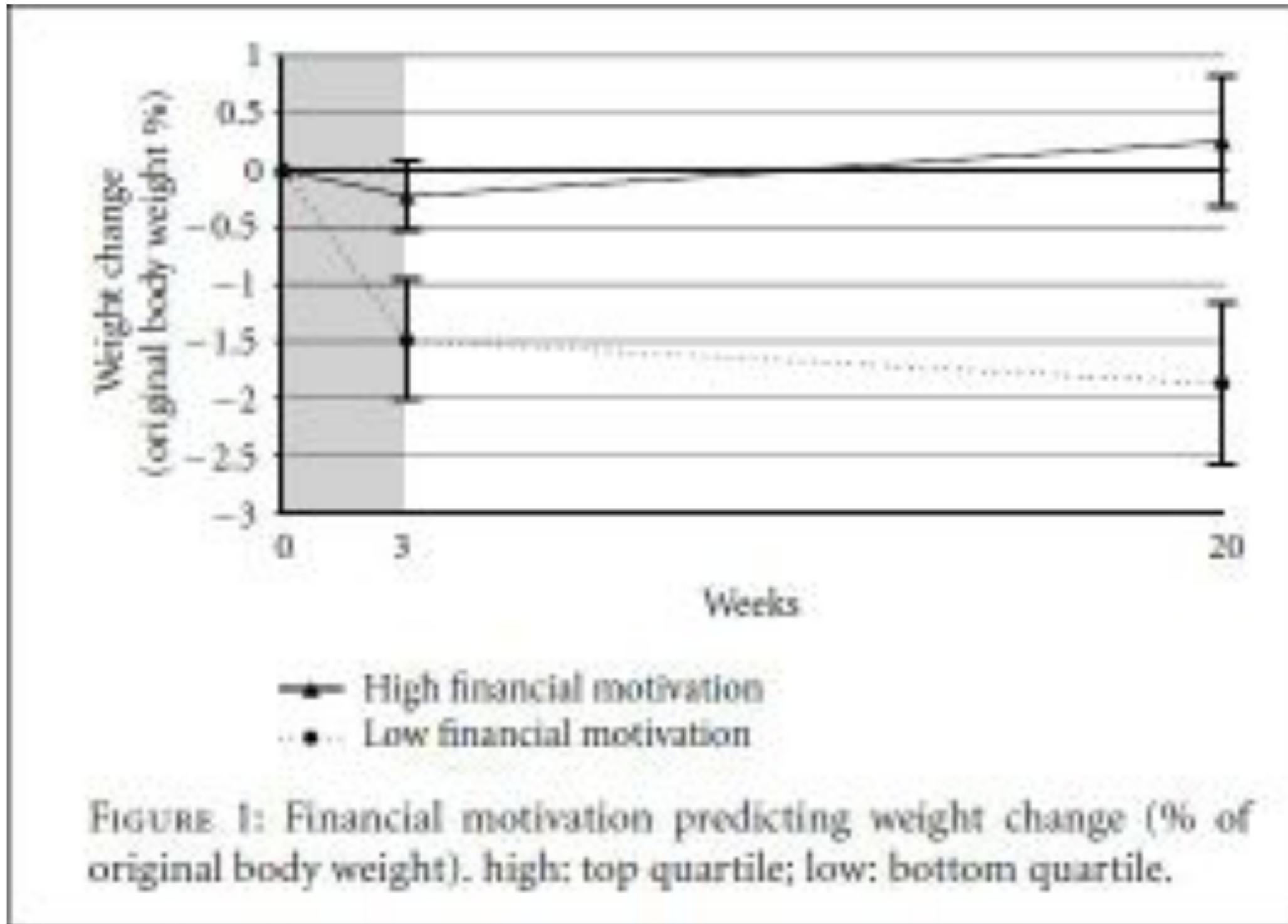
When all students got the offered rewards -0.36

When students got less than maximal rewards -0.88

When some students got no rewards -0.95

numbers are Cohen's *d* effect size, all are significant from Deci, Koestner, & Ryan (1999)

Negative Impact of Extrinsic Reward Focus on Sustained Weight Change :



Relations of Teachers' Orientations (autonomy-supportive vs. controlling) to Students' Intrinsic Motivation and Perceived Competence

Teachers' Autonomy Support

Intrinsic Motivation

Preference for Challenge

.41***

Curiosity

.56***

Mastery attempts

.37***

Perceived Competence

Cognitive competence

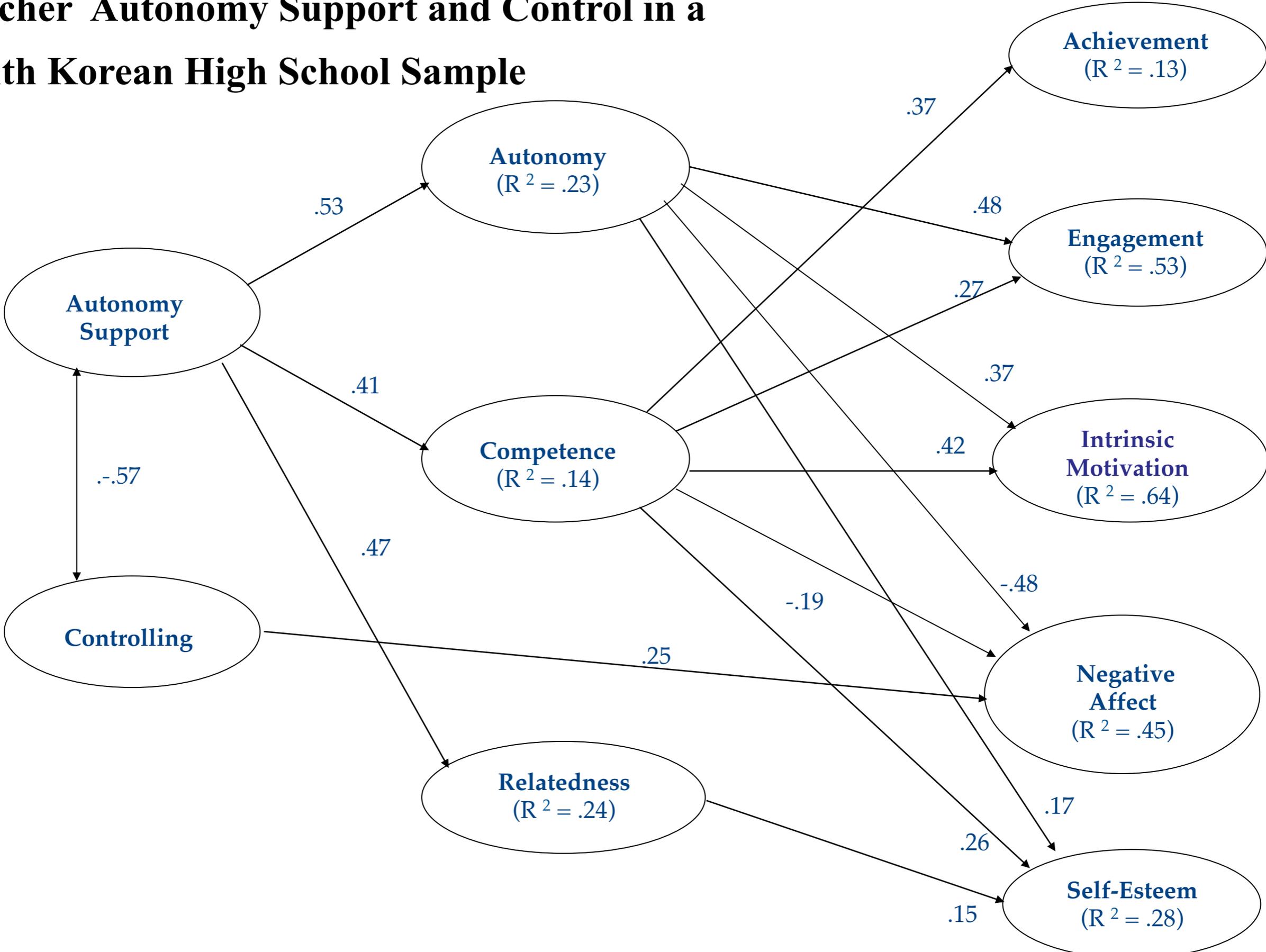
.29***

Global competence (self-worth)

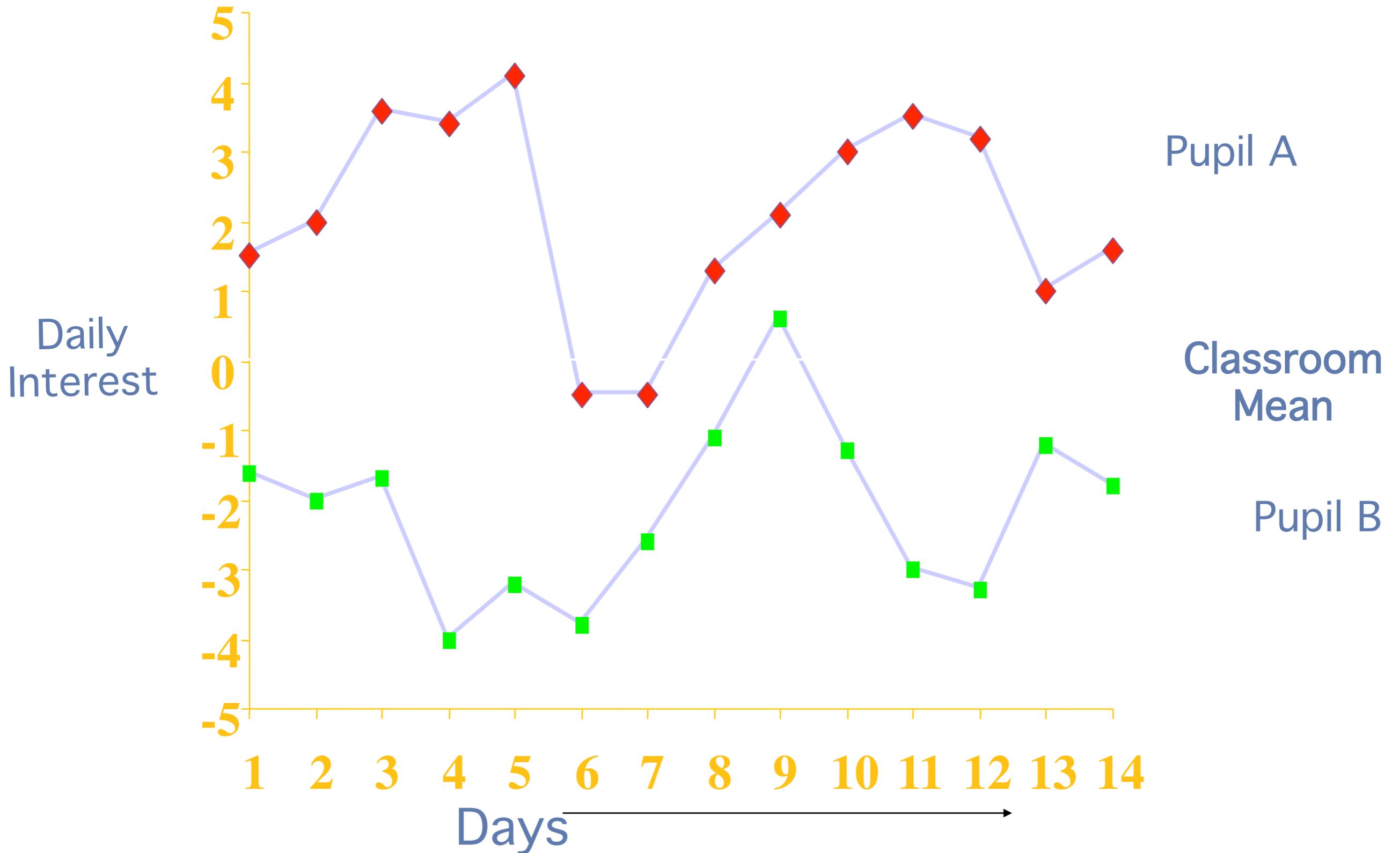
.36***



Teacher Autonomy Support and Control in a South Korean High School Sample



Daily Fluctuations in Two Students' Interest in the Same Class



Predicting Learners' Daily Interest Experience

	Mathematics	German	2 nd Language
<u>Predictor</u>	<u>B (Model 2)</u>	<u>B (Model 2)</u>	<u>B (Model 2)</u>
Within-student level			
Autonomy-support	.25***	.31***	.28***
Controlling behaviors	-.10***	-.10***	-.14***
Cognitive Auto-support	.23***	.23***	.22***
Between-student level			
Gender	.02	.07	.03
Individual interest	.28***	.24***	.29***
Person Level auto-support	.19***	.34***	.26***
PL controlling behaviors	-.15***	-.09**	-.15***
PL cognitive auto-support	.35***	.16**	.23***

Note. B unstandardized regression coefficient resulting from HLM analyses. ** p .01. *** p .001.

See: Tsai, Y., Kunter, M., Lüdtke, O., Trautwein, U., & Ryan, R. M. (2008). What makes lessons interesting? the role of situational and individual factors in three school subjects. *Journal of Educational Psychology, 100*, 460-472.

SEM Relating Autonomy Support/Control to Need Satisfaction and Outcomes in Athletes

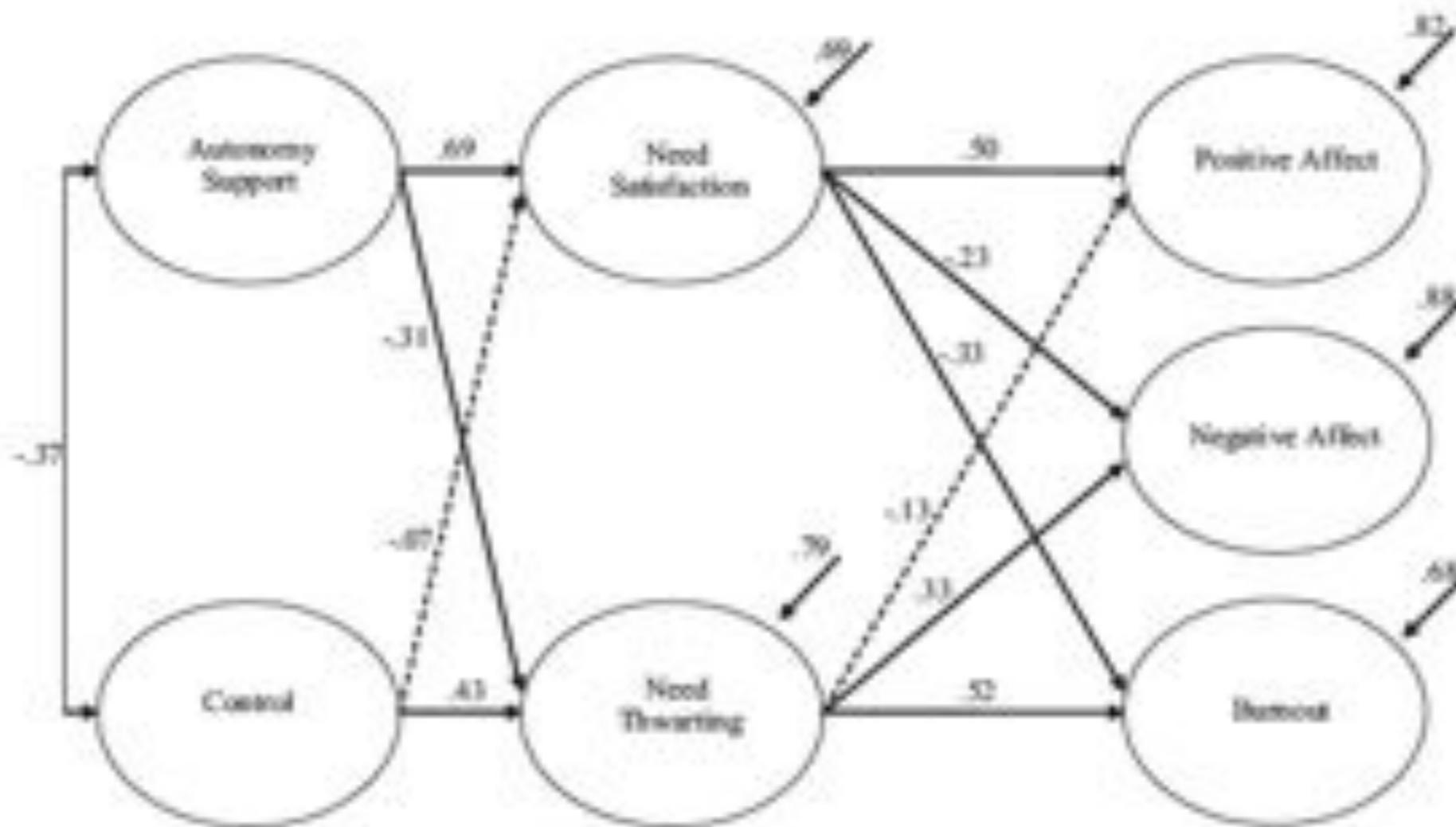


Figure 2. Latent variable modeling predicting positive affect, negative affect, and burnout symptoms (Study 2). Dotted lines represent nonsignificant parameters. Item indicators are not presented for presentation simplicity purposes. Correlations between disturbance terms were need satisfaction-need thwarting = $-.20$, positive affect-burnout = $-.30$, negative affect-burnout = $.46$.

Secretory Immunoglobulin A (S-IgA) as Predicted by Need Thwarting Prior to Training or Practice Sessions

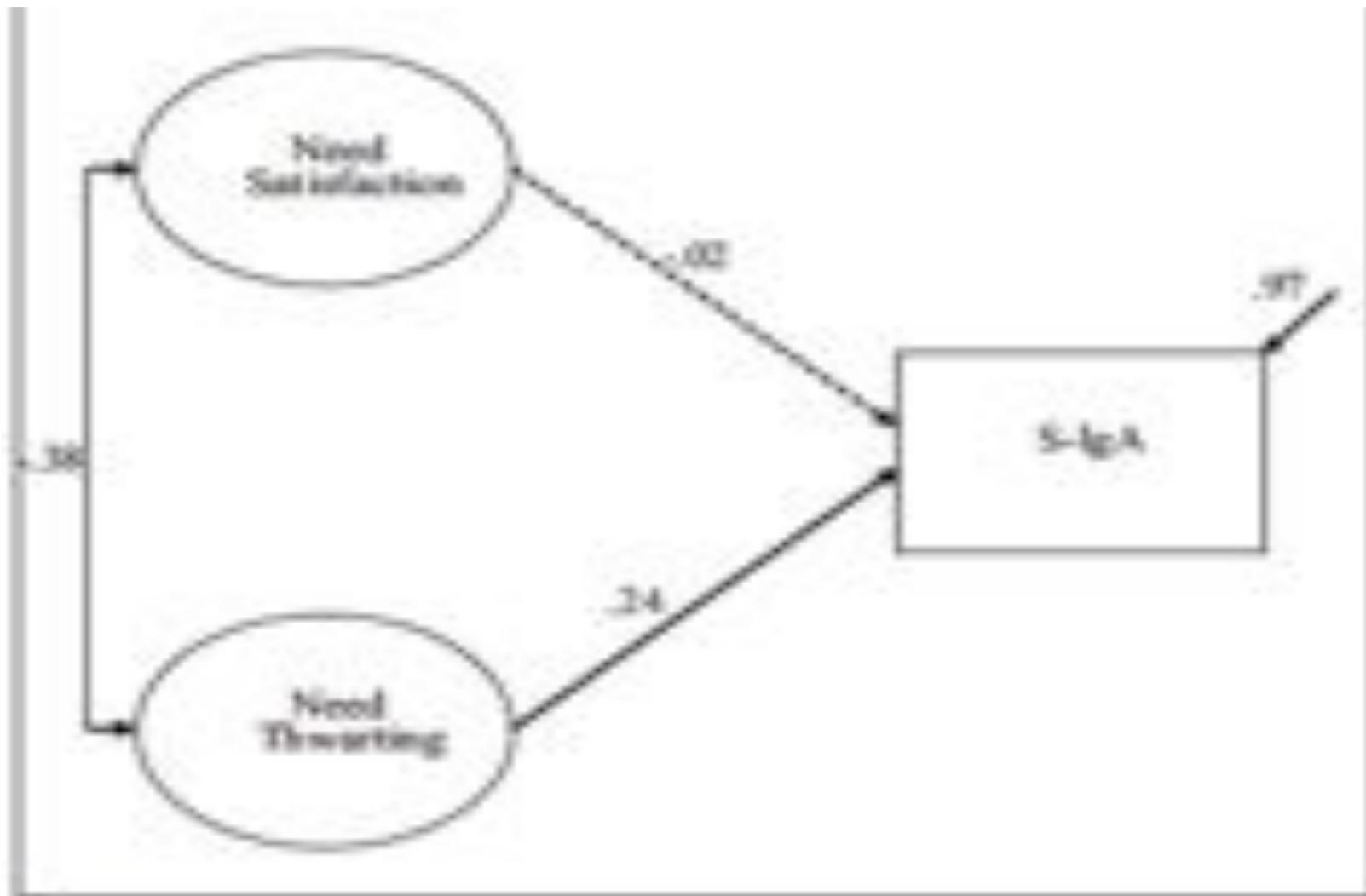


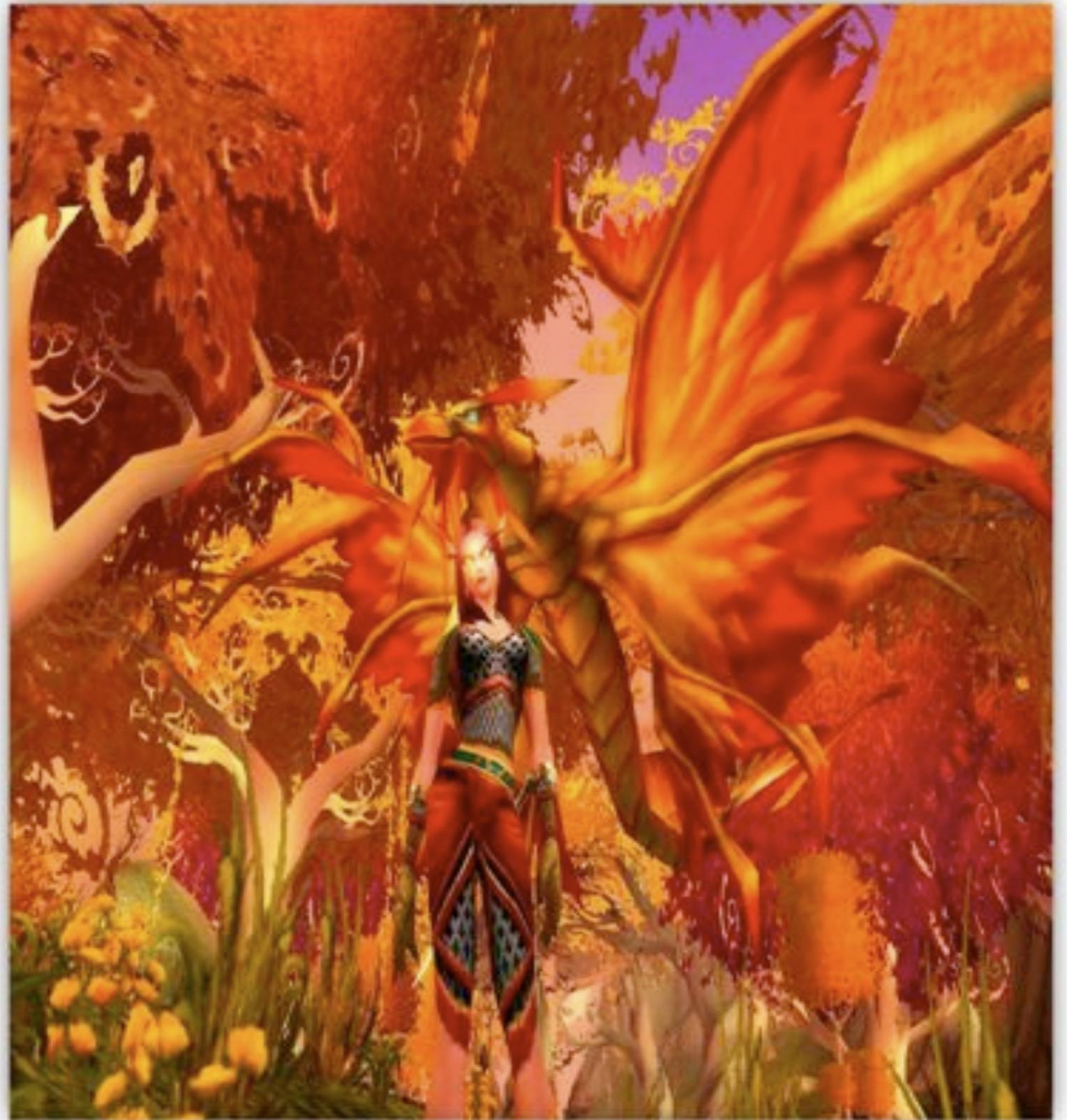
Figure 3. Latent variable modeling predicting levels of S-IgA

(Study 2)

Dotted lines represent nonsignificant parameters. Secretory immunoglobulin A (S-IgA) was an observed variable. Item indicators for the two need factors are not presented for presentation simplicity purposes.

Motivation for Multiplayer Online Role-Playing Games

*We did a longitudinal
analysis of in-game
psychological need
satisfaction &
engagement and
persistence in World of
Warcraft over 8 months*



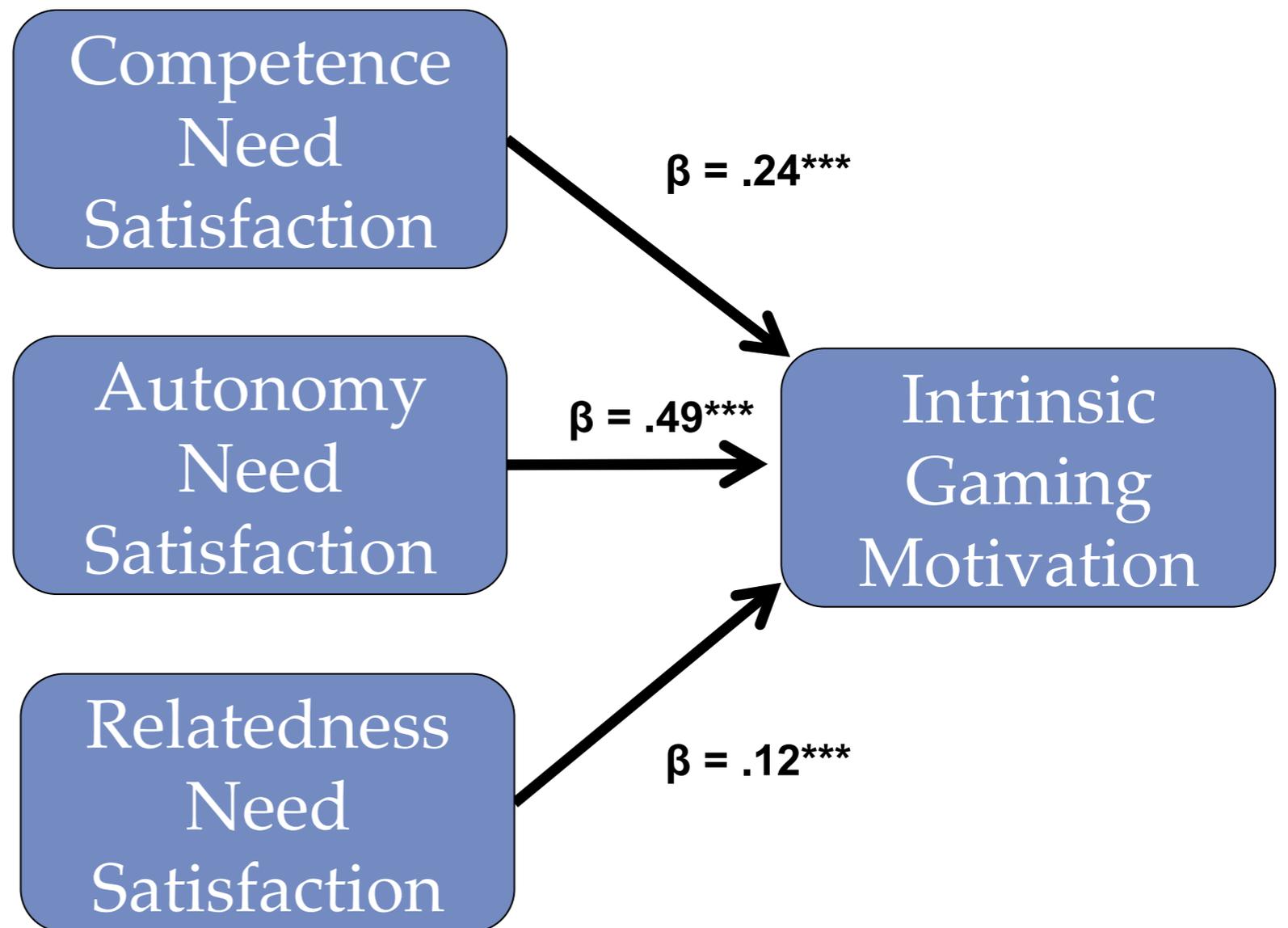
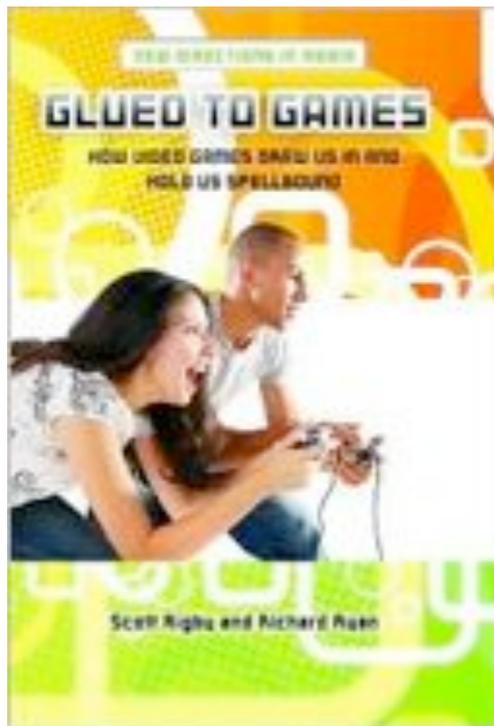
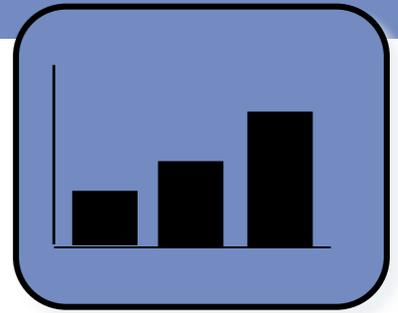
Correlations and Regressions of Initial Enjoyment and Need Satisfaction on Outcomes 8-Months Later

Zero-Order Correlations and Simultaneous Regressions of Need Satisfaction and Enjoyment on Outcomes 8 Months Later

	Correlations		Betas	
	Need Satisfaction	Enjoyment	Need Satisfaction	Enjoyment
Still Playing Game	.41**	.19	.42**	.02
Worth the Price	.54**	.37*	.47**	.14
Will Recommend to Others	.61**	.53**	.46**	.30 ⁺
“This Game Rocks!”	.56**	.46**	.45**	.24

N = 31. *p < .05. ** p < .01. ⁺ p < .10.

All Three Needs Impact Gaming Motivation



Two Types of Motivation....

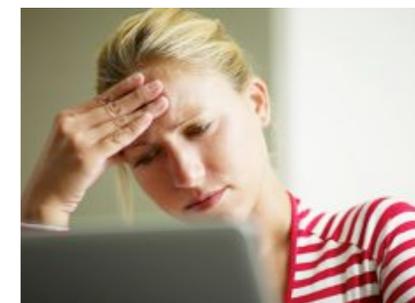
Intrinsic Motivation:

Done or the inherent satisfactions in acting



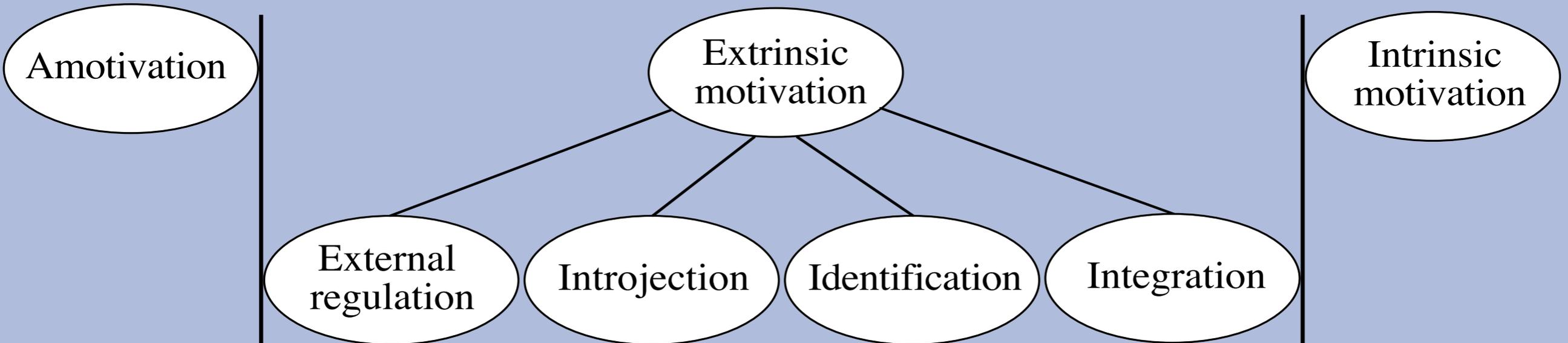
Extrinsic Motivation:

Done to attain consequences separable from behavior



Intrinsic & Extrinsic Motivation

REGULATORY STYLES:



ASSOCIATED PROCESSES:

Perceived non-contingency
 Low perceived competence
 Non-relevance
 Non-intentionality

Saliency of extrinsic rewards or punishments
 Compliance/Reactance

Ego Involvement
 Focus on approval from self and others

Conscious valuing of activity
 Self-endorsement of goals

Hierarchical synthesis of goals
 Congruence

Interest & Enjoyment
 Inherent satisfaction

PERCEIVED LOCUS OF CAUSALITY:

Impersonal

External

Somewhat External

Somewhat Internal

Internal

Internal



Why do you do your homework?: Simplex pattern in three diverse elementary school samples

Sample	External	Introjected	Identified
Urban (n=112)			
Introjected	.34***		
Identified	.10	.53***	
Intrinsic	.04	.17	.46***
Rural (n=450)			
Introjected	.54***		
Identified	.30***	.56***	
Intrinsic	.02	.25***	.47***
Suburban (n=156)			
Introjected	.35***		
Identified	-.13	.46***	
Intrinsic	-.30***	.07	.51***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Correlations Among Autonomy Subscales in Japanese Elementary Students

Subscales	External	Introjected	Identified	Intrinsic
External	----			
Introjected	.62***	----		
Identified	.26***	.50***	----	
Intrinsic	.08	.35***	.68***	----

Note. *** $p < .001$

Correlations between Motives and Japanese Students' Goals, Values, & Learning Strategies

Subscales	External	Introjected	Identified	Intrinsic
Goal Orientation				
Learning Orientation	.15**	.37***	.58***	.62***
Performance Orientation	.28***	.50***	.33***	.16**
Work-Avoidance	.19***	-.02	-.37***	-.42***
Value of school	-.02	.24***	.49***	.58***
Learning Strategies				
Deep Process	-.04	.27***	.54***	.56***
Surface Process	.38***	.40***	.16**	.13*

Note. * $p < .05$, ** $p < .01$, *** $p < .001$; Yamauchi & Tanaka (1998)

Chinese 5th Grader's relative Autonomy and School Motivation/EnGagement

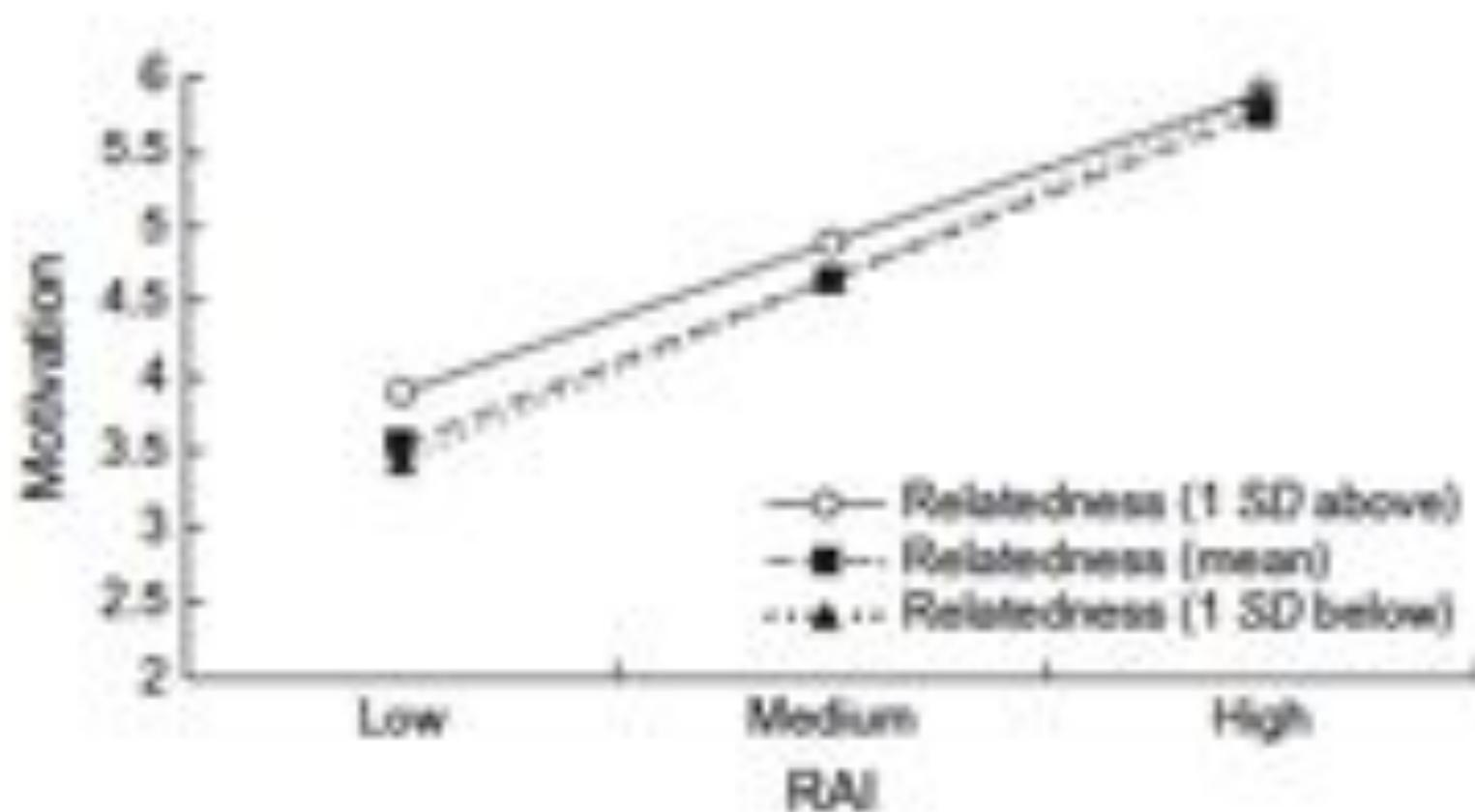


Figure 4. Relationships between Relative Autonomy Index (RAI), relatedness, and motivation in Study 4.

Predicting Engagement & Emotions from Students' Relative Autonomy

Engagement Variable	Predictor Variable	β	t
Persisting	SAT	0.14	1.02
	Autonomy	0.70	3.54**
Curiosity	SAT	-0.16	-0.99
	Autonomy	1.86	8.31**
Participating	SAT	0.10	1.47
	Autonomy	0.31	3.22*
Anxiety	SAT	-0.10	-1.26
	Autonomy	-0.87	-7.99**
Boredom	SAT	-0.01	-0.07
	Autonomy	-1.03	-6.52**
Anger	SAT	0.12	0.91
	Autonomy	-0.93	-5.22**

* $p < .01$; ** $p < .001$

Multiple Regressions Predicting Grades From Achievement Tests and Student's Autonomy

	Predictor	R^2	f	β	t *
Math	SAT			.42	4.89**
	Autonomy			.42	3.48**
	Summary Model	.22	22.96**		
Language Arts	SAT			.36	3.90**
	Autonomy			.47	3.73**
	Summary Model	.19	18.87**		
Social Studies	SAT			.30	3.14**
	Autonomy			.54	4.17**
	Summary Model	.18	17.28**		

** $p < .01$

MOTIVATION IN MEDICAL STUDENTS

From Kusrkar et al (2013)

	Autonomous	Controlled
Deep Study Strategy	.46***	.05
Surface Study Strategy	-.15**	.26**
Self-Study Hours	.10**	-.12**
Exhaustion	-.18**	.09*
GPA	.11**	-.12**

Exercise motivation and engagement in objectively assessed bouts of moderate intensity exercise behavior

Table 1 Bivariate Correlations Among the Study Variables

	M	SD	1	2	3	4	5	6	7	8	9	10	11
Gender (1)	—	—	—										
BMI/WC (2)	—	—	-.22	—									
Intrinsic motivation (3)	3.19	.66	-.28*	-.13	—								
Identified regulation (4)	3.19	.76	-.24	.00	.74***	—							
Introjected regulation (5)	1.33	.23	.02	.07	.30*	.45**	—						
External regulation (6)	1.19	.55	.32*	-.06	-.20	-.08	.28*	—					
Autonomous motivation (7)	3.20	.65	-.27	-.07	.94***	.93***	.38**	.12	—				
Controlled motivation (8)	1.21	.56	.17	.03	.10	.29*	.38***	.68***	.21	—			
Total moderate-intensity exercise ≥ 10 min (9)	150.75	128.42	-.49***	.16	.39**	.48***	.18	-.24	.47***	-.03	—		
Total moderate-intensity exercise ≥ 20 min (10)	100.46	107.39	-.38**	.23	.38**	.41**	.13	-.17	.42**	-.02	.92**	—	
Total moderate-intensity exercise ACSM/AHA guidelines (11)	128.23	127.68	-.50***	.24	.34*	.45***	.22	-.18	.42**	.05	.95**	.91**	—

Note. Square-root transformed data were used in the correlation analyses but nontransformed mean and SD values are presented.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Correlations of motivational constructs and Total Moderate-Intensity Exercise per ACSM/AHA guidelines

External Regulation	-.18
Introjected Regulation	.22
Identified Regulation	.45***
Intrinsic Motivation	.34*
Controlled Motivation	.05
Autonomous Motivation	.42**



Integrating Attitudes: Autonomy and prejudice

(Legault et al. 2007)

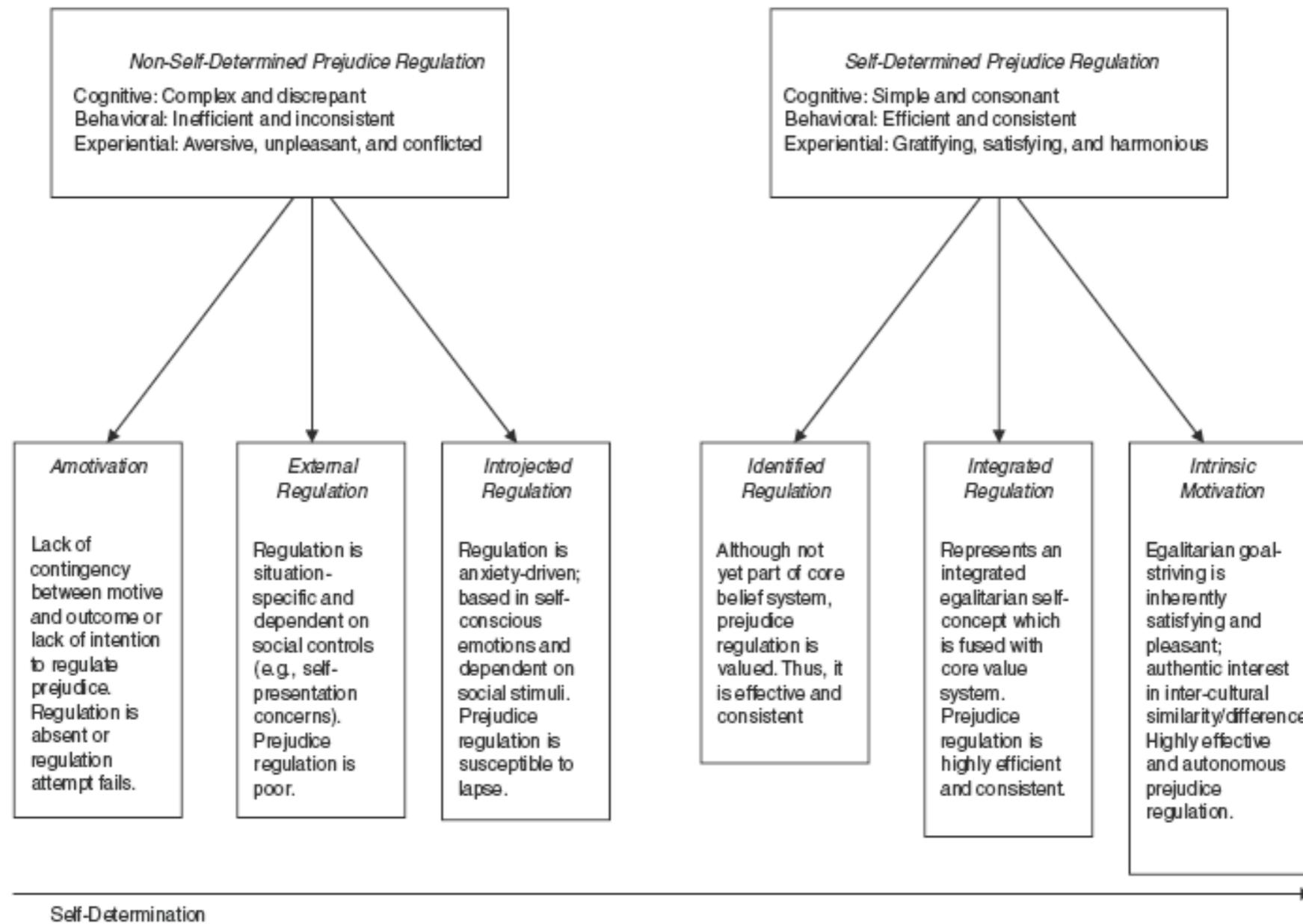


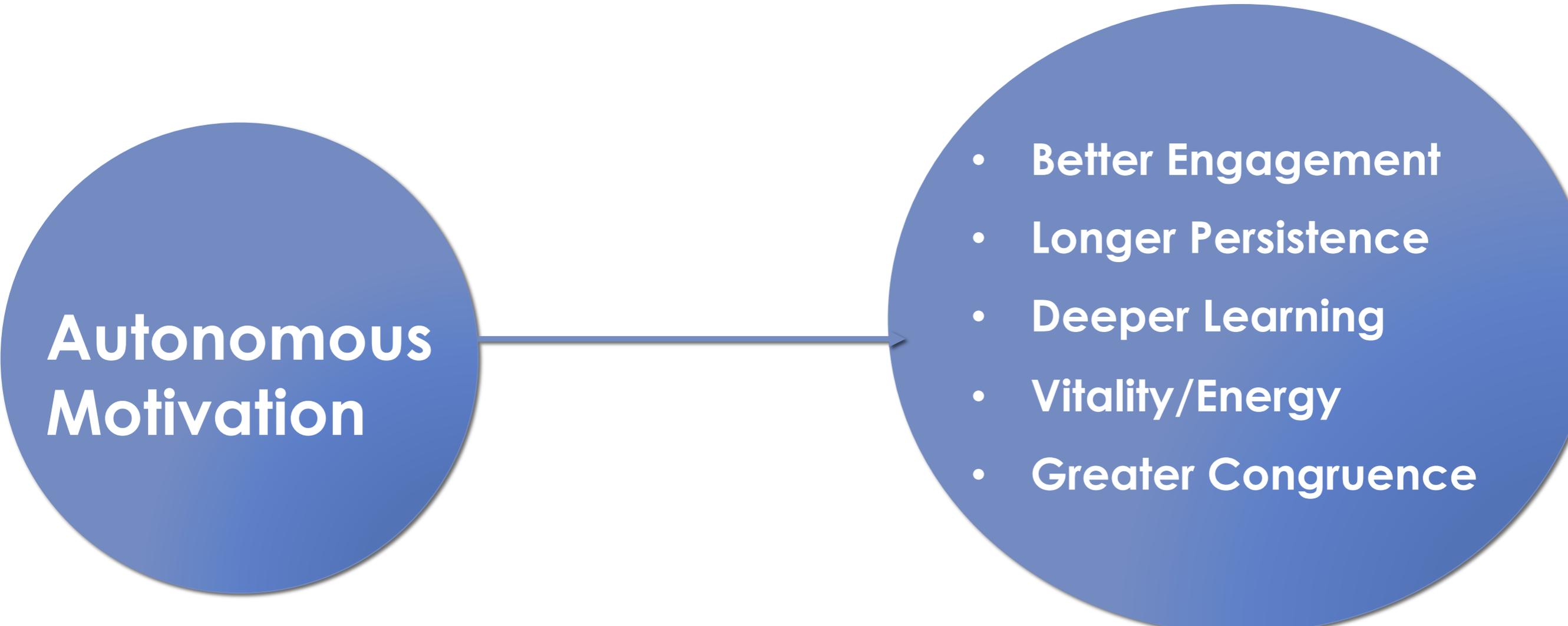
Figure 1 Continuum of Self-Determined Motivation to Regulate Prejudice.

Correlations Between Motivation to be Non-prejudiced and Explicit and Implicit Outcomes

Dependent Variable	Correlation with Relative Autonomy
Explicit (Affective) Prejudice	-.45***
IAT assessed Racism Score	-.53***

Greater Relative Autonomy Enhances Value, Motivation and Wellness Outcomes

**Autonomous
Motivation**



```
graph LR; A((Autonomous Motivation)) --> B((Better Engagement, Longer Persistence, Deeper Learning, Vitality/Energy, Greater Congruence));
```

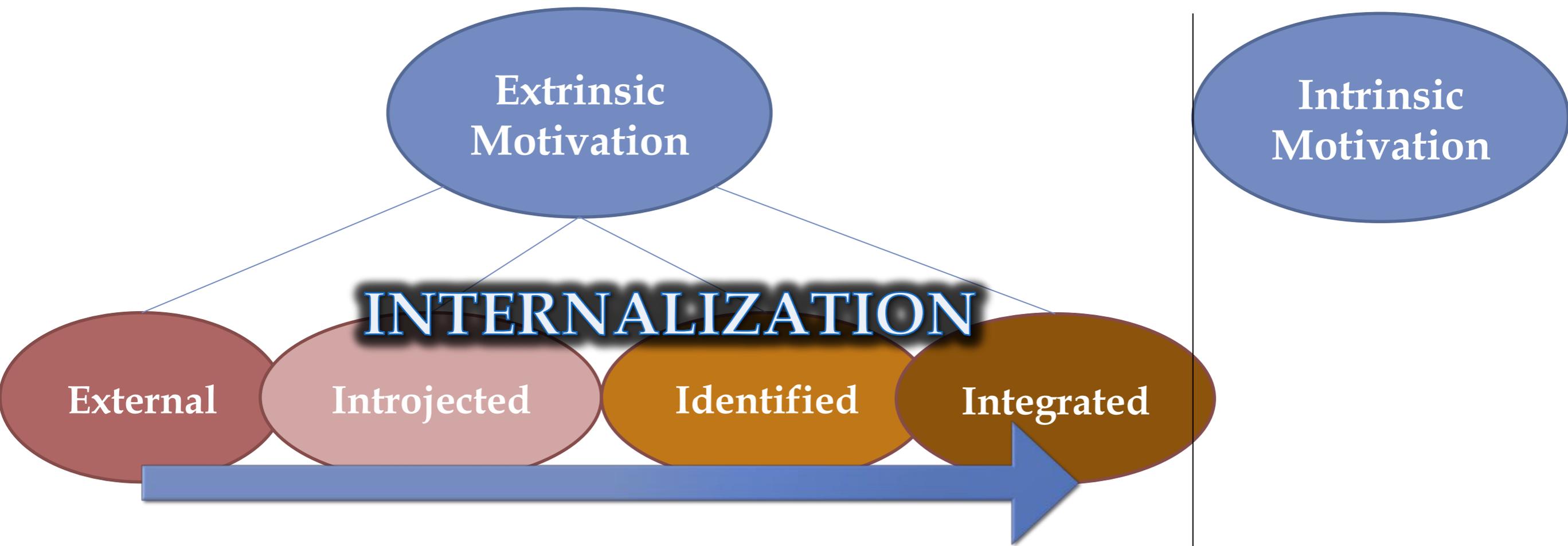
- Better Engagement
- Longer Persistence
- Deeper Learning
- Vitality/Energy
- Greater Congruence

These functional effects are apparent:

Across the Life Span

Across SES

Across Cultures



Extrinsic
Motivation

Intrinsic
Motivation

INTERNALIZATION

External

Introjected

Identified

Integrated

-Control with
rewards &
punishments
-Compliance

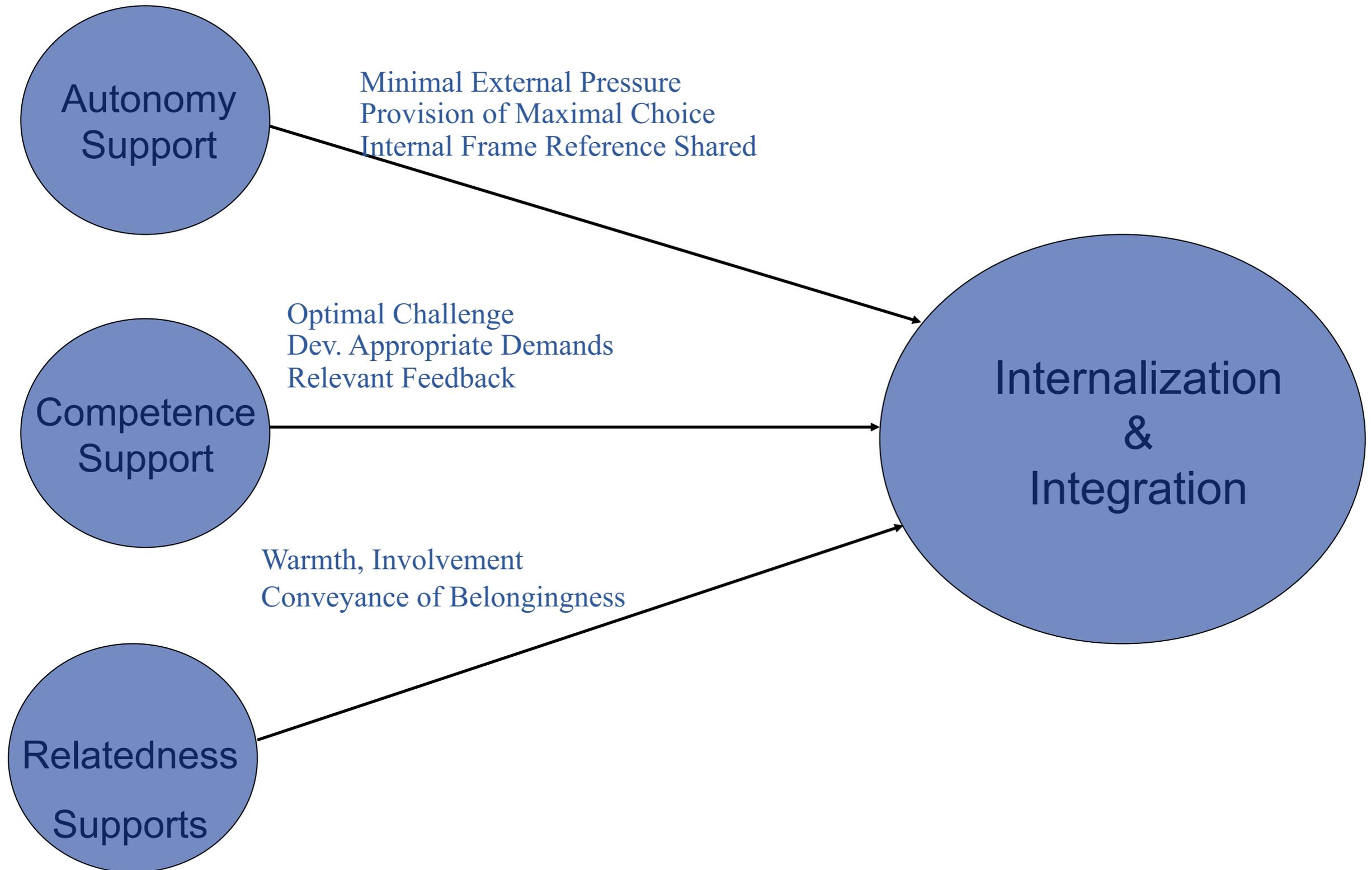
-Guilt/Shame
-Self-pressure
-Ego-involvement

-Self truly
endorses &
values goal

-Goals are
integrated

- Inherent
Satisfaction
- Autotelic

Factors Facilitating Greater Relative Autonomy of Behavioral Regulations and Values



Autonomy-Supportive Interactions

- Understand the other's perspective (IFOR)
- Encourage self-reflection, or “interest-taking”
- Offer meaningful choices
- Provide a rationale for requested behavior
- Minimize use of controlling language/rewards

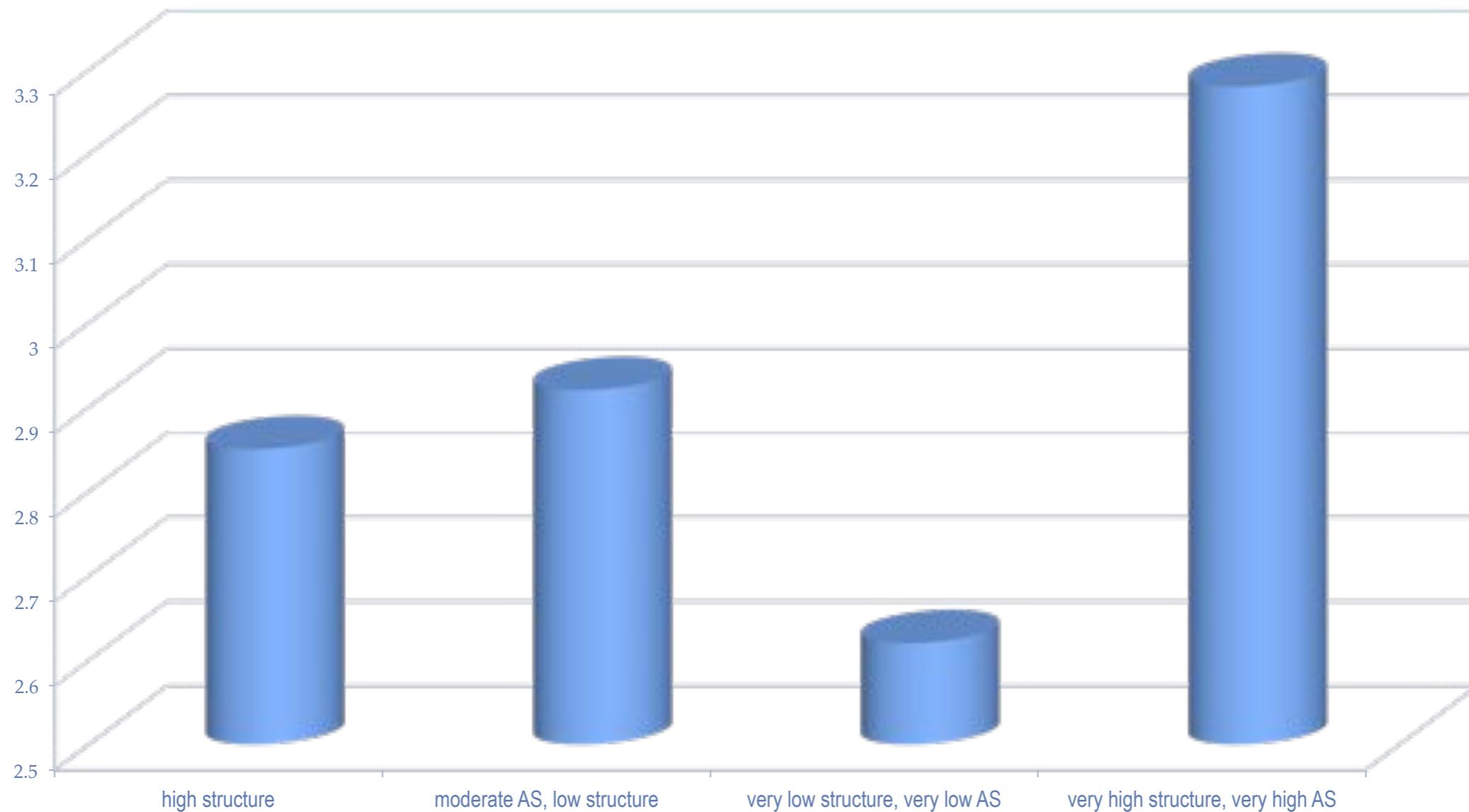


Competence-Supportive Environments

- Design activities so that mastery (not high challenge) is the dominant experience
- Structure provides a scaffolding for active development and skill acquisition
- Feedback is “informational” rather than evaluative
- Praise focuses on effort and specific accomplishments; not ability or comparisons with others



Students' autonomous motivation as a function of perceived teaching profile



Relatedness-Supportive Environments

- Convey respect for the individual
- Individual feels valued and significant
- Care and concern when facing challenges
- Warmth and Inclusion
- Opportunities to Contribute/Give
- “My practitioner (teacher, coach) likes me”



Estimated Latent Constructs' Means and Variances for U.S. (N=116) and Russian (N=120) High School Samples

Latent Constructs	U.S.		Russia		Difference Tests	
	Mean	Variance	Mean	Variance	t	p
Parent A-S*	0.0	1.00	-.41	.90	-2.97	p<.01
Teacher A-S*	0.0	1.00	-.54	.71	-4.18	p<.001
Self-Actualization	0.0	1.00	-1.27	.48	-6.59	p<.001
Self-Esteem	0.0	1.00	-.42	.81	-3.15	p<.01
Depression	0.0	1.00	-.25	.85	1.93	p<.10
Life Satisfaction	0.0	1.00	-.57	.79	-4.21	p<.001

*A-S = Autonomy Support

Correlations Between Parent and Teacher Autonomy Support and Academic Self-Regulation in U. S. and Russian Schools

	U.S.		Russian	
	Parent A-S	Teacher A-S	Parent A-S	Teacher A-S
External Regulation	-.21*	-.25*	-.26*	-.28*
Introjected Regulation	.06	.03	.15	.08
Identified Regulation	.38**	.36**	.47**	.43**
Intrinsic Motivation	.14	.60**	.16	.48**

(Chirkov & Ryan, 2001)

Correlations Between Parent and Teacher Autonomy Support and Well-Being in U. S. and Russian High School Students

	U.S.		Russian	
	Parent A-S	Teacher A-S	Parent A-S	Teacher A-S
Self-Actualization	.35**	.33**	.39**	.20*
Self-Esteem	.40**	.18	.54**	.21*
Depressive Symptoms	-.09	-.14	-.48**	.08
Life-Satisfaction	.49**	.34**	.50**	.36**

Cross-Cultural Perspectives: 23 Country Study



Inspiring Teachers: The Same Everywhere

Students wrote narratives about their **most recent, most motivating, and most de-motivating** teachers

In **EVERY** sample, **autonomy-support** and **relatedness** emerged as the most frequent and salient characteristics, along with enthusiasm and energy

In **NO** sample did rewards, grade focus, rigor or control emerge as positive factors.

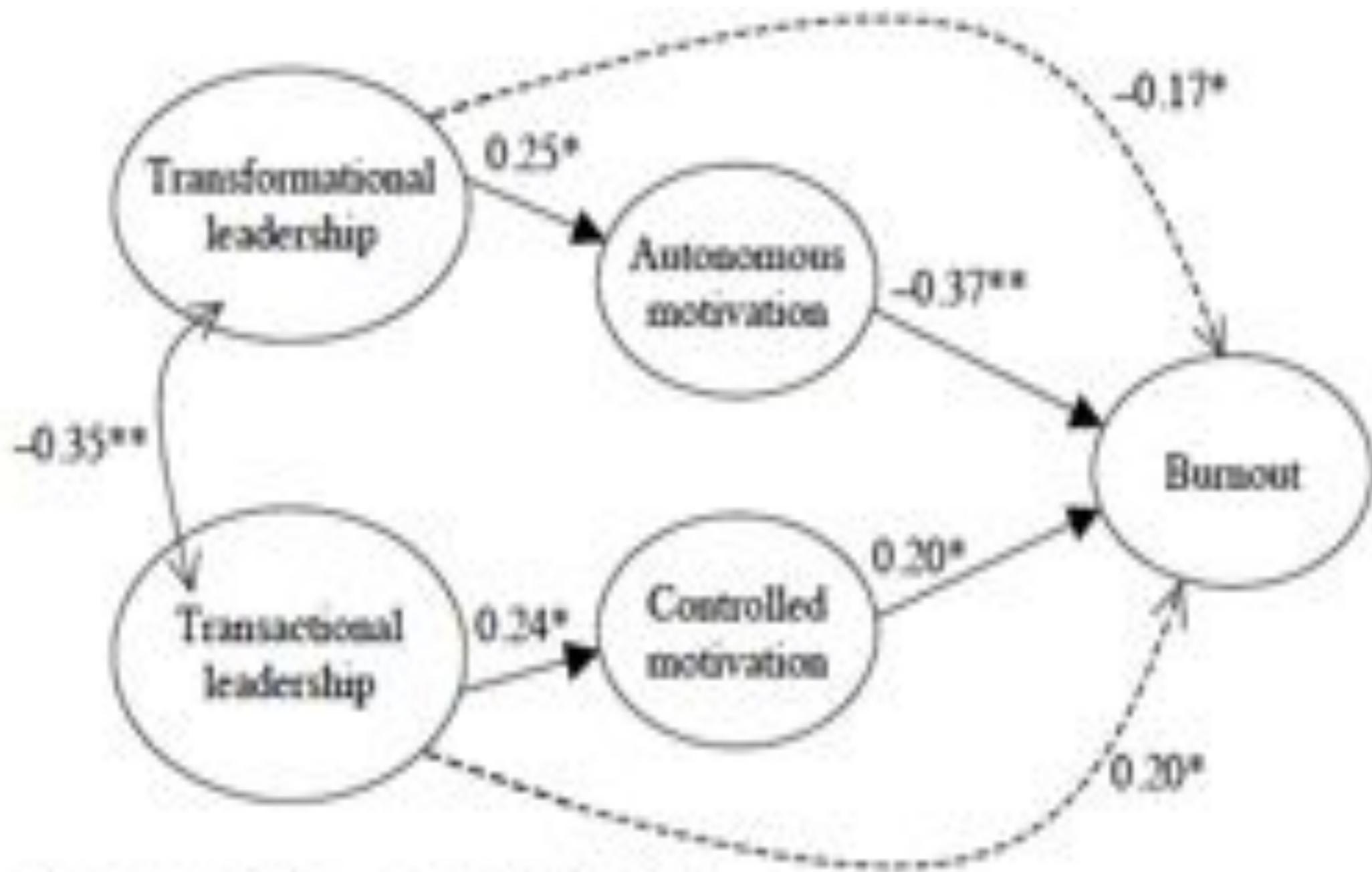


Teachers need support too!



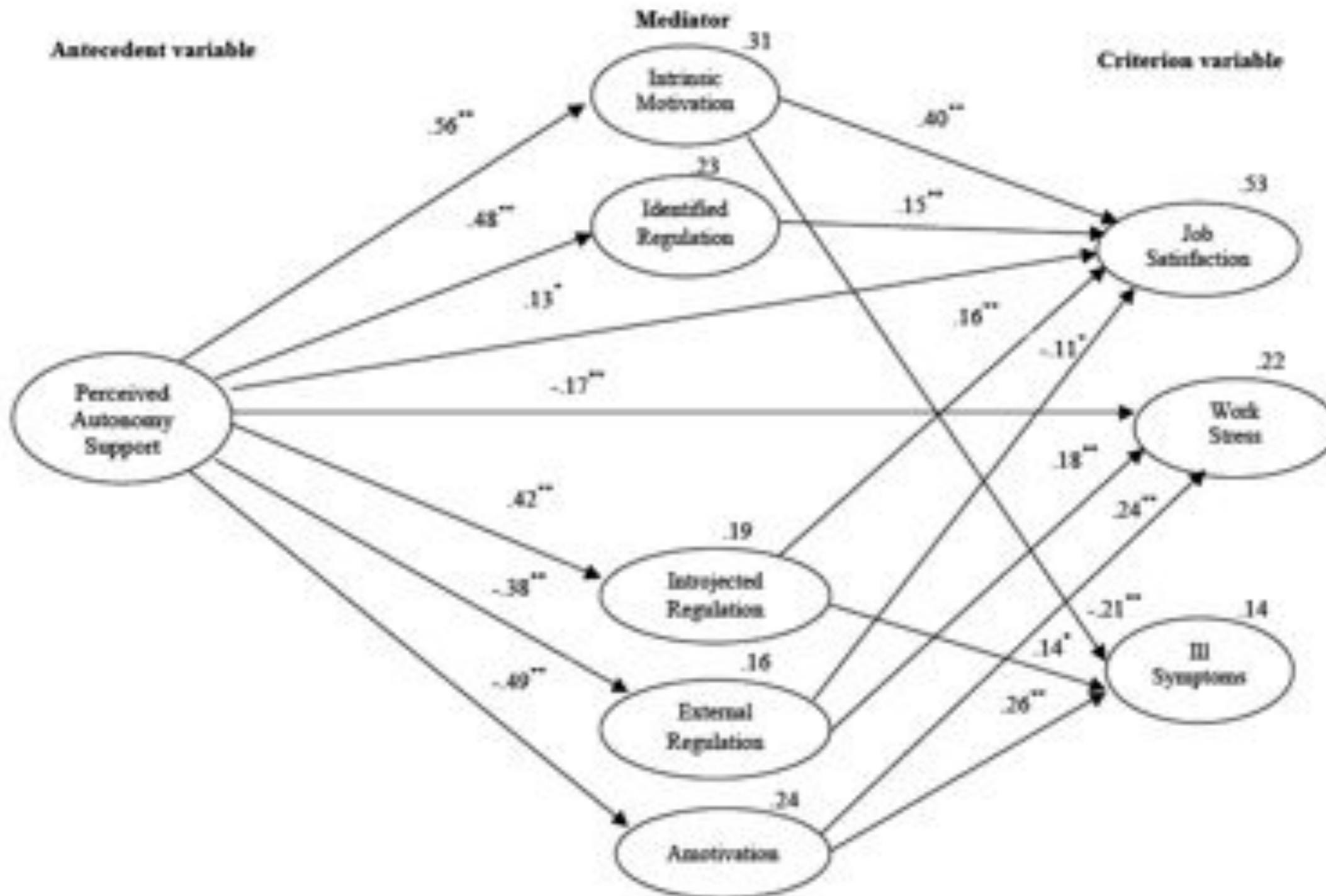
Engkey, a white, egg-shaped robot developed by the Korea Institute of Science of Technology (KIST),

Impact of principal leadership on teacher motivation



Notes: * $p < 0.05$ and ** $p < 0.01$; indicators and error terms were omitted for clarity

Autonomy Support, Work Motivation, and Well-Being in Employees in Two Chinese Government Schools



Teacher Autonomy and Student Motivation

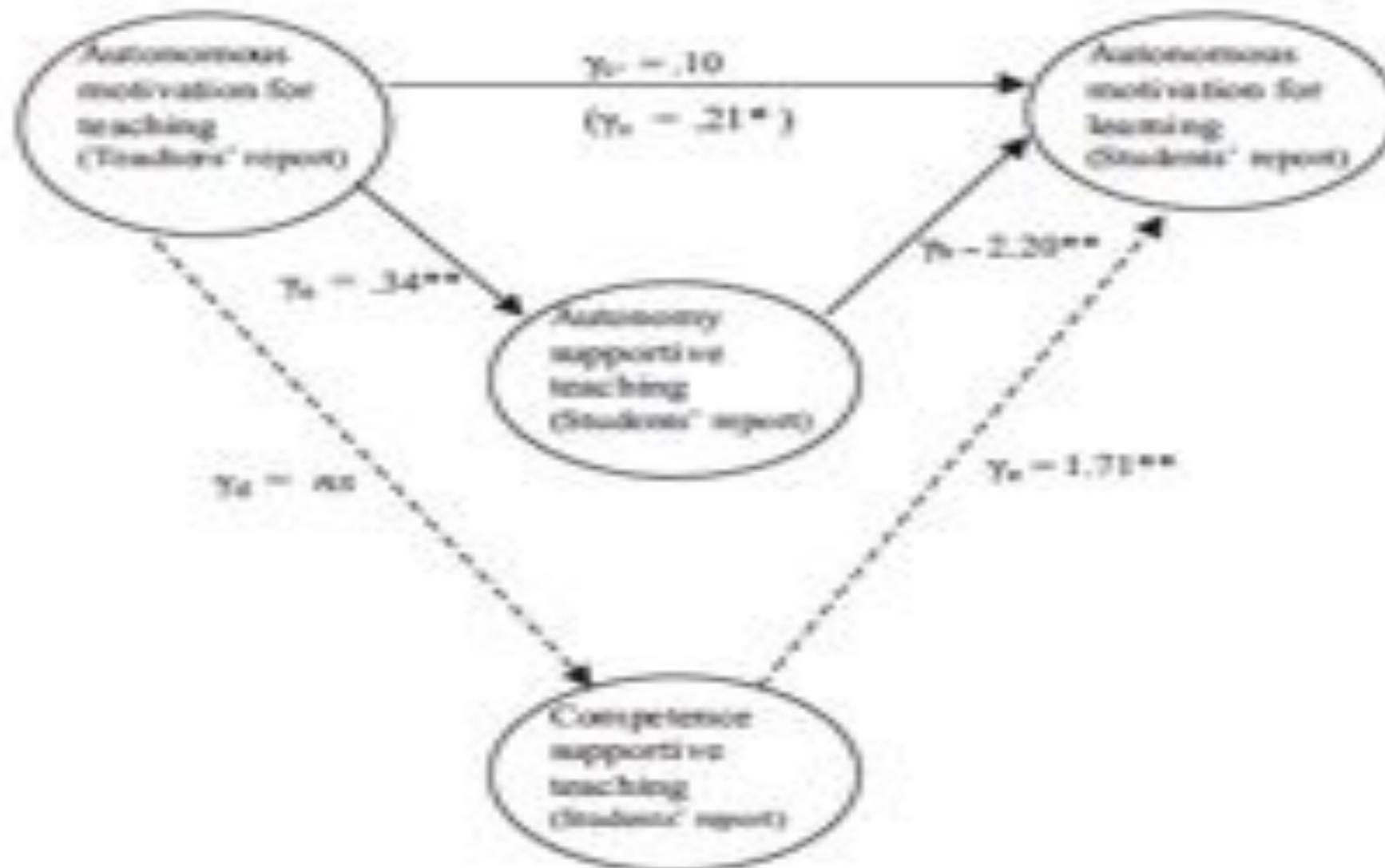
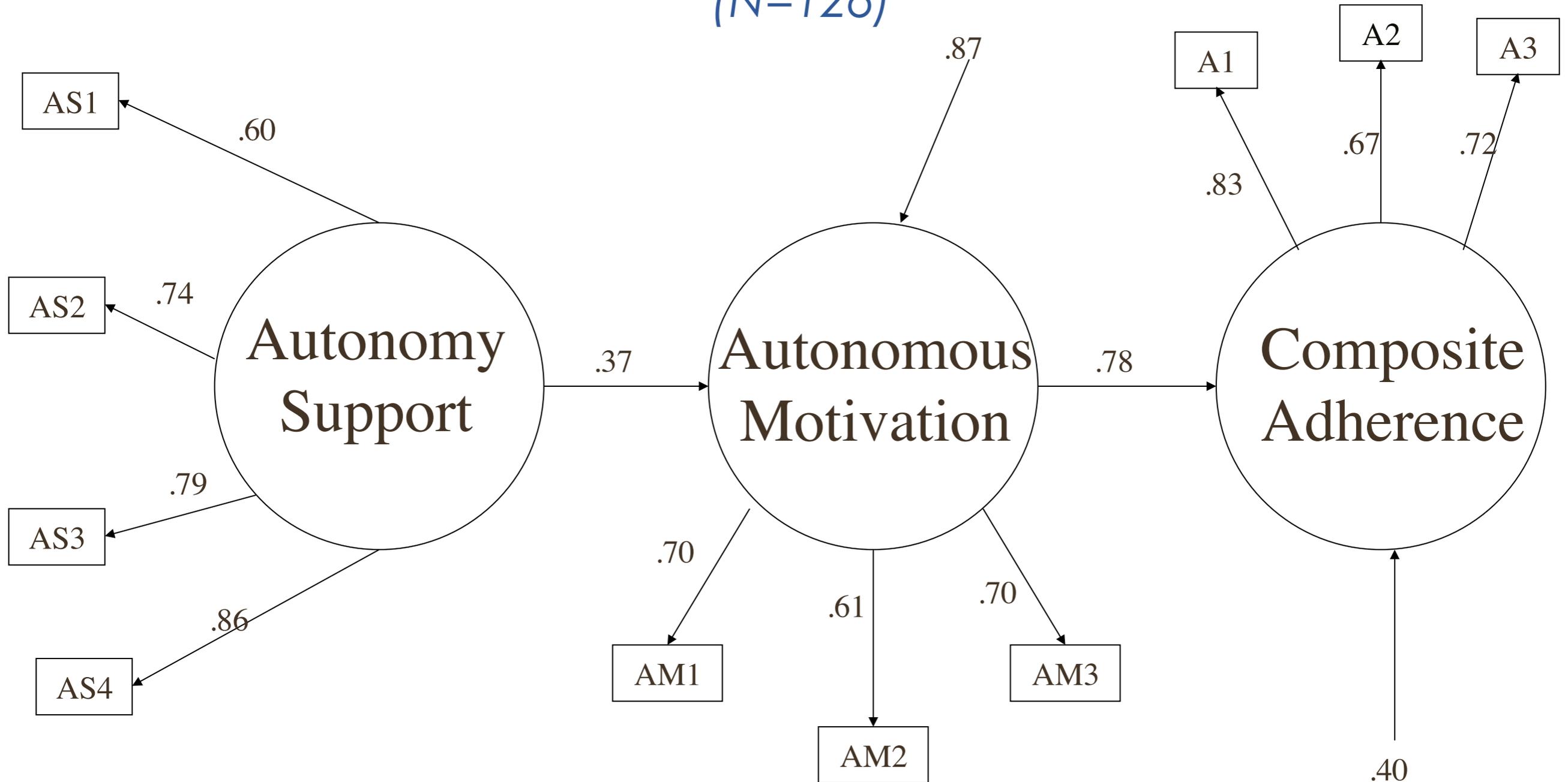


Figure 2. Multilevel model of autonomy-supportive teaching as a mediator of the relations between autonomous motivation for teaching and autonomous motivation for learning. γ_0 is the direct association between autonomous motivation for teaching and autonomous motivation for learning, and γ_1 is the same association while controlling for the mediator, ns = not significant. * $p < .05$. ** $p < .01$.

Autonomy and Medication Adherence

(N=126)



From Williams, Rodin, Ryan, Grolnick, and Deci, Health Psychology, 1998

Motivation for Medication Adherence

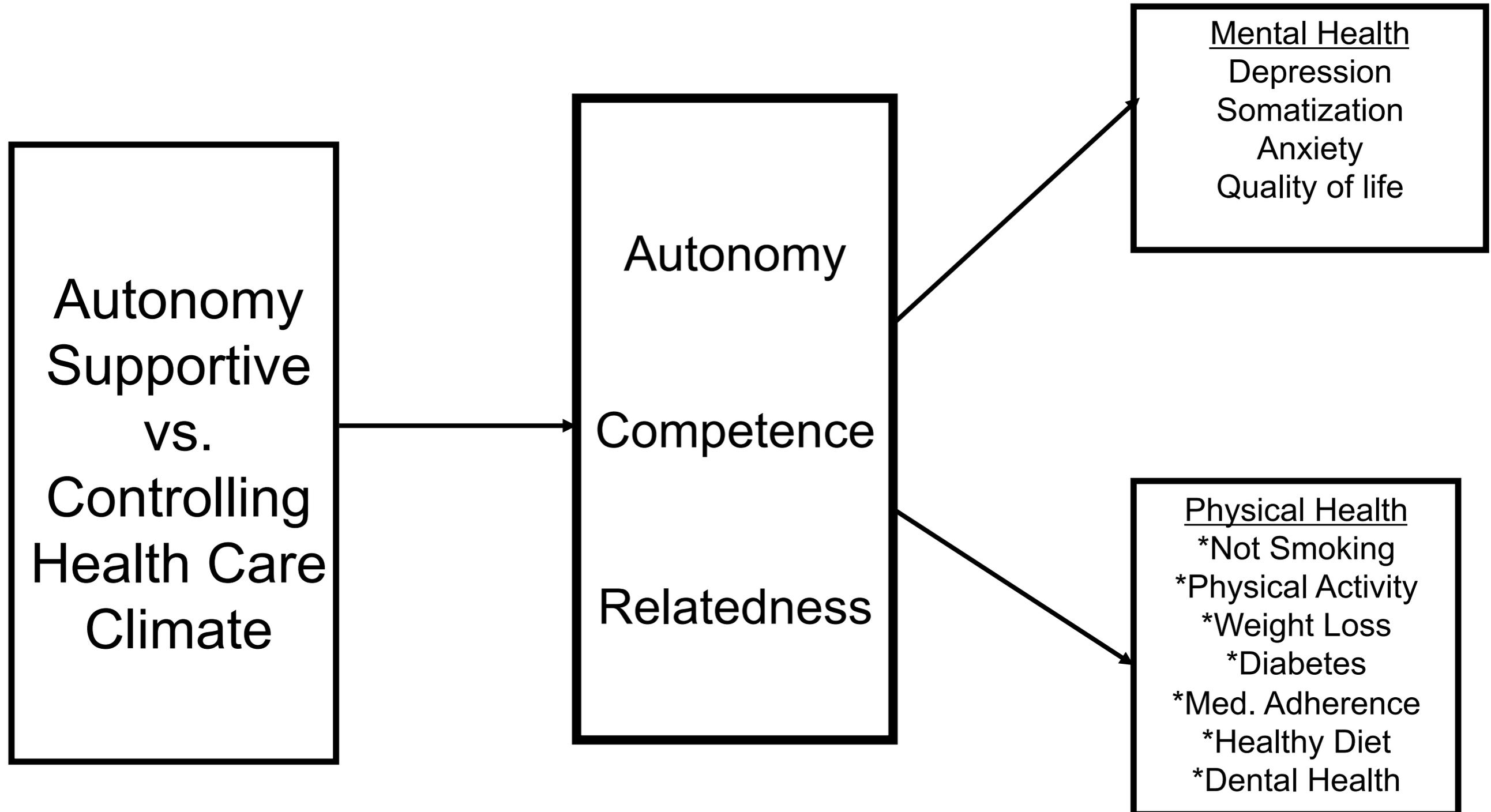
	2 Day Pill Count	14 Day Count	Self- Rpt.	Composite Adherence
Autonomy Support (HCCQ)	.24**	.17*	.03	.18*
Controlled Regulation	-.05	-.10	-.13	-.11
Autonomous Regulation	.41***	.52***	.57***	.59***

+ $p < .10$, * $p < .05$, *** $p < .001$

Meta-analyzed Correlations Between Practitioner Autonomy-Support and Control and Patient Regulatory Styles In Available Health Behavior Studies (k=67)

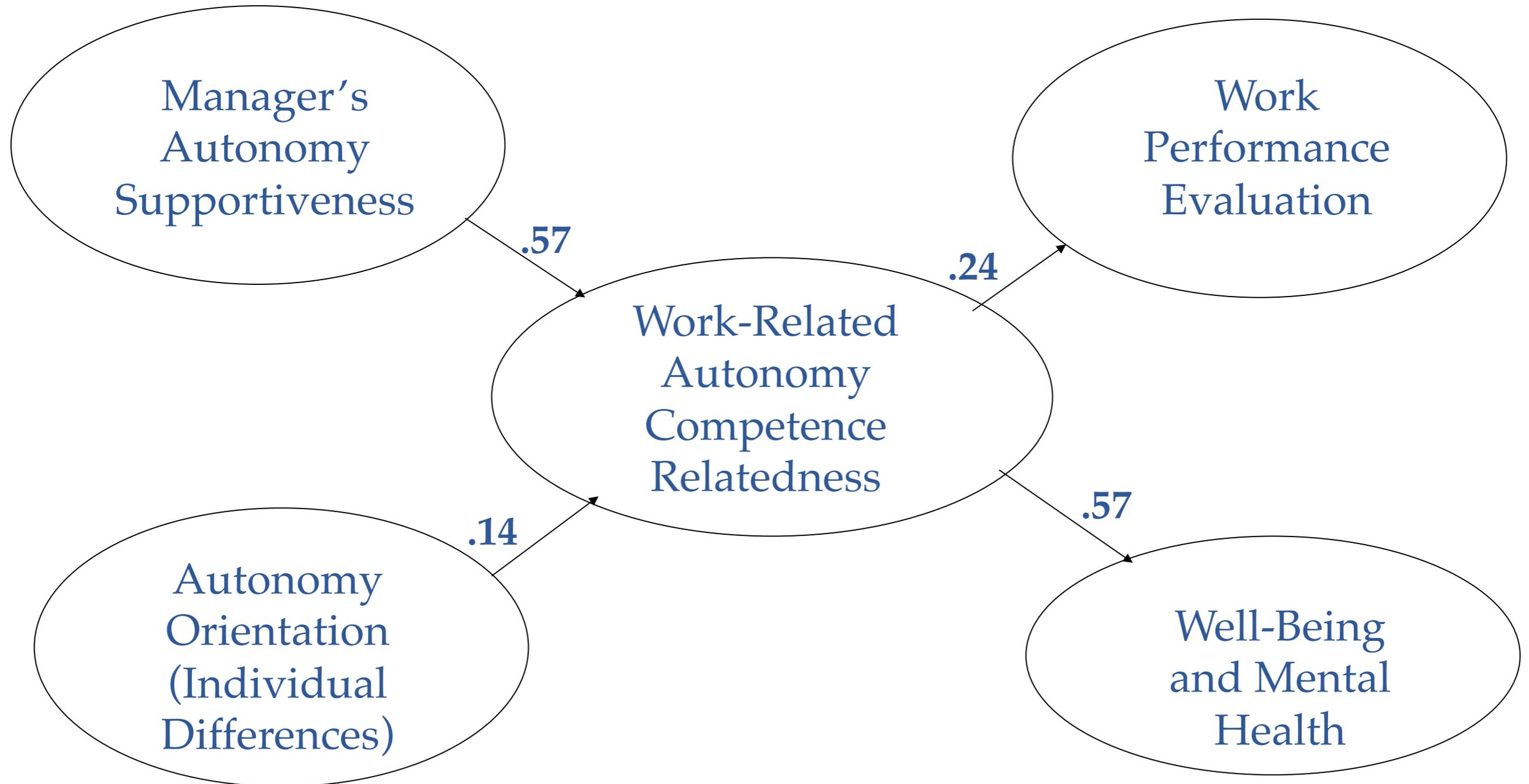
	Autonomy Support	Control
Intrinsic Motivation	.42	-.11
Identified Motivation	.36	.16
Introjection	.09	.29
External Regulation	.02	.31
Amotivation	-.27	.27
Autonomous Motivation Sum	.39	.03
Controlled Motivation Sum	.04	.34

Self-Determination Model for Health Interventions

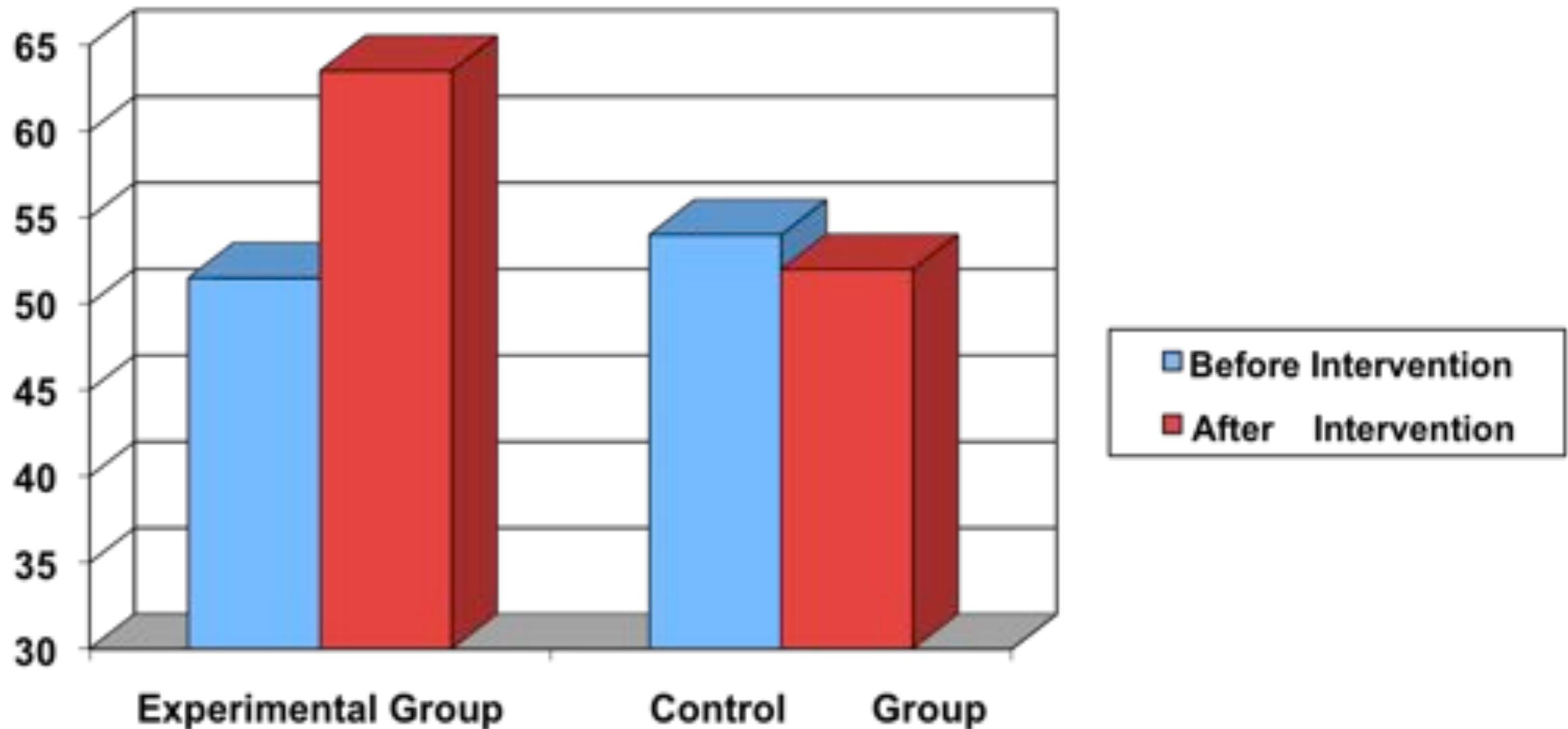


Motivation of Wall Street Brokers

(N=495; Baard, Deci & Ryan, 2004)



Managers' Autonomy Support in Experimental and Control Branches Before and After Intervention



Radiation of Intervention: Overall Positive Effects on Employees

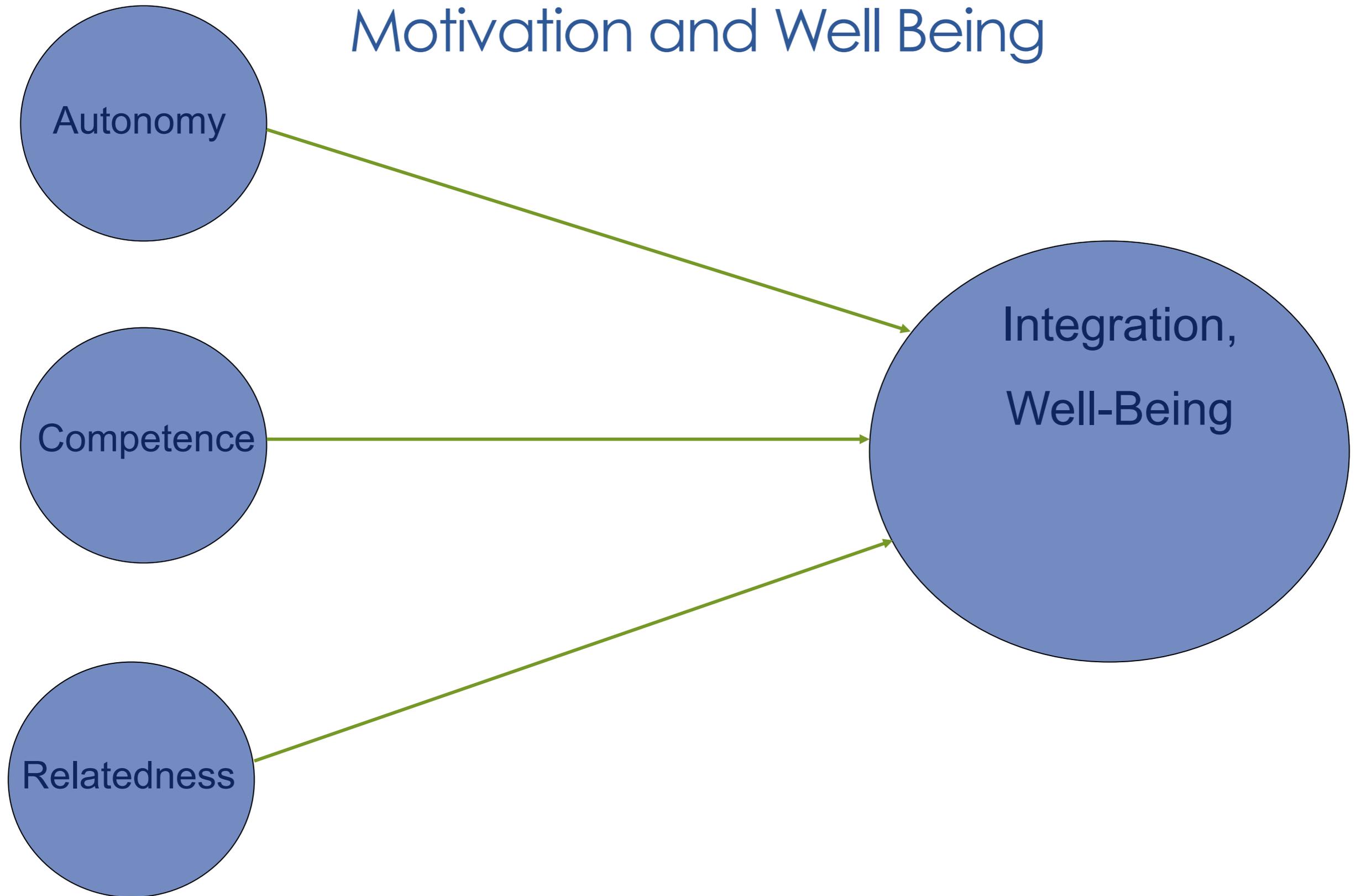
The company found that our intervention:

Increased Employee Trust in Corporation

Increased Employee Job Satisfaction

Enhanced Satisfaction with Current Pay

Basic Psychological Needs Underlying Motivation and Well Being



Within-Country Correlations of Basic Need Satisfaction with Subjective Well-being

Country (n)	US (n = 195)	Russia (n = 159)	Korea (n = 111)	Turkey (n = 94)
Basic Need Satisfaction	.72**	.60**	.62**	.71**



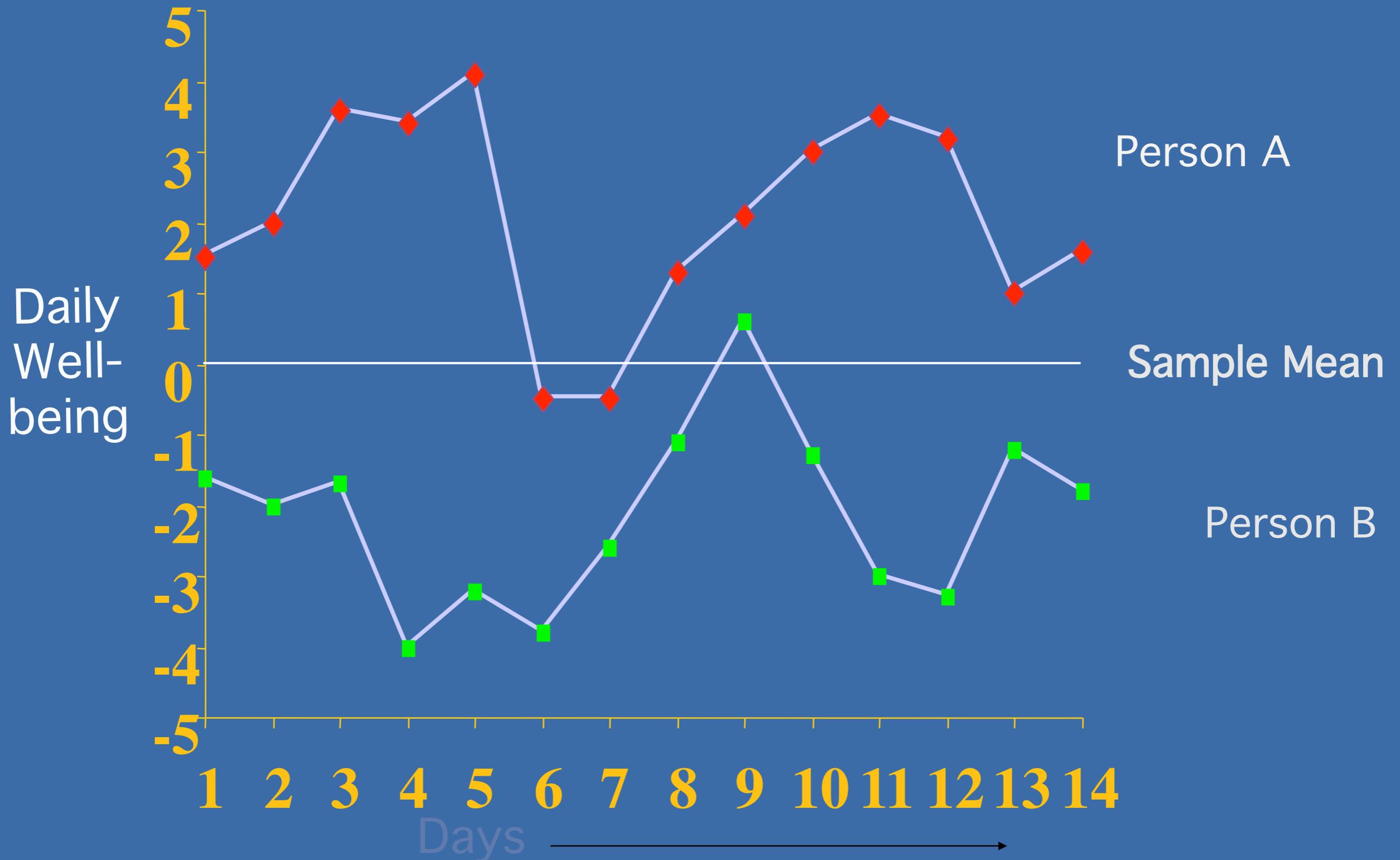
From Chirkov, Ryan, Kim and Kaplan, 2003

Association of psychological need satisfaction and composite wellbeing in 4 countries

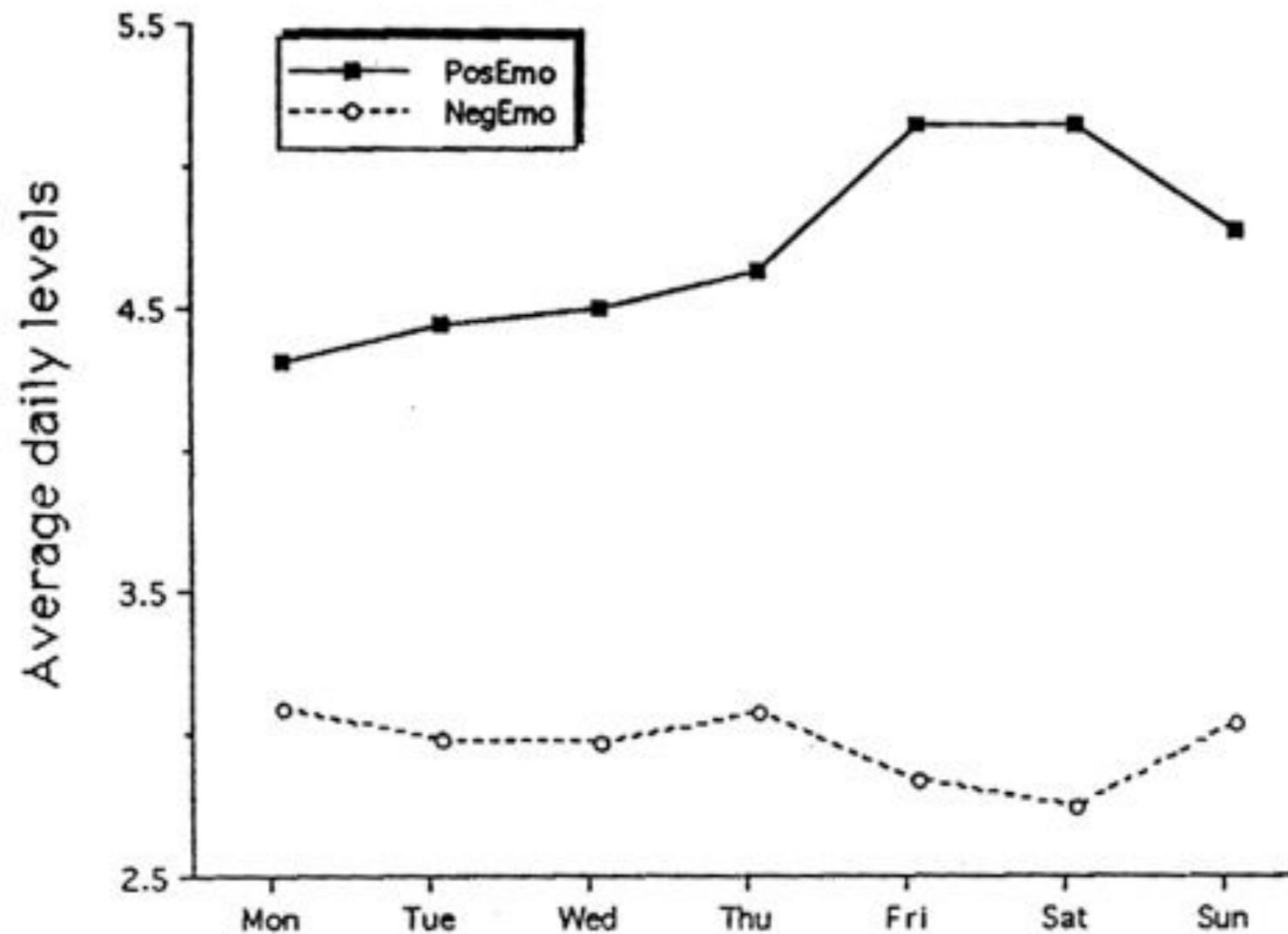
	Autonomy	Relatedness	Competence
US	.42**	.40**	.20*
China	.44**	.27**	.31**
Peru	.24**	.29**	.31**
Belgium	.37**	.36**	.33**

Chen et al., in press *Motivation and Emotion*

Within-person effects: Daily fluctuations



Positive and Negative Affect on the Days of the Week: College Students

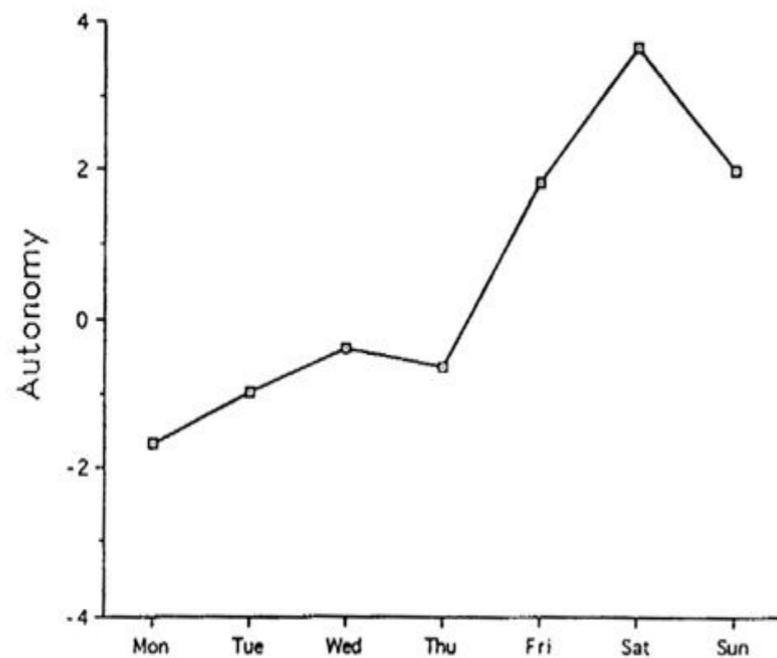


Need Satisfaction on Days of the Week

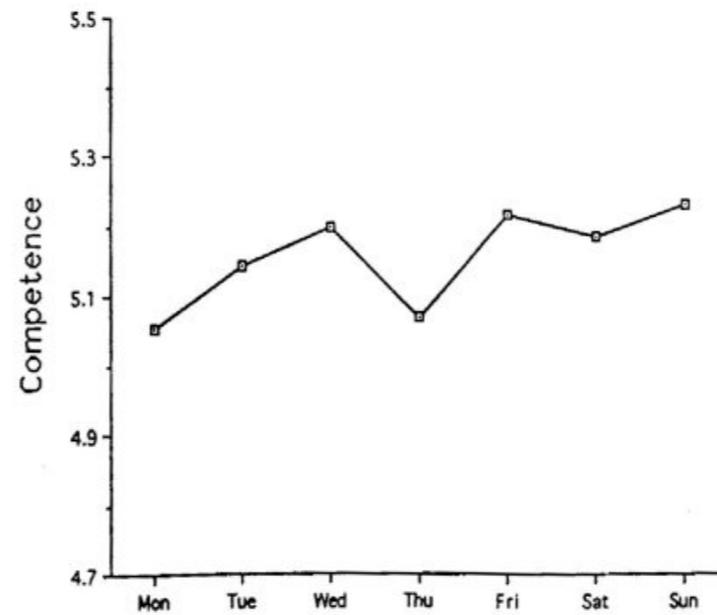
SEPTEMBER 2006 - AUGUST 2007

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
SEP																																
OCT																																
NOV																																
DEC																																
JAN																																
FEB																																
MAR																																
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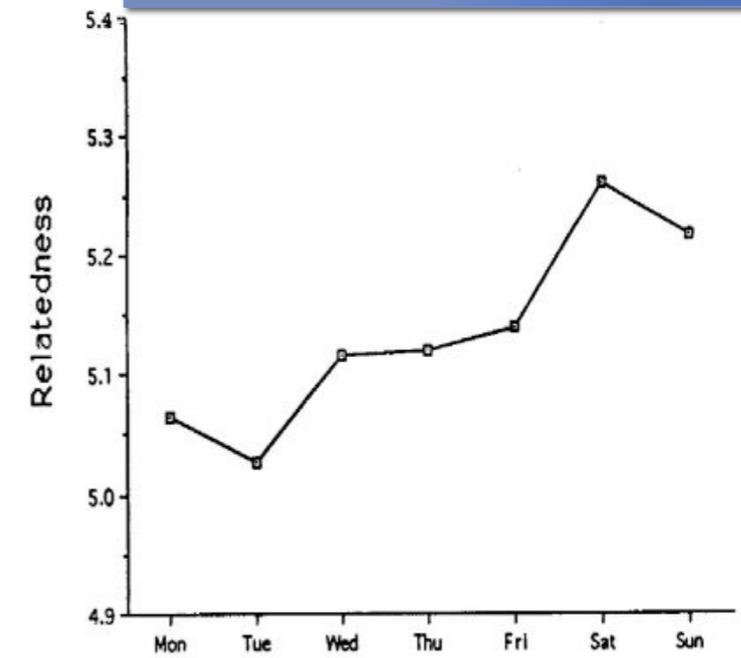
Autonomy



Competence



Relatedness



Adult Working Sample

Predicting Experience Level Well-Being from Experience-Level Need Satisfaction

Need Satisfaction	Positive Affect		Negative Affect		Vitality		Phys. Symptoms	
	<i>B</i>	<i>t</i>	<i>B</i>	<i>t</i>	<i>B</i>	<i>t</i>	<i>B</i>	<i>t</i>
Autonomy	.95	22.29**	-.03	-10.66**	.04	8.74**	-.01	-5.24**
Relatedness	.20	11.69**	-.06	-8.38**	.08	7.21**	-.02	-2.74*
Competence	.21	7.65**	-.18	-10.37**	.06	3.14*	-.02	-1.26

Note. Group-mean centering was used for all predictors. *B*s are unstandardized.

* $p < .01$, ** $p < .001$.

Relations of Weekend Effect to Need Satisfaction

	<u>Autonomy</u>		<u>Relatedness</u>		<u>Competence</u>	
	<i>B</i>	<i>t</i>	<i>B</i>	<i>t</i>	<i>B</i>	<i>t</i>
Weekend Contrast	1.08	4.86**	.38	7.37**	.02	.33
Work Contrast	3.44	9.66**	.84	9.62**	.12	2.30*

Note. Weekend represents Friday afternoons through Sunday mornings. Group-mean centering was used for all predictors.

All *B*s are unstandardized.

^a0 = weekday experience; 1 = weekend day experience. ^b0 = work experience; 1 = non-work experience.

* $p < .01$, ** $p < .001$.

Weekend effects are not for everyone.....

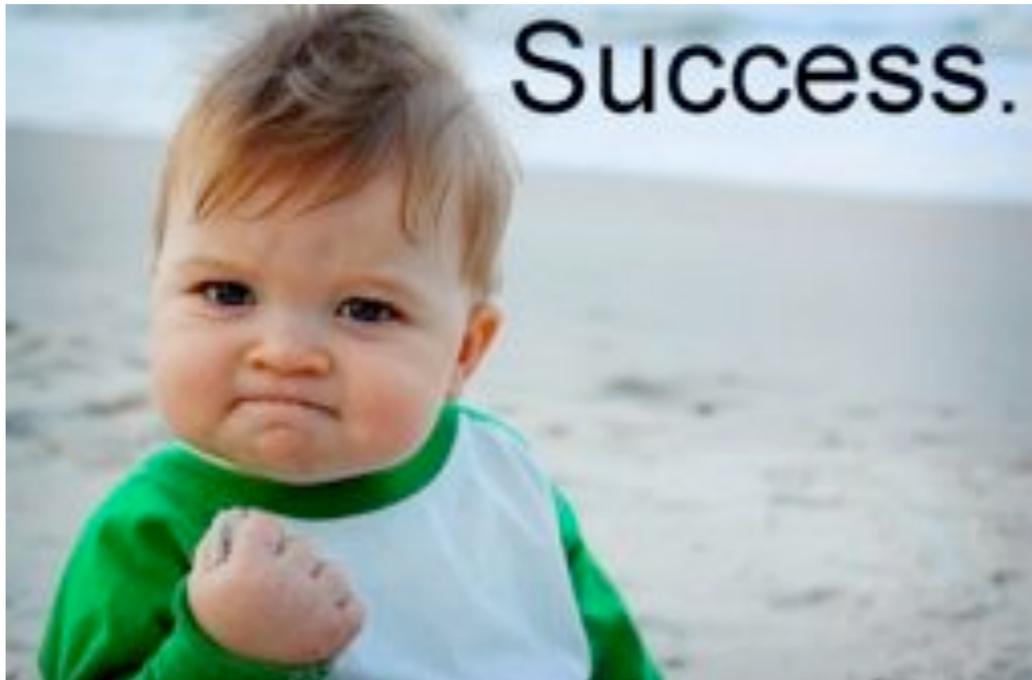


She has one



They may not

LIFE GOALS AND HAPPINESS



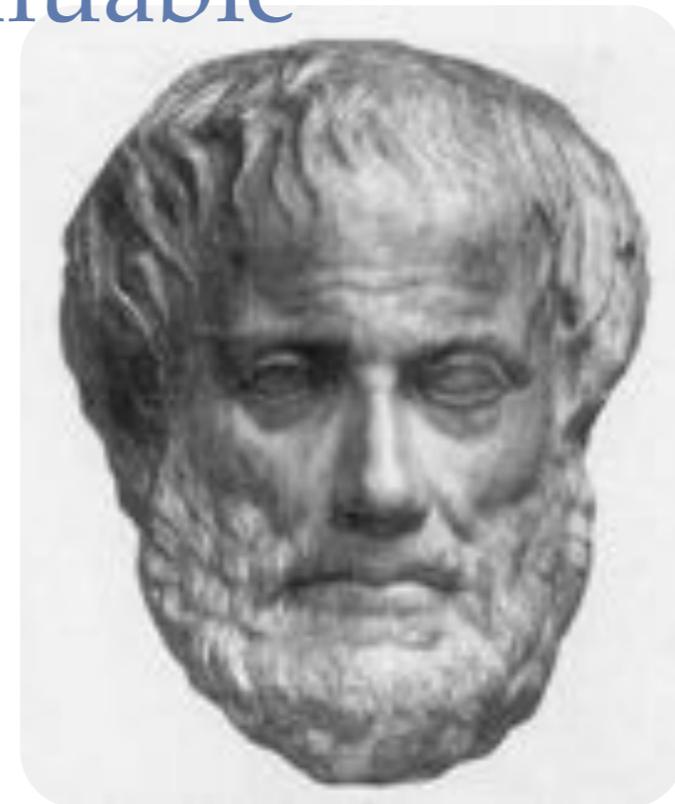
Not all goals are created equal



See Ryan, Kasser, Sheldon & Deci, (1996)

Eudaimonia: Living Well or Flourishing

Aristotle made the empirically testable claim that what is most satisfying is: “the virtuous exercise of human potentialities” or doing that which is intrinsically valuable



See Ryan, Curren & Deci, in press;
Ryan, Huta & Deci, 2008



Intrinsic and Extrinsic Life Goals



Intrinsic goals: attainment relatively directly yields Basic Need Satisfaction (e.g. goal of contributing to community enhances relatedness)



Extrinsic goals: attainment is at best indirectly related to Basic Need Satisfaction, and may even interfere with it (e.g., goal of being rich may interfere with autonomy)

Higher Order Factor Analyses of Aspiration Importance Ratings Urban Adults

	Factor 1	Factor 2
Personal Growth	.77	.20
Affiliation/Relatedness	.76	.19
Community	.76	-.21
Physical Health	.60	.18
Social Recognition	.18	.75
Image/Appearance	.10	.76
Material Success	.02	.87

From: Kasser & Ryan, 1996

Relations of Intrinsic and Extrinsic Goal Importance to Well-Being (Urban Adult Sample)

Relative Goal Importance

	Intrinsic	Extrinsic
Self-Actualization	.40***	-.52***
Vitality	.46***	-.60***
Depressive symptoms	-.35**	.29*
Physical Symptoms	-.35**	.46**

Scores control for overall goal importance, entered at step 1
yielding standardized regression coefficient

Across Groups, the Same Pattern:

Russian, German, Korean, Israeli, Belgian,
British, Nigerian, Brazilian, Icelander samples

Teenagers, Parents, Adult Workers,
Retired Workers

Business, Education, Sport, Law and
Medical Student



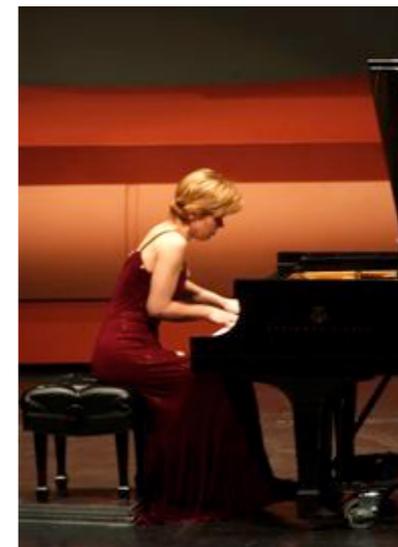
Be careful what you wish for

Two Year longitudinal study of early career adults

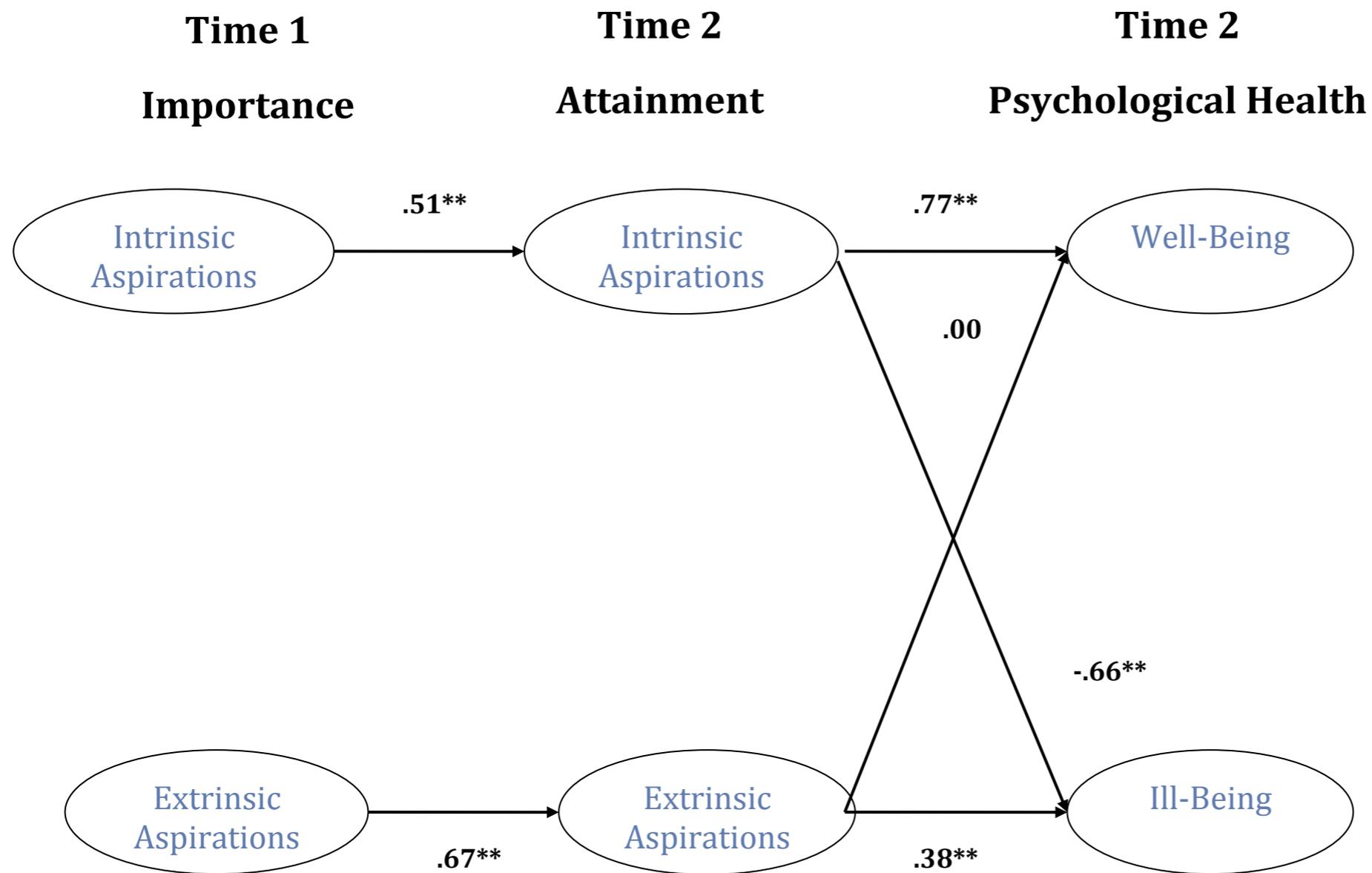
Assessed Intrinsic and Extrinsic Life Goals and well-being at baseline

Two years later we found:

- People tended to achieve their goals
- Progress at intrinsic goals led to greater wellness and lower distress or ill being
- No relation between extrinsic goal attainments and wellness yet more signs of distress and ill being
- Mediated by Basic Psychological Needs

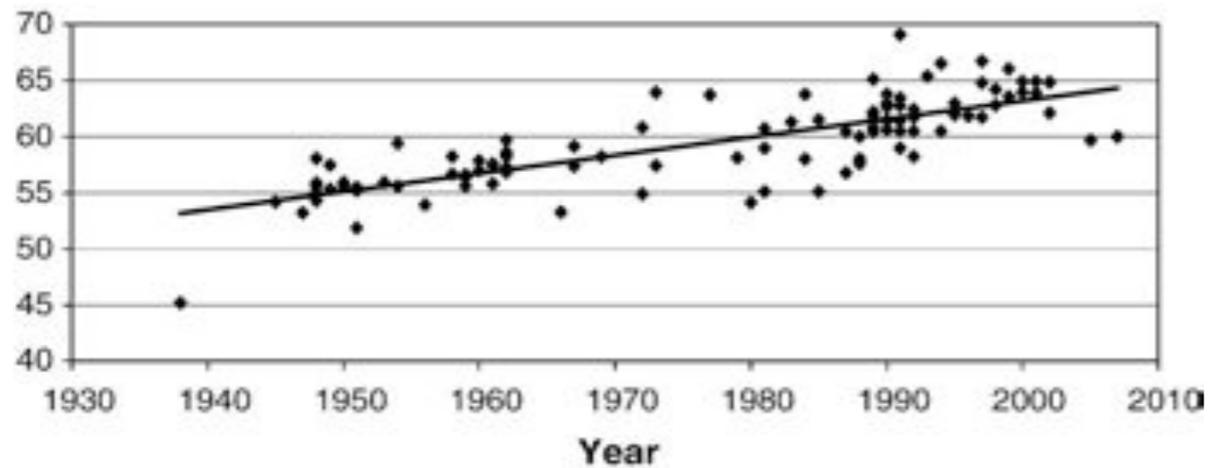


Relations between life goals, goal attainments, and changes in well being over a one year period

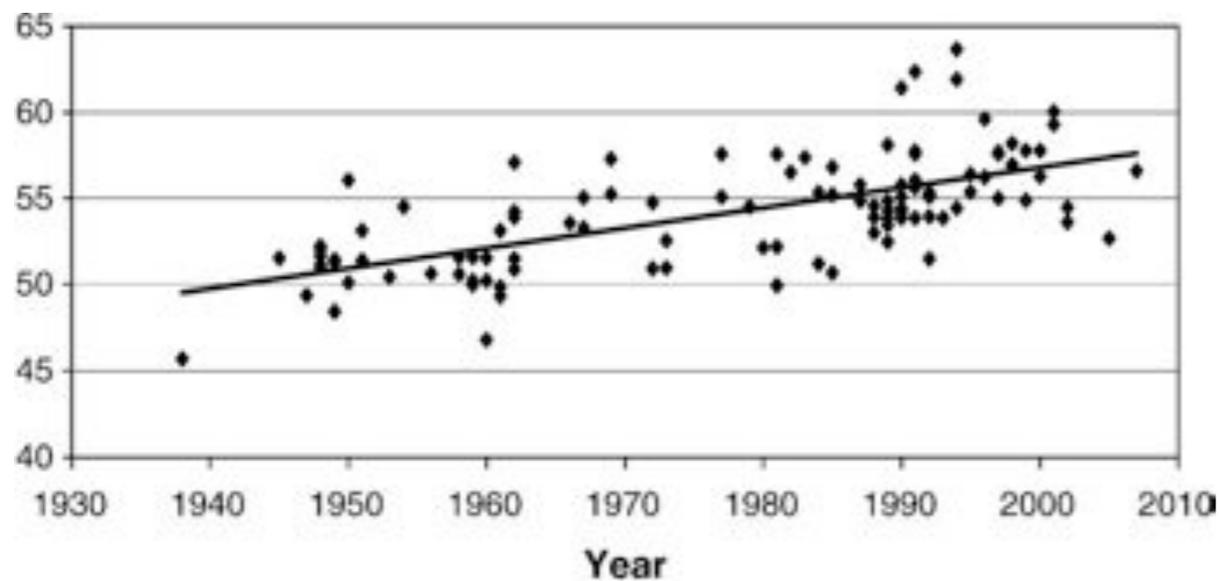


Outcomes mediated by
Basic Psychological
Need Satisfaction

Changes in Mental Health, 1937-2008



Psychopathic Deviation (Pd)



Depression

“The pattern of change best fits a model of cultural change toward extrinsic rather than intrinsic goals that may have negatively impacted youth mental health.”

Twenge et al., 2010, *CPR*

Their conclusion.....

“Over time, American culture has increasingly shifted toward an environment in which more and more young people experience poor mental health and psychopathology, possibly due to an increased focus on money, appearance, and status rather than on community and close relationships.”

Summary



People are naturally prone to learn and to internalize

Yet these positive propensities are impacted by basic psychological need satisfactions and frustrations



Need support promotes intrinsic motivation and internalization, which in turn yield more effective performance and greater wellness



Life goals differentially satisfy basic needs

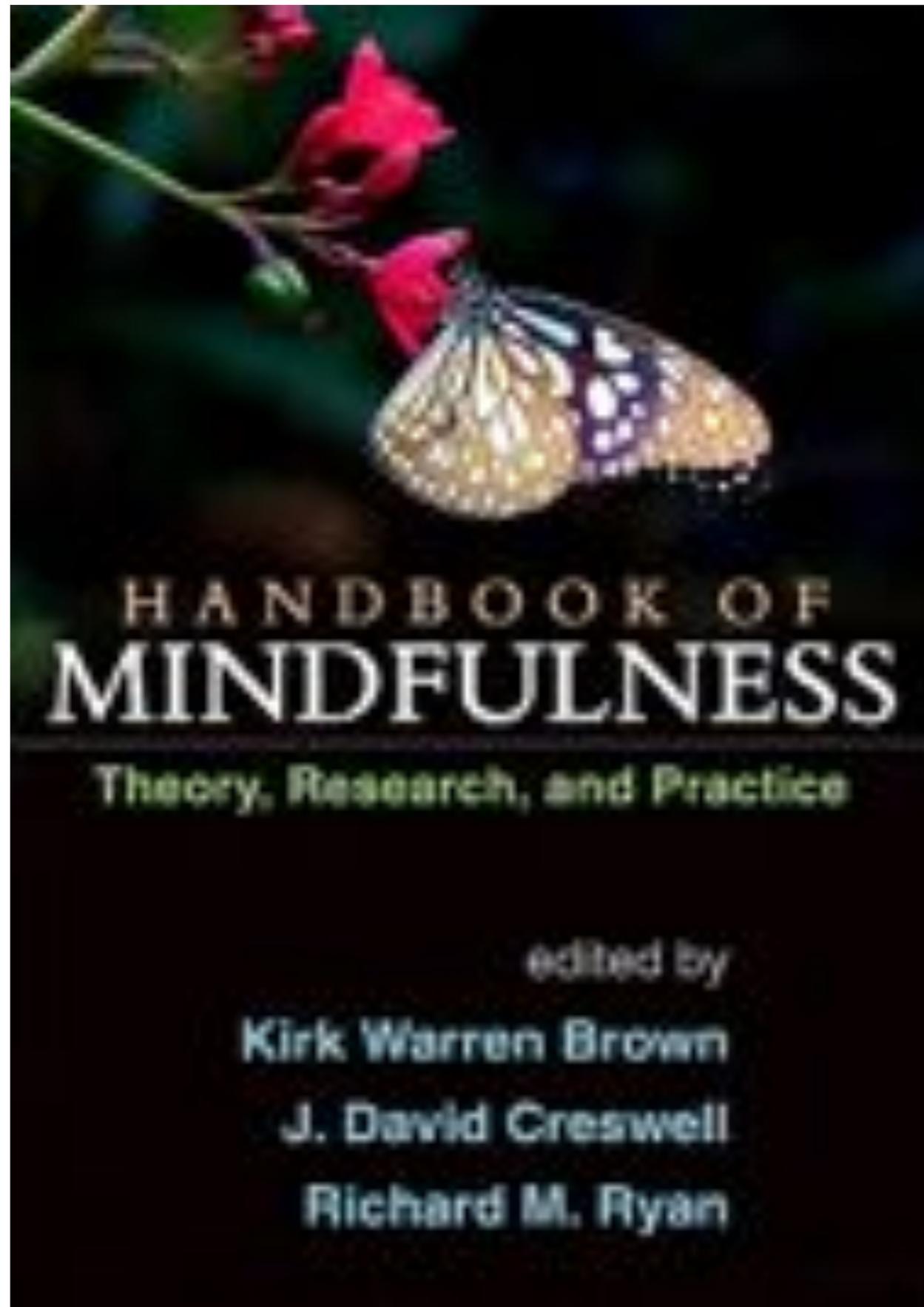
Mindfulness promotes autonomous functioning



www.selfdeterminationtheory.org

6th International SDT Conference,
Victoria, CA, June 1-4 2016





HANDBOOK OF
MINDFULNESS

Theory, Research, and Practice

edited by

Kirk Warren Brown

J. David Creswell

Richard M. Ryan

Autonomy and Awareness

Awareness is the ground of autonomous functioning; lack of awareness makes one vulnerable to being controlled or non-self-regulated

Mindfulness: open and receptive awareness of what is occurring in the present moment

See Brown & Ryan, 2003, 2004, 2007;
Weinstein, Brown & Ryan, 2009



Mindfulness as a Predictor of Day-to-Day Autonomous Behavior

- *Sample 2 Results: Multilevel Modeling*

Predictor	Day-to-Day Autonomy Unstandardized estimate
Gender	-0.98
Time of day	0.53****
Day of study	-0.03
Weekly cyclicity	-0.51***
Autocorrelation	0.02
Trait mindfulness	1.08**
State mindfulness	1.59****

** $p < .01$ *** $p < .001$ **** $p < .0001$

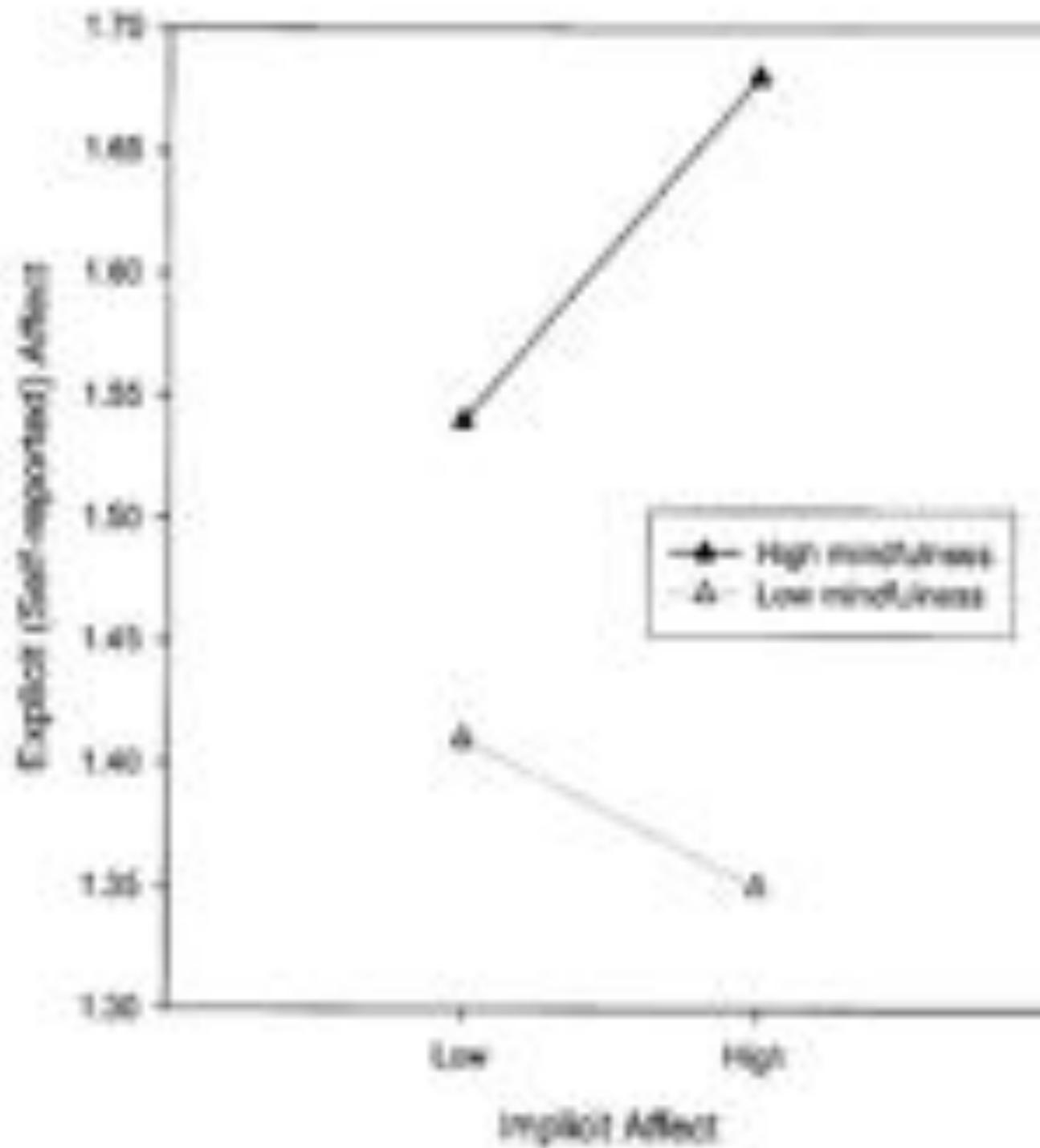
From Brown & Ryan
(2003), *JSPSP*

Mindfulness Moderates the Relations of Implicit and Explicit Measures

- IAT assessed affect compared with self reports of affect. $r = .16$, ns.
- Mindfulness moderates this relation



From Brown & Ryan, 2003, Journal of Personality and Social Psychology



From Brown & Ryan, 2003,
*Journal of Personality and
 Social Psychology*

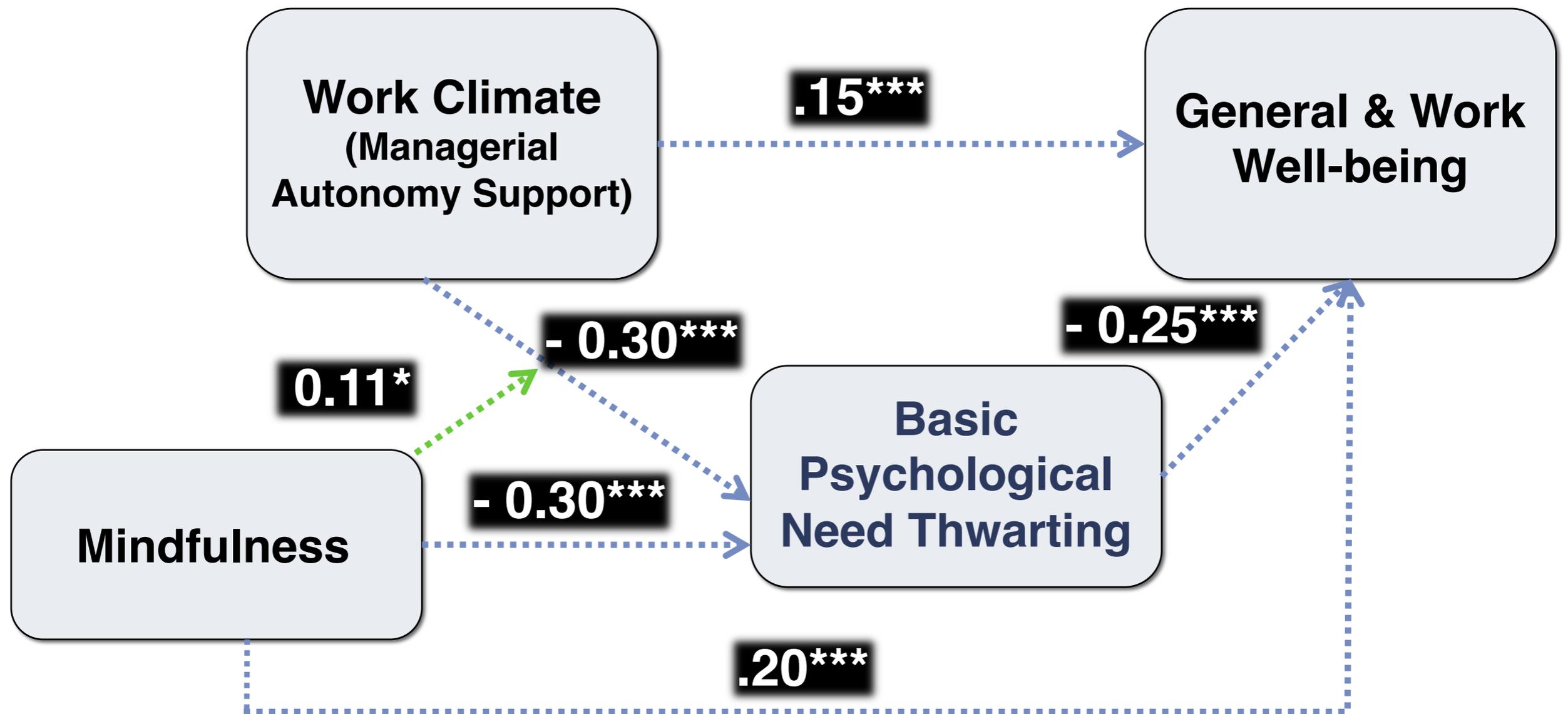
Figure 1. Moderation effect of mindful Attention Awareness Scale mindfulness on the relation between implicit and explicit affect valence. High and low values are 1 standard deviation above and below the mean, respectively.

Mindfulness, Stress, Coping and Well-being

	<i>M</i>	<i>SD</i>	Trait mindful β	State mindful β
Trait mindfulness	4.14	0.95	–	0.57 ^{**}
State mindfulness	4.12	1.92	0.57 ^{**}	–
Stress response	4.18	1.60	–0.34 ^{**}	–0.29 [*]
Approach coping	2.99	1.03	0.21 [*]	0.20 [*]
Avoidance coping	2.43	1.13	–0.22 [*]	–0.42 ^{**}
Efficacy for modulation	3.25	1.02	0.35 [*]	0.49 ^{**}
Ill-being	3.37	1.12	–0.38 ^{**}	–0.44 ^{**}
Well-being	4.62	1.15	0.46 ^{**}	0.32 [*]

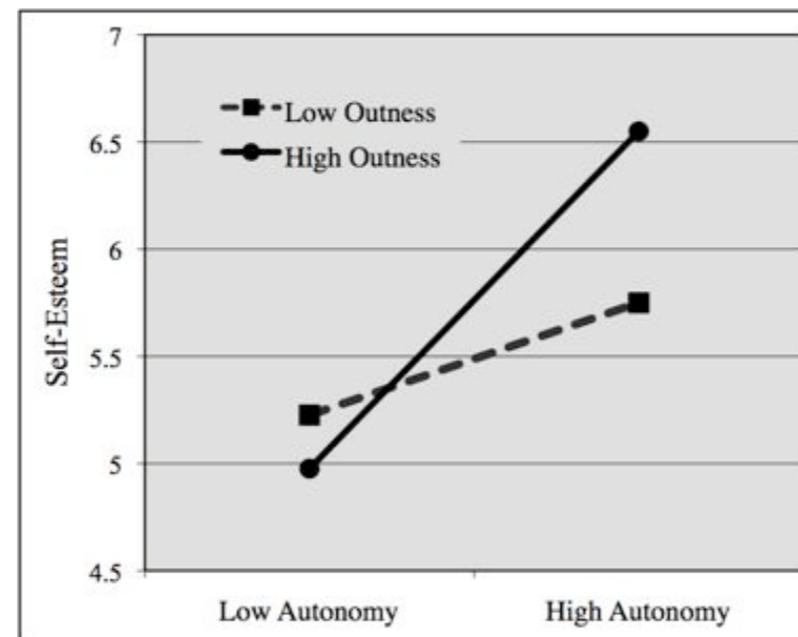
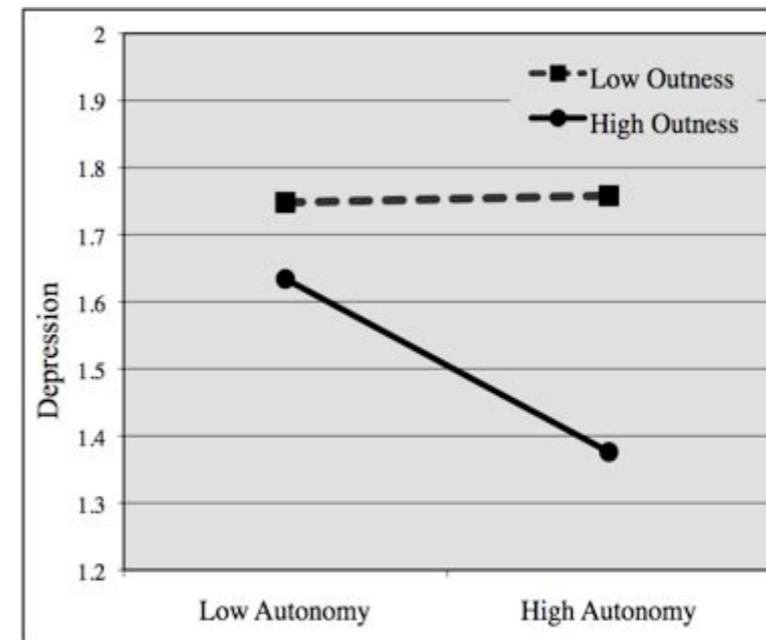
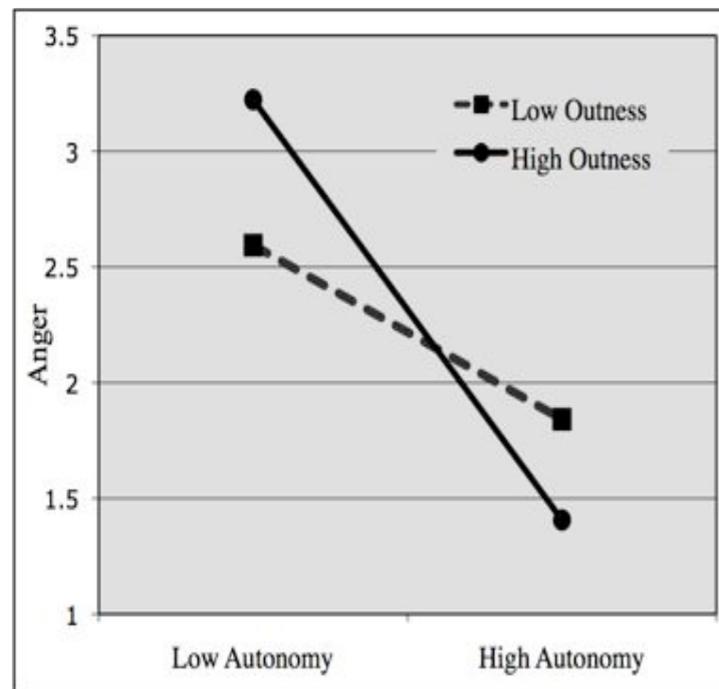
From: Weinstein, Brown & Ryan, 2009 *Journal of Research in Personality*, 43, 374-385.

Moderated Mediation of Work Climate Effects on Need Thwarting by Mindfulness



* .05; *** $p < .001$; b coefficients

Contextual autonomy-support vs. control and its effects on LGB Individuals' anger, depressive symptoms and self-esteem



From Legate, Weinstein, & Ryan (2010)