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Driven by the future

Future time perspective across life domains and cultures

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APPENDICES

APPENDIX A

Literature Search Future Time Perspective

Databases

PsycINFO	1.876 results (August 23, 2013)
MEDLINE	822 results (August 23, 2013)
ERIC	2.127 results (August 23, 2013)
Business Source Premier	815 results (August 23, 2013)
Web of Science	249 results (August 23, 2013)
CINAHL	445 results (August 23, 2013)
SPORTDiscus	148 results (August 23, 2013)

Expert Authors contacted for unpublished-non-significant data from the three life domains

4 results (February 7, 2014)

Authors contacted for the FTP research

(either based on the Abstract book at the 1th Time Perspective international conference (2012) or International Conference "Life designing and career counselling: Building hope and Resilience" (2013)

1 result (February, 21, 2014)

Posts

“Call for data for meta-analysis on Future time perspective” - International Time Perspective Network” group (LinkedIn) and the time-research listserv

12 results (February, 26, 2014)

In total = 6.462 results; 5830 after removing the duplicates

After inspection of main inclusion criteria = 301

Collected and inserted in the Excel file and CMA3 = 65 reports/77 individual samples

PsycINFO

OvidSP

#1 Future time perspective

time perspective/ OR (future adj3 time perspective*).ti,ab,id,tm. OR future time orient*.ti,ab,id,tm. OR future consequence*.ti,ab,id,tm. OR future orientation.ti,ab,id,tm. OR time orientation.ti,ab,id,tm. OR future planning.ti,ab,id,tm. OR time perspective questionnaire.ti,ab,id,tm. OR zimbardo time perspective.ti,ab,id,tm. OR (experiential time perspective ADJ1 (measure OR scale)).ti,ab,id,tm. OR wallace* measure.ti,ab,id,tm. OR Wallace* future events test.ti,ab,id,tm. OR long term personal direction scale.ti,ab,id,tm. OR achievability of future goals scale.ti,ab,id,tm. OR temporal focus scale.ti,ab,id,tm. OR (future work* adj1 (salience or goal*)).ti,ab,id,tm. OR career planning.ti,ab,id,tm. OR future

career.ti,ab,id,tm.

Results: 4.677 (August 23, 2013)

#2 Education domain

learn*.ti,ab,id. OR school learning/ OR educat*.ti,ab,id. OR classroom*.ti,ab,id. OR middle school education/ OR middle school students/ OR junior high school students/ OR high school education/ OR high school students/ OR school*.ti,ab,id. OR secondary education/ OR higher education/ OR graduate education/ OR undergraduate education/ OR postgraduate training/ OR junior college students/ OR college students/ OR college*.ti,ab,id. OR academic achievement/ OR college academic achievement/ OR universit*.ti,ab,id.

Results: 953.307 (August 23, 2013)

#3 Work domain

career development/ OR career*.ti,ab,id. OR occupations/ OR occupation*.ti,ab,id. OR personnel/ OR personnel.ti,ab,id. OR job applicants/ OR job performance/ OR job*.ti,ab,id. OR work*.ti,ab,id. OR employ*.ti,ab,id. OR vocational education/ OR vocational maturity/

Results: 693.367 (August 23, 2013)

#4 Health domain

health behavior/ OR health attitudes/ OR health* behavio?r*.ti,ab,id. OR physical activity/ OR

physical activit*.ti,ab,id. OR aerobic exercise/ OR eating behavior/ OR eating attitudes/ OR eating.ti,ab,id. OR binge eating/ OR food/ OR food intake/ OR food preferences/ OR food*.ti,ab,id. OR fruit*.ti,ab,id. OR vegetable*.ti,ab,id. OR diets/ OR diet*.ti,ab,id. OR nutrition/ OR safe sex/ OR sexual risk taking/ OR safe* sex.ti,ab,id. OR sexual health.ti,ab,id. OR sexual risk.ti,ab,id. OR sexual behavio?r.ti,ab,id. OR drug abuse.ti,ab,id. OR substance abuse.ti,ab,id. OR alcohol abuse/ OR binge drinking/ OR alcohol abuse.ti,ab,id. OR smoking cessation/ OR tobacco smoking/ OR tobacco.ti,ab,id. OR smoker*.ti,ab,id. OR smoking.ti,ab,id. OR mari?uana.ti,ab,id.

Results: 248.729 (August 23, 2013)

#5 Motivated behavior

motivation/ OR motivat*.ti,ab,id. OR achievement/ OR achievement*.ti,ab,id. OR learn*.ti,ab,id. OR academic achievement motivation/ OR student engagement/ OR ((academic OR student) ADJ1 engagement).ti,ab,id. OR effort.ti,ab,id. OR student attitudes/ OR attitude*.ti,ab,OR school investment.ti,ab,id. OR attitude*.ti,ab,id. OR decision making/ OR decision*.ti,ab,id. OR choice*.ti,ab,id. OR occupational choice/ OR occupational attitudes/ OR career development/ OR vocational maturity/ OR employer attitudes/ OR aspiration*.ti,ab,id. OR health behavior/ OR health attitudes/ OR health* behavio?r*.ti,ab,id. OR physical activity/ OR physical activit*.ti,ab,id. OR aerobic exercise/ OR exercise/ OR eating behavior/ OR eating attitudes/ OR eating.ti,ab,id. OR binge eating/ OR food intake/ OR safe sex/ OR sexual risk taking/ OR safe* sex.ti,ab,id. OR sexual behavio?r.ti,ab,id. OR drug abuse.ti,ab,id. OR substance abuse.ti,ab,id. OR alcohol abuse/ OR binge drinking/ OR alcohol abuse.ti,ab,id. OR smoking cessation/ OR tobacco smoking/ OR choice behavior/ OR theory

of planned behavior?r.ti,ab,id.

Results: 984.033 (August 23, 2013)

1 AND (2 OR 3 OR 4) AND 5: 1.877 results (August 23, 2013)

MEDLINE

Ovid MEDLINE ® In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R)

#1 Future time perspective

(future adj3 time perspective*).ti,ab. OR future time orient*.ti,ab. OR future consequence*.ti,ab. OR future orientation.ti,ab. OR time orientation.ti,ab. OR future planning.ti,ab. OR time perspective questionnaire.ti,ab. OR zimbaro time perspective.ti,ab. OR (experiential time perspective ADJ1 (measure OR scale).ti,ab. OR wallace* measure.ti,ab. OR wallace* future events test.ti,ab. OR long term personal direction scale.ti,ab. OR achievability of future goals scale.ti,ab. OR temporal focus scale.ti,ab. OR (future work* adj1 (salience or goal*)).ti,ab. OR career planning.ti,ab. OR future career.ti,ab.

Results: 1.888 (August 23, 2013)

#2 Education domain

learn*.ti,ab. OR educat*.ti,ab. OR classroom*.ti,ab. OR school*.ti,ab. OR college*.ti,ab. OR universit*.ti,ab. OR students/

Results: 963.419 (August 23, 2013)

#3 Work domain

career*.ti,ab. OR occupations/ OR occupation*.ti,ab. OR personnel.ti,ab. OR job*.ti,ab. OR work*.ti,ab. OR employ*.ti,ab. OR vocational education/

Results: 1.362.553 (August 23, 2013)

#4 Health domain

health behavior/ OR attitude to health/ OR health* behavio?r*.ti,ab. OR motor activity/ OR physical activit*.ti,ab. OR eating.ti,ab. OR food/ OR food habits/ OR food preferences/ OR health food/ OR food*.ti,ab. OR fruit/ OR fruit*.ti,ab. OR vegetables/ OR vegetable*.ti,ab. OR diet/ OR diet*.ti,ab. OR safe sex/ OR safe* sex.ti,ab. OR sexual health.ti,ab. OR sexual risk.ti,ab. OR sexual behavior/ OR sexual behavio?r.ti,ab. OR drug abuse.ti,ab. OR substance abuse.ti,ab. OR alcoholism/ OR binge drinking/ OR alcohol abuse.ti,ab. OR smoking cessation/ OR smoking/ OR tobacco.ti,ab. OR smoker*.ti,ab. OR smoking.ti,ab. OR mari?uana.ti,ab.

Results: 1.277.402 (August 23, 2013)

#5 Motivated behavior

motivation/ OR motivat*.ti,ab. OR achievement/ OR achievement*.ti,ab. OR learn*.ti,ab. OR ((academic OR student) ADJ1 engagement).ti,ab. OR effort.ti,ab. OR attitude*.ti,ab. OR school investment.ti,ab. OR attitude*.ti,ab. OR decision making/ OR decision*.ti,ab. OR

choice*.ti,ab. OR career choice/ OR occupational attitudes/ OR career mobility/ OR aspiration*.ti,ab. OR health behavior/ OR attitude to health/ OR health* behavio?r*.ti,ab. OR motor activity/ OR physical activit*.ti,ab. OR exercise/ OR food habits/ OR eating.ti,ab. OR safe sex/ OR safe* sex.ti,ab. OR sexual behavior/ OR sexual behavio?r.ti,ab. OR drug abuse.ti,ab. OR substance abuse.ti,ab. OR binge drinking/ OR alcohol abuse.ti,ab. OR smoking cessation/ OR choice behavior/ OR theory of planned behavio?r.ti,ab.

Results: 1.378.153 (August 23, 2013)

1 AND (2 OR 3 OR 4): 1.240 results (August 22, 2013)

1 AND (2 OR 3 OR 4) OR 5: 822 results (August 23, 2013)

ERIC

Educational Resources Information Center (OvidSP)

#1 Future time perspective

(future adj3 time perspective*).ti,ab,id. OR future time orient*.ti,ab,id. OR future consequence*.ti,ab,id. OR future orientation.ti,ab,id. OR time orientation.ti,ab,id. OR future planning.ti,ab,id. OR time perspective questionnaire.ti,ab,id. OR zimbaro time perspective.ti,ab,id. OR (experiential time perspective ADJ1 (measure OR scale).ti,ab,id. OR wallace* measure.ti,ab,id. OR Wallace* future events test.ti,ab,id. OR long term personal direction scale.ti,ab,id. OR achievability of future goals scale.ti,ab,id. OR temporal focus scale.ti,ab,id. OR (future work* adj1 (salience or goal*)).ti,ab,id. OR career planning.ti,ab,id. OR future career.ti,ab,id.

Results: 3.298 (August 23, 2013)

#2 Education domain

learn*.ti,ab. OR educat*.ti,ab. OR classroom*.ti,ab. OR middle school students/ OR junior high school students/ OR high school students/ OR school*.ti,ab. OR secondary education/ OR postsecondary education/ OR higher education/ OR undergraduate study/ OR undergraduate students/ OR graduate study/ OR graduate students/ OR college students/ OR two year college students/ OR college*.ti,ab. OR academic achievement/ OR universit*.ti,ab. OR postdoctoral education/ OR vocational education/

Results: 1.099.219 (August 23, 2013)

#3 Work domain

career development/ OR career*.ti,ab. OR occupations/ OR career choice/ OR career development/ OR occupation*.ti,ab. OR personnel.ti,ab. OR job applicants/ OR job performance/ OR job*.ti,ab. OR work*.ti,ab. OR employ*.ti,ab. OR vocational education/ OR vocational maturity/

Results: 402.993 (August 23, 2013)

#4 Health domain

health behavior/ OR health* behavio?r*.ti,ab. OR physical activities/ OR physical health/ OR physical activit*.ti,ab. OR eating habits/ OR eating.ti,ab. OR food/ OR food*.ti,ab. OR

fruit*.ti,ab. OR vegetable*.ti,ab. OR diet*.ti,ab. OR nutrition/ OR sexuality/ OR safe* sex.ti,ab. OR sexual health.ti,ab. OR sexual risk.ti,ab. OR sexual behavior?.ti,ab. OR drug abuse/ OR drug abuse.ti,ab. OR substance abuse/ OR substance abuse.ti,ab. OR alcohol abuse/ OR drinking/ OR alcohol abuse.ti,ab. OR smoking/ OR tobacco.ti,ab. OR smoker*.ti,ab. OR smoking.ti,ab. OR marijuana/ OR mari?uana.ti,ab.

Results: 54.935 (August 23, 2013)

5# Motivated behavior

motivation/ OR motivat*.ti,ab. OR achievement/ OR achievement*.ti,ab. OR learn*.ti,ab. OR academic achievement/ OR learner engagement/ OR ((academic OR student) ADJ1 engagement).ti,ab. OR effort.ti,ab. OR student motivation/ OR student attitudes/ OR attitude*.ti,ab. OR school investment.ti,ab. OR attitude*.ti,ab. OR decision making/ OR decision*.ti,ab. OR choice*.ti,ab. OR career choice/ OR career development/ OR vocational maturity/ OR employer attitudes/ OR aspiration*.ti,ab. OR health behavior/ OR health* behavior?.ti,ab. OR physical activities/ OR physical activit*.ti,ab. OR eating habits/ OR eating.ti,ab. OR safe* sex.ti,ab. OR sexual behavior?.ti,ab. OR drug abuse.ti,ab. OR substance abuse.ti,ab. OR alcohol abuse/ OR drinking/ OR alcohol abuse.ti,ab. OR smoking/ OR choice behavior/ OR theory of planned behavior?.ti,ab.

Results: 597.612 (August 23, 2013)

1 AND (2 OR 3 OR 4) AND 5: 2.127 results (August 23, 2013)

Business Source Premier

EBSCO

#1 Future time perspective

TI ((“future” N3 “time perspective*”) OR “future time orient*”) OR “future consequence*”) OR “future orientation” OR “time orientation” OR “future planning” OR “time perspective questionnaire” OR “zimbardo time perspective” OR “experiential time perspective” N1 (“measure” OR “scale”) OR “wallace* measure” OR “Wallace* future events test” OR “long term personal direction scale” OR “achievability of future goals scale” OR “temporal focus scale” OR (“future work*” N1 (“salience” OR “goal*”)) OR “career planning” OR “future career”) OR AB ((“future” N3 “time perspective*”) OR “future time orient*”) OR “future consequence*”) OR “future orientation” OR “time orientation” OR “future planning” OR “time perspective questionnaire” OR “zimbardo time perspective” OR “experiential time perspective” N1 (“measure” OR “scale”) OR “wallace* measure” OR “Wallace* future events test” OR “long term personal direction scale” OR “achievability of future goals scale” OR “temporal focus scale” OR (“future work*” N1 (“salience” OR

“goal*”) OR “career planning” OR “future career”)

Results: 1.774 (August 23, 2013)

2# Motivated behavior

DE (“employee motivation” OR “occupational achievement” OR “employees -- attitudes” OR “decision making” OR “career development” OR “employer attitudes”) OR TI (“motivat” OR “achievement*” OR “learn*” OR “effort” OR “attitude*” OR “decision*” OR “choice*” OR “aspiration*” OR “health* behavio?r*” OR “physical activit*” OR “eating” OR “safe* sex” OR “sexual behavio?r*” OR “drug abuse” OR “substance abuse” OR “alcohol abuse” OR “theory of planned behavio?r”) OR AB (“motivat” OR “achievement*” OR “learn*” OR “effort” OR “attitude*” OR “decision*” OR “choice*” OR “aspiration*” OR “health* behavio?r*” OR “physical activit*” OR “eating” OR “safe* sex” OR “sexual behavio?r*” OR “drug abuse” OR “substance abuse” OR “alcohol abuse” OR “theory of planned behavio?r”) OR KW (“motivat” OR “achievement*” OR “learn*” OR “effort” OR “attitude*” OR “decision*” OR “choice*” OR “aspiration*” OR “health* behavio?r*” OR “physical activit*” OR “eating” OR “safe* sex” OR “sexual behavio?r*” OR “drug abuse” OR “substance abuse” OR “alcohol abuse” OR “theory of planned behavio?r”)

Results: 1.080.777 (August 23, 2013)

1 AND 2: 815 (August 23, 2013)

Web of Science

#1 Future time perspective

TS=(“future” NEAR/3 “time perspective*”) OR “future time orient*” OR “future consequence*” OR “future orientation” OR “time orientation” OR “future planning” OR “time perspective questionnaire” OR “zimbardo time perspective” OR (“experiential time perspective” NEAR/1 (“measure” OR “scale”)) OR “wallace* measure” OR “Wallace* future events test” OR “long term personal direction scale” OR “achievability of future goals scale” OR “temporal focus scale” OR (“future work*” NEAR/1 (“salience” OR “goal*”)) OR “career planning” OR “future career”)

Results: 3.179 (August 23, 2013)

#2 Education domain

TS=(“learn*” OR “school*” OR “educat*” OR “classroom*” OR “college*” OR “universit*”)

Results: 1.304.590 (August 23, 2013)

#3 Work domain

TS=(“career*” OR “occupation*” OR “personnel” OR “job*” OR “work*” OR “employ*”)

Results: 2.465.250 (August 23, 2013)

#4 Health domain

TS=(“health* behavio?r*” OR “physical activit*” OR “eating” OR “food*” OR “fruit*” OR “vegetable*” OR “diet*” OR “safe* sex” OR “sexual health” OR “sexual risk” OR “sexual behavio?r” OR “drug abuse” OR “substance abuse” OR “tobacco” OR “smoker*” OR “smoking” OR “mari?uana”)

Results: 1.321.326 (August 23, 2013)

#5 Motivated behavior

TS=(“health* behavio?r*” OR “physical activit*” OR “eating” OR “food*” OR “fruit*” OR “vegetable*” OR “diet*” OR “safe* sex” OR “sexual health” OR “sexual risk” OR “sexual behavio?r” OR “drug abuse” OR “substance abuse” OR “alcohol abuse” OR “tobacco” OR “smoker*” OR “smoking” OR “mari?uana”)

Results: 1.328.575 (August 23, 2013)

1 AND (2 OR 3 OR 4) AND 5: 249 results (August 23, 2013)

CINAHL

Cumulative Index to Nursing and Allied Health Literature (EBSCO)

#1 Future time perspective

TI ((“future” N3 “time perspective*”) OR “future time orient*” OR “future consequence*” OR “future orientation” OR “time orientation” OR “future planning” OR “time perspective questionnaire” OR “zimbardo time perspective” OR “experiential time perspective” N1 (“measure” OR “scale”) OR “wallace* measure” OR “Wallace* future events test” OR “long term personal direction scale” OR “achievability of future goals scale” OR “temporal focus scale” OR (“future work*” N1 (“salience” OR “goal*”)) OR “career planning” OR “future career”) OR AB ((“future” N3 “time perspective*”) OR “future time orient*” OR “future consequence*” OR “future orientation” OR “time orientation” OR “future planning” OR “time perspective questionnaire” OR “zimbardo time perspective” OR “experiential time perspective” N1 (“measure” OR “scale”) OR “wallace* measure” OR “Wallace* future events test” OR “long term personal direction scale” OR “achievability of future goals scale” OR “temporal focus scale” OR (“future work*” N1 (“salience” OR “goal*”)) OR “career planning” OR “future career”)

Results: 837 (August 23, 2013)

#2 Motivated behavior

MH (“Motivation” OR “achievement” OR “academic achievement” OR “Student Attitudes” OR “Decision Making” OR “Career Planning and Development” OR “health behavior” OR “attitude to health” OR “physical activity” OR “aerobic exercises” OR “exercise” OR “eating behavior” OR “food habits” OR “food intake” OR “safe sex” OR “alcohol abuse” OR “smoking cessation”) OR TI (“motivat” OR “achievement*” OR “learn*” OR “effort” OR “attitude*” OR “decision*” OR “choice*” OR “aspiration*” OR “health* behavio?r*” OR “physical activit*” OR “eating” OR “safe* sex” OR “sexual behavio?r” OR “drug abuse” OR

“substance abuse” OR “alcohol abuse” OR “theory of planned behavior?”) OR AB (“motivat” OR “achievement*” OR “learn*” OR “effort” OR “attitude*” OR “decision*” OR “choice*” OR “aspiration*” OR “health* behavior?” OR “physical activit*” OR “eating” OR “safe* sex” OR “sexual behavior?” OR “drug abuse” OR “substance abuse” OR “alcohol abuse” OR “theory of planned behavior?”) **Results: 391.501 (August 23, 2013)**

1 AND 2: 445 results (August 23, 2013)

SPORTDiscus

EBSCO

#1 Future time perspective

TI (“future” N3 “time perspective*”) OR “future time orient*” OR “future consequence*” OR “future orientation” OR “time orientation” OR “future planning” OR “time perspective questionnaire” OR “zimbardo time perspective” OR “experiential time perspective” N1 (“measure” OR “scale”) OR “wallace* measure” OR “Wallace* future events test” OR “long term personal direction scale” OR “achievability of future goals scale” OR “temporal focus scale” OR (“future work*” N1 (“salience” OR “goal*”)) OR “career planning” OR “future career”) OR AB (“future” N3 “time perspective*”) OR “future time orient*” OR “future consequence*” OR “future orientation” OR “time orientation” OR “future planning” OR “time perspective questionnaire” OR “zimbardo time perspective” OR “experiential time perspective” N1 (“measure” OR “scale”) OR “wallace* measure” OR “Wallace* future events test” OR “long term personal direction scale” OR “achievability of future goals scale” OR “temporal focus scale” OR (“future work*” N1 (“salience” OR “goal*”)) OR “career planning” OR “future career”) OR KW (“future” N3 “time perspective*”) OR “future time orient*” OR “future consequence*” OR “future orientation” OR “time orientation” OR “future planning” OR “time perspective questionnaire” OR “zimbardo time perspective” OR “experiential time perspective” N1 (“measure” OR “scale”) OR “wallace* measure” OR “Wallace* future events test” OR “long term personal direction scale” OR “achievability of future goals scale” OR “temporal focus scale” OR (“future work*” N1 (“salience” OR “goal*”)) OR “career planning” OR “future career”)

Results: 345 (August 23, 2013)

#2 Motivated behavior

DE ("motivation (psychology)" OR "motivation in education" OR “achievement motivation” OR “academic achievement” OR “students -- attitudes” OR “decision making” OR “career development” OR “attitude (psychology)” OR “health behavior” OR “health attitudes” OR “physical activity” OR “aerobic exercises” OR “exercise” OR “food consumption” OR “substance abuse” OR “smoking cessation”) OR TI (“motivat” OR “achievement*” OR “learn*” OR “effort” OR “attitude*” OR “decision*” OR “choice*” OR “aspiration*” OR “health* behavior?” OR “physical activit*” OR “eating” OR “safe* sex” OR “sexual behavior?” OR “drug abuse” OR “substance abuse” OR “alcohol abuse” OR “theory of planned behavior?”) OR AB (“motivat” OR “achievement*” OR “learn*” OR “effort” OR

Appendix A

“attitude*” OR “decision*” OR “choice*” OR “aspiration*” OR “health* behavio?r*” OR “physical activit*” OR “eating” OR “safe* sex” OR “sexual behavio?r” OR “drug abuse” OR “substance abuse” OR “alcohol abuse” OR “theory of planned behavio?r”) OR KW (“motivat” OR “achievement*” OR “learn*” OR “effort” OR “attitude*” OR “decision*” OR “choice*” OR “aspiration*” OR “health* behavio?r*” OR “physical activit*” OR “eating” OR “safe* sex” OR “sexual behavio?r” OR “drug abuse” OR “substance abuse” OR “alcohol abuse” OR “theory of planned behavio?r”)

Results: 248.247 (August 23, 2013)

1 AND 2: 148 results (August 23, 2013)

Studies from the Dissertation Abstract International

(found by the databases syntaxes)

Two studies

APPENDIX B

Coding manual: Motivational power of Future time perspective: Meta-analyses in education, work, and health

Please code each study carefully in the accompanying excel sheet based on the outlined dimensions. Refer to the code and its description. Each row in the excel sheet represents an independent study. Add extra rows to the excel sheet when needed (i.e., if the study has more than one outcome type, different subsamples of a study, more than one measurement point).

Dimension	Code
1. Study ID What is the study's identification number?	Assign a unique identification number for each study by following the main ID of the study from the supplementary word document: "ID numbers and References of coding studies". In case where the paper consists of more than one independent study (i.e., consists of different samples), code each study separately. Add a letter for these different samples (e.g., 10A, 10B). In case the same sample was used, code only the study with the bigger sample size and sufficient information for coding. If a study has more than one measurement point assign to the Study ID the number of the measurement point (e.g., 11_T1, 11_T2). In case of subsamples (e.g., results for males and females separately), code each subgroup with an appropriate letter for a gender: M = males, F = females (e.g., 12_M; 12_F).
2. Author/s What is author's surname and name?	Enter each author's surname, and first letter of his/her name (e.g., Adams, J., & Nettle, D.).
3. Study year What is the publication year of the study?	Enter the publication year. In case the study is only online published, enter the online publication year.
4. Publication status Was the study published or unpublished?	1 = Published study 2 = Unpublished study
5. Publication type What is the type of the publication?	1 = Journal 2 = Book chapter 3 = Master/Doctoral dissertation 4 = Other (specify) 5 = Can't tell
6. Study design Is the study cross-sectional or longitudinal?	1 = Cross-sectional 2 = Longitudinal 3 = Other, specify
7. Life domain What is the life domain of the FTP scale and outcome	Code the life domain of the FTP and outcome relationship: 1 = Learning 2 = Work

relationship?	<p>3 = Health 4 = Mixed life domain (specify) 5 = Can't tell</p> <p>For example, the <i>FTP</i> and <i>academic achievement</i> relationship would be coded as number 1, as it represents the education life domain.</p> <p>Please note that the relationship should belong solely to one of the three specified life domains, or their mixture (e.g., education and work).</p>
8. FTP measure name	<p>For the purpose of this meta-analysis the authors have established a clear definition of the FTP. It is defined as <i>an attitude that encompasses personal cognitions, feelings, and behavioral intentions with respect to the future</i>. Cognitions relate to thoughts about future outcomes and goals that are valued and instrumental for current decision making and behaviors (e.g., goal planning and striving). Feelings correspond to the emotions (e.g., hope and fear) that are associated with the future, and behavioral intentions relate to individual's plans to engage in behaviors in order to realize future goals.</p> <p>In this meta-analysis we only use the FTP self-reported questionnaires as being the most dominant source of measurement and as only individuals themselves are able to report whether they reflect on the future.</p> <p>Code the FTP measures which are in the line with the aforementioned definition. Type the FTP measure name, author and year (e.g., <i>Future scale of ZTPI</i> (Zimbardo & Boyd, 1999; <i>CFCS</i> (Strathman et al., 1994; <i>Future focus scale of Temporal focus scale</i> (Shipp et al., 2009). Carefully read the description of the measure and make a note if there were some changes in the current study regarding the measure (e.g., the study has used an adapted version of the scale, three items are missing, there is an extra item, etc.).</p> <p>In case where the study consists of two or more FTP measures (e.g., Zimbardo's and CFCS scale), use the one with the higher reliability reported in that study (Lipsey & Wilson, 2001).</p> <p>Note that certain FTP scales and subscales are excluded from the meta-analysis as they are related to other constructs (e.g., hope, economic markers) or by having an operationalization that does not fit the FTP definition of this meta-analysis. These FTP scales and subscales are: <i>Delay discount rate</i>, Mazur, 1987; <i>Future Time Perspective Scale</i>, Carstensen & Lang, 1994, 1996, 2002; <i>Temporal depth scale</i>, Bluedorn 2002; <i>Speed and Distance (Extension)</i> subscale, Husman & Shell (2001); <i>Hope scale</i>, Snyder et al., 1991; <i>Future work self-salience</i> (King & Patterson, 2000, adapted by Strausss, Griffin, & Parker, 2012); <i>Present Time Value</i> and <i>Time Pressure</i> subscales from the Future-present time orientation questionnaire (Bjorgvinsson, 1999).</p>
9. Number of items in the	Code the number of items in the FTP scale:

<p>FTP scale/subscale used What is the number of the items in the FTP scale?</p>	<p>1 = One to three items 2 = Four to ten 3 = Eleven and more</p> <p>Please be careful when there are separate correlations per FTP subscale and the outcome of interest. In that case, please count the number of items per each FTP subscale respectively.</p>
<p>10. FTP construct type Which FTP component is dominant in the scale/subscale?</p>	<p>Similarly to Peetsma's (2012) distinction between three FTP components (i.e., cognitive, affective, and behavioral intention), we group FTP scales based on the FTP component dominance (if more than 80 % of items belong to one component) or mixture of components (if more than 20 % are related to different components) into one of the four construct types:</p> <ol style="list-style-type: none"> 1. Cognition: Include items about an individual's ideas and expectations about the future. For example, "I think about what my future has in store"; "I imagine what tomorrow will bring for me." 2. Cognition and behavioral intention: Include items about an individual's future goals and ways to accomplish these goals (planning, setting, and self-control). For example, "When I want to get something done, I make step-by-step plans and think about how to complete each step"; "I consider how things might be in the future, and try to influence those things with my day to day behavior." 3. Cognition and affect: Include items that focus on the affective tone of future cognitions, that is, emotions that are associated with future goals (hope, worry, fear). "If things don't get done on time, I don't worry about it"; "When I think about the future I feel happy." 4. Mixture of cognition, behavioral intention, and affect: Include items that combine cognition, affect and intentions with regard to the future. For example, "I like to think of the way I will be able to develop my possibilities (capacities/talents) after school"; "I am willing to sacrifice my immediate happiness or well-being in order to achieve future outcomes." <p>For example, to be coded as a FTP scale type 2, about 80 % of the items have to relate to cognitive and behavioral intention component of FTP.</p> <p>Accordingly, code:</p> <p>1 = Cognition 2 = Cognition and behavioral intention 3 = Cognition and affect 4 = Mixture of cognition, behavioral intention, and affect</p>
<p>11. FTP focus Is the FTP measure referring to a general (i.e., no specification to a certain life domain) or a specific life</p>	<p>Code is the FTP measure referring to a general (i.e., no specification to a certain life domain) or a specific life domain:</p> <p>1 = Domain general 2 = Domain specific 3 = Can't tell</p>

domain?	
12. FTP scale/subscale number What is the number of FTP scales?	Of how many separate scales/subscales is the FTP measure consisting of: 1 = One 2 = Two (specify) 3 = Three (specify) 4 = Four or more Enter only the number of scales/subscales that are included in the meta-analysis.
13. FTP value Is the FTP measure consisting of a separate positive and negative subscale (i.e., Future positive and Future negative)?	1 = Yes 2 = No 3 = Can't tell If the answer is Yes, please pay attention to code their both effect sizes.
14. Outcome name What is the outcome/dependent variable?	Type in the precise outcome name from the study.
15. Outcome measure description	Write in the name of the measure, the author's name and the date. Write a concise description of the outcome variable with an item example.
16. Outcome type What is the outcome type based on the Theory of planned behavior (TPB; Ajzen, 1985)?	Each outcome/dependent variable of the study is to be coded based on the TPB (Ajzen, 1985). According to the TPB, human behaviors are guided by attitudes toward the behavior, normative beliefs, control beliefs, and intention (Fishbein & Ajzen, 2010). Figure 1 below implies a causal link between attitudes and behaviors that are mediated by intentions. As there were no outcomes on the normative beliefs, we exclude them from our coding. Also, as within the outcomes we noticed a distinction between behavior that is not possible to be verified and behavior that is recorded or reported, but potentially verifiable, we coded these two separately: Behavior (non-verifiable) and Behavior (verifiable).

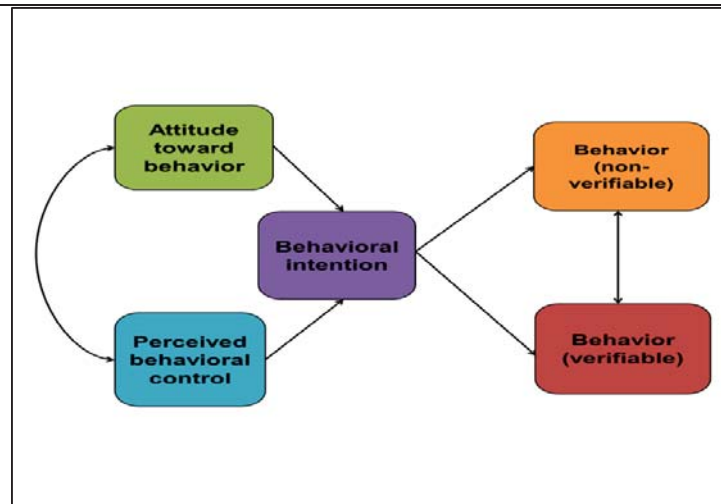


Figure 1. Outcome types based on the adapted TPB (Ajzen, 1985).

1. Attitude toward behavior

An individual's positive or negative evaluation of self-performance of the particular behavior. The concept is the degree to which performance of the behavior is positively or negatively valued. It is determined by the total set of accessible behavioral beliefs linking the behavior to various outcomes and other attributes. In general, the more favorable the attitude towards the behavior, the stronger should be the individual's intention to perform it. For example: "Being physically active would be . . .," on a 5-point scale of useful to useless, beneficial to harmful, desirable to undesirable, good to bad, enjoyable to unenjoyable, and interesting to boring"; Gulley, 2012).

2. Perceived behavioral control

An individual's perceived ease or difficulty of performing the particular behavior (Ajzen, 1991). That is, people's perceptions of their ability to perform a given behavior. For example: "If I wanted to, I could easily be physically active on a regular basis."; related to controlled belief: "I believe that I have the ability to be physically active on a regular basis." Gulley, 2012). Control belief or perceived behavioral control (PBC) includes individuals' beliefs in their abilities (self-efficacy) for certain behavior and their perceptions about whether or not they will have the opportunity and resources to participate in that behavior (Fishbein & Ajzen, 2010).

3. Behavioral intention

An indication of an individual's readiness to perform a given behavior. It is assumed to be an immediate antecedent of behavior (Ajzen, 2002). It is based on attitude toward the behavior, subjective norm, and perceived behavioral control, with each predictor weighted for its importance in relation to the behavior and population of interest. Intentions are assumed to capture the motivational factors that influence a behavior and to indicate how hard people are willing to try or how much effort they would exert to perform the behavior (Ajzen, 1991, p. 181). For instance: "I intend to eat healthy";

	<p>Gulley, 2012.</p> <p>4. Behavior (unverifiable): It is the manifest, an individual's observable response in a given situation with respect to a given target. It is a reported behavior that cannot be verifiable. For example: "Do you participate in a school sponsored sport (s)?" ; Gulley, 2012; "I make my supervisor aware of my work aspirations and goals"; "Have you ever smoked cigarettes?" ; "Have you ever drunk alcohol (beer, wine, or liquor)".</p> <p>5. Behavior (verifiable): An individual's recorded behavior, or if reported, possible to be verifiable. For example, Grade point average, working hours as recorded or easily verifiable when self-reported, body mass index.</p> <p>Accordingly code: 1 = Attitude toward behavior 2 = Perceived behavioral control 3 = Behavioral intention 4 = Behavior (unverifiable) 5 = Behavior (verifiable)</p>
17. Cultural dimension	<p>Code each culture based on the Hofstede's cultural dimension score available via the website: https://www.hofstede</p> <p>In case the study consists of samples from different countries, code data for each country separately (if possible).</p>
18. Sample age (mean) What is the mean age of the sample?	<p>Specify the mean age of the sample. If mean age cannot be determined, enter, 999.</p>
19. Standard deviation (SD) What is the standard deviation of the sample age (mean)?	<p>Write down the SD of the sample age (mean).</p> <p>Write 999 if the information is missing.</p>
20. Sample age group What is the age group based on the Erikson's (1963) stages of psychosocial development?	<p>Code sample age group similarly to the Erikson's stages of psychosocial development. We excluded the first three age groups (i.e., infancy; early childhood; preschool), as the FTP is being developed from about 11/12 years onwards (before this period there is fantasy). Also, we added one age group (Older adolescence).</p> <p>Accordingly code:</p> <ul style="list-style-type: none"> 1 = School age (6 – 11 years) 2 = Adolescence (12 – 18 years) 3 = Older adolescence (19 – 23 years) 4 = Young adulthood (24 – 40 years) 5 = Middle adulthood (41 – 65 years) 6 = Maturity (66 years onwards) <p>Missing = 999.</p>
21. Gender Predominant gender of the sample.	<p>Enter the percentage of males. Use the excel sheet made for the percentage calculation. Enter 999 if the information is missing.</p>
22. Education level of the	<p>1 = Secondary education (gymnasium, other) write down the</p>

sample What is the education level of the sample?	percentage if possible 2 = University (Bachelor/master) write down the percentage if possible If the information is missing, enter 999.
23. Sample size (<i>N</i>) What is the sample size used in the analysis?	Enter the precise sample size used in the analysis. Enter 999 if the information is missing. Please note that in case of longitudinal studies there is a natural attrition of the sample size at later time points. Thus, write the sample size at all measures.
24. Effect size (ES)	The Pearson product-moment correlation coefficient (<i>r</i>) is to be used as the effect size index for this meta-analysis. <i>r</i> is a measure of the correlation (relationship) between the observed value of the FTP and the value of the outcome variable. For example, the strength of the relationships between FTP and job satisfaction is $r = .25$. Please note that in the case of a regression analysis, when there is <u>one</u> predictor variable in the model, then the standardized regression coefficient <i>Beta</i> is equivalent to the correlation coefficient (<i>r</i>) between the predictor and the criterion variable (bivariate analysis). However, when there is more than one predictor variable (multivariate regression), it is not possible to compare the contribution of each predictor variable by simply comparing the correlation coefficients. Thus, be careful and do not include these partial correlations (e.g., when in the model it is controlled for SES or other variables, more predictors in the model). Only include the correlation coefficient or the bivariate beta coefficient when it was not controlled for other variables in the model. If the study has ES for subgroups (e.g., males and females, different ethnicity; school level, different country) code them separately. Do not average. If the study has a longitudinal design use the ES from all the measurements points. In case the FTP measure consists of immediate/short-term FTP subscale (immediate) and long-term FTP (future) subscale, use the ES related to the long-term FTP subscale. When the FTP measure consists of positive and negative subscale, use the ES related from both the positive and negative FTP subscale.
25. Page number ES What is the page number where the data for the ES can be found?	Enter the page number where the ES was found.
26. Effect size type What is the ES type?	Enter the effect size type (e.g., Pearson correlation, bivariate beta coefficient, odds ratio).
27. Comment	Please make a note if you encounter any difficulty or a particular issue regarding the coding. Refer precisely to the dimension's number to which the comment is referring to. These comments will help to gain a better insight in the coding process.
28. All items presence in the study Is it possible to see all the	Code is it possible to see all the items from the FTP measure. In case it is not possible to see all the items, first, we will try to ask the complete measure from the author. In case this is not possible,

Appendix B

items from the FTP measure?	continue coding the measure operationalisation based on the items provided in the study. 1 = I see all the items 2 = I don't see all the items
29. Sample characteristic What is the sample characteristic?	Code the sample characteristic: 1 = General population 2 = Academically gifted 3 = Homeless people 4 = Other (specify) 5 = Can't tell

APPENDIX C

Subgroup analyses for meta-analysis

<u>Education</u>						
Model						
Fixed	<i>Q</i>	<i>p</i>	<i>k</i>	<i>r</i>	LL	UL
FTP construct	27.32	.00***				
Cognition			3	.09	.02	.17
Cognition and affect			2	.15	.07	.23
Cognition and beh. intention			11	.23	.20	.26
Mixture of cognition, beh. intention, and affect			12	.28	.25	.30
<u>Random</u>						
FTP construct	6.93	.07†				
Cognition			3	.10	-.03	.23
Cognition and affect			2	.16	.00	.31
Cognition and beh. intention			11	.24	.18	.31
Mixture of cognition, beh. intention, and affect			12	.28	.22	.34
<u>Fixed</u>						
FTP focus	8.94	.00**				
FTP general			20	.22	.20	.24
FTP specific			8	.28	.25	.31
<u>Random</u>						
FTP focus	2.13	.14				
FTP general			20	.22	.17	.27
FTP specific			8	.29	.21	.37
<u>Fixed</u>						
Study design	.04	.85				
Cross-sectional			25	.24	.22	.26
Longitudinal			3	.24	.20	.29
<u>Random</u>						
Study design	.32	.57				
Cross-sectional			25	.24	.20	.29
Longitudinal			3	.20	.07	.33
<u>Work</u>						
Model						
Fixed	<i>Q</i>	<i>p</i>	<i>k</i>	<i>r</i>	LL	UL
FTP construct	43.52	.00***				
Cognition			2	.09	.00	.18
Cognition and beh. intention			6	.19	.14	.24
Mixture of cognition, beh. intention, and affect			8	.34	.31	.37
<u>Random</u>						
FTP construct	8.39	.02*				
Cognition			2	.11	-.10	.31
Cognition and beh. intention			6	.15	.04	.27

Appendix C

Mixture of cognition, beh. intention, and affect						
<u>Health</u>						
Model						
Fixed	<i>Q</i>	<i>p</i>	<i>k</i>	<i>r</i>	LL	UL
FTP construct	8.83	.00**				
Cognition and beh. intention			20	.18	.16	.20
Mixture of cognition, beh. intention, and affect			11	.23	.20	.25
Random						
FTP construct	1.61	.20				
Cognition and beh. intention			20	.19	.15	.22
Mixture of cognition, beh. intention, and affect			11	.23	.18	.27
Fixed						
FTP focus	.25	.62				
FTP general			28	.20	.18	.22
FTP specific			4	.22	.14	.30
Random						
FTP focus	.04	.84				
FTP general			28	.21	.17	.24
FTP specific			4	.22	.11	.32

Note. *k* = number of studies; *r* = effect size; LL = lower limit; UL = upper limit.

†*p* < .10. **p* < .05. ***p* < .01. ****p* < .0001.

APPENDIX D

Meta-regression analyses

Life domain	Model	Moderator	B	SE	<i>p</i>
Education	Fixed	Culture–individualism/collectivism	.0007	.0005	.18
		Culture–long-term/short-term	.0021	.0005	.0001***
		Culture–uncertainty-avoidance	.001	.0006	.09†
		Culture–indulgence/restraint	.0001	.0006	.91
		Age	.00	.0035	.38
		Gender	.0013	.0007	.05*
		Publication year	.0002	.0027	.93
	Random	Culture–individualism/collectivism	.0006	.0011	.60
		Culture–long-term/short-term	.0022	.0011	.03*
		Culture–uncertainty-avoidance	.001	.0013	.42
		Culture–indulgence/restraint	–.0002	.0014	.90
		Age	–.0051	.0078	.51
		Gender	.0009	.0014	.53
		Publication year	.0017	.0063	.78
Work	Fixed	Culture–individualism/collectivism	.001	.0006	.07†
		Culture–long-term/short-term	–.0003	.0005	.56
		Culture–uncertainty-avoidance	.0001	.0006	.85
		Culture–indulgence/restraint	–.0036	.0008	.0001***
		Age	–.0052	.0013	.0001***
		Gender	.0036	.001	.0004**
		Publication year	.0036	.0023	.10
	Random	Culture–individualism/collectivism	.0002	.002	.93
		Culture–long-term/short-term	.0013	.002	.50
		Culture–uncertainty-avoidance	.001	.0018	.56
		Culture–indulgence/restraint	–.0029	.0022	.18
		Age	–.0013	.0037	.72
		Gender	.0018	.0035	.61
		Publication year	.0054	.0048	.26
Health	Fixed	Culture–individualism/collectivism	.0031	.0011	.004*
		Culture–long-term/short-term	.0007	.0006	.29
		Culture–uncertainty-avoidance	.0005	.0007	.52
		Culture–indulgence/restraint	.0006	.0007	.44
		Age	–.0016	.0009	.09†
		Gender	–.0026	.0007	.0001***
		Publication year	.0044	.0015	.003**
	Random	Culture–individualism/collectivism	.0033	.002	.10
		Culture–long term/short term	.0011	.0012	.36
		Culture–uncertainty-avoidance	.0006	.0014	.65
		Culture–indulgence/restraint	.0012	.0018	.51
		Age	–.0015	.0018	.42
		Gender	–.0014	.0011	.18

Appendix D

Publication year	.0028	.0029	.34
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Note. B = unstandardized beta weight; *SE* = standard error.

†*p* < .10. **p* < .05. ***p* < .001. ****p* < .0001.

APPENDIX E

Multiple regression models

Domain	Model	Moderators	<i>Q</i>	<i>df</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>P</i>			
Education	Fixed	FTP construct type	20	3	.0002**	-.06	.03	.07†			
		FTP focus									
	Random	Culture–long-term orientation				5.66	3	0.13	.00	.00	.61
		Culture–uncertainty-avoidance									
		Gender									
		FTP construct type									
		FTP focus									
		Culture–long-term orientation									
		Culture–uncertainty-avoidance									
		Gender									
<i>R</i> ²	.08										
Work	Fixed	FTP construct type	40.27	3	.0001**	-.01	.00	.001**			
		Culture–individualism/collectivism									
	Random	Culture–indulgence/restraint				11.21	3	.01*	.00	.00	.16
		Age									
		FTP construct type									
		Culture–individualism/collectivism									
		Culture–indulgence/restraint									
		Age									
		Age									
		<i>R</i> ²									
Health	Fixed	FTP construct type	13.75	2	.001*	.00	.00	.04*			
		Culture–individualism/collectivism									
	Random	Gender				.00	.00	.02*			
		Year of publication									

Appendix E

Random	FTP construct type	8.03	2	.02*	.00	.00	.38
	Culture-individualism/collectivism				.00	.00	.32
	Gender				.00	.00	.26
	Year of publication				.00	.00	
R^2							.30*

Note. B = unstandardized beta weight; SE = standard error.

† $p < .10$. * $p < .05$. ** $p < .001$.

APPENDIX F

FTP and outcome type relationships

	Education													
	Effect size and 95% interval			Test of null (2-Tail)			Heterogeneity			Tau-squared				
	<i>k</i>	<i>r</i>	LL	UL	<i>Z</i>	<i>p</i>	<i>Q</i>	<i>df(Q)</i>	<i>p</i>	<i>I</i> ²	<i>T</i> ²	<i>SE</i>	σ	<i>T</i>
FTP and ATB														
Fixed	7	.28	.24	.32	14.65	.00****	25.51	6.00	.00	76.48	.01	.01	.00	.10
Random	7	.29	.21	.36	7.00	.00****								
FTP and BI														
Fixed	4	.23	.18	.27	9.99	.00****	68.97	3.00	.00	95.65	.05	.05	.00	.23
Random	4	.28	.06	.48	2.52	.01**								
FTP and PBC														
Fixed	3	.26	.21	.32	9.17	.00****	9.80	2.00	.01	79.59	.01	.02	.00	.11
Random	3	.25	.12	.37	3.60	.00****								
FTP and UB														
Fixed	12	.34	.31	.37	21.99	.00****	30.68	11.00	.00	64.14	.01	.00	.00	.08
Random	12	.33	.28	.38	11.39	.00****								
FTP and VB														
Fixed	14	.16	.14	.19	12.01	.00****	48.51	13.00	.00	73.20	.01	.00	.00	.09
Random	14	.16	.11	.21	5.81	.00****								
Work														
Effect size and 95% interval			Test of null (2-Tail)			Heterogeneity			Tau-squared					
<i>k</i>	<i>r</i>	LL	UL	<i>Z</i>	<i>p</i>	<i>Q</i>	<i>df(Q)</i>	<i>p</i>	<i>I</i> ²	<i>T</i> ²	<i>SE</i>	σ	<i>T</i>	
12	.22	.20	.25	18.08	.00****	36.96	11.0	.00	70.24	.01	.00	.00	.08	

Appendix F

Random	12	.21	.16	.27	7.74	.00****															
FTP and BI																					
Fixed	7	.00	-.03	.03	.09	.93	474.38	6.00	.00	98.74	.15	.12	.01	.38							
Random	7	.20	-.08	.46	1.42	.16															
FTP and PBC																					
Fixed	9	.33	.31	.35	2.52	.00****	42.05	8.00	.00	80.98	.01	.01	.00	.10							
Random	9	.32	.25	.38	8.68	.00****															
FTP and UB																					
Fixed	5	.39	.35	.43	17.15	.00****	106.75	4.00	.00	96.25	.08	.06	.00	.28							
Random	5	.45	.23	.62	3.76	.00****															
FTP and VB																					
Fixed	2	.00	-.09	.08	-.09	.93	12.79	1.00	.00	92.18	.06	.08	.01	.23							
Random	2	8	-.39	.26	-.44	.66															

		Health										Heterogeneity			Tau-squared		
		Effect size and 95% interval					Test of null (2-Tail)					Q			I^2		
k	r	LL	UL	Z	p	Q	df	p	T^2	SE	σ	T	SE	σ	T	SE	σ
FTP and ATB																	
Fixed	8	.13	.08	.17	5.39	.00****	13.16	7.00	.07	46.79	.00	.00	.00	.06			
Random	8	.14	.08	.21	4.22	.00****											
FTP and BI																	
Fixed	9	.24	.21	.27	14.75	.00****	24.69	8.00	.00	67.59	.01	.01	.00	.08			
Random	9	.21	.15	.28	6.34	.00****											
FTP and PBC																	
Fixed	6	.17	.13	.22	7.16	.00****	8.66	5.00	.12	42.26	.00	.00	.00	.05			
Random	6	.17	.11	.24	5.12	.00****											
FTP and UB																	
Fixed	26	.19	.17	.20	20.35	.00****	69.88	25.0	.00	64.22	.00	.00	.00	.07			

	Random	26	.21	.18	.24	12.06	.00****	1.20	2.00	.55	.00	.00	.00	.00
FTP and VB														
Fixed		3	.14	.08	.19	4.59	.00****	1.20	2.00	.55	.00	.00	.00	.00
Random		3	.14	.08	.19	4.59	.00****							

Note. ATB = attitude toward behavior; BI = behavioral intention; PBC = perceived behavioral control; UB = unverifiable behavior; VB = verifiable behavior; *k* = number of studies; *r* = effect size; LL = lower limit; UL = upper limit.

p* < .05. *p* < .01. ****p* < .001. *****p* < .0001.

SUMMARY

Driven by the future: Future time perspective across life domains and cultures

Thinking about the future is inevitable for people's life and for their goal strivings. Consequently, the concept of Future Time Perspective (FTP) – individuals' attitudes towards the future as a motivator for different attitudes and behaviors, has been researched across different disciplines and related to important life domains such as health, work, and education. Yet, after more than 80 years of exploration, FTP research shows inconclusive findings and needs robust evidence about the generalizability of FTP as a driver for individuals' motivation, attitudes and behaviors. Furthermore, little is known about the factors that influence FTP and its outcomes. The overarching goal of the present dissertation was thus to explore the relationships between FTP and individuals' attitudes and behaviors in the education, work, and health domains and whether and how FTP and its outcomes are rooted in another motivational construct, Regulatory Focus (RF; Lockwood, Jordan, & Kunda, 2002), across countries that differ on cultural values, socio-economic circumstances, and history.

In pursuing this goal, three studies were conducted that together form the present dissertation.

The first study (**chapter 2**) aimed to clarify and explore the concept of FTP as a motivator for individuals' educational, work, and health outcomes, and sought for possible cultural and study characteristics that are responsible for the variations in the FTP-outcome relationships. Three meta-analyses were conducted that included FTP studies in the domains of education (28 studies), work (17 studies), and health (studies 32) and involved 31,558 participants. In order to deal with a diversity of FTP measures within and across life domains, a conceptual model for grouping FTP constructs was developed. Moreover, to address different outcome types, study outcomes were coded based on the Theory of Planned Behavior (TPB; Ajzen & Fishbein, 1980).

The results of this multidisciplinary study revealed that: (1) FTP relationships with educational, work, and health outcomes were significant and small-to-medium, and were generalizable across domains; (2) the relationships between FTP and the three life domains were strongest when the FTP construct included a mixture of cognition, behavioral intention, and affect and, in the education domain, when the FTP measure was domain specific rather than general; (3) there were cross-cultural differences in FTP-outcome relationships based on Hofstede's cultural values (2011); and (4) the strength of the FTP-outcome relationship varied for the outcome types: attitudes, perceived behavioral control, behavioral intention, and

behaviors. The highest effect sizes were found when FTP predicted educational, work, and health attitudes, educational and health behavioral intention, perceived behavioral control and self-reported behaviors, as for example, investment in learning in the educational domain. Smallest effect sizes were found for objective behaviors, as for example, grade point average in case of education. Overall, this study provided the first meta-analytical evidence that FTP is a motivator within and across life domains and highlighted that the FTP measure, cultural context, and study characteristics influence the magnitude of the FTP-outcome relationships.

The second study (**chapter 3**) investigated whether the regulatory foci (promotion and prevention) of parents and adolescents are situational and personal determinants of adolescents' FTP on school and professional career. As no instrument existed for measuring adolescents' perceptions of parent RF, a perceived parent RF scale was developed and validated. Moreover, a theoretical framework of FTP antecedents in education and professional career was developed and tested by conducting a cross-sectional study that included 347 Dutch adolescents. The results showed that adolescents' promotion RF was positively related to their FTP on school and professional career, whereas adolescents' prevention RF was negatively related to their FTP. Moreover, the study also revealed a positive relationship between perceived parents' promotion focus and FTP via adolescents' RF. Specifically, when adolescents perceived that their parents stimulate them to take on challenges, they were more promotion focused and contemplated more strongly on their future school and career. In sum, this study provided preliminary evidence that RF is an antecedent of adolescents' FTP, and highlighted the important role of parents' promotion focus in the formation of adolescents' RF and FTP on school and professional career.

The third study (**chapter 4**) built upon the findings from chapters 2 and 3, and cross-culturally tested the theoretical model of the relationships between parent and adolescent RF and FTP and educational and career outcomes of adolescents from countries that differ on Hofstede's cultural dimensions, socio-economic circumstances, and recent history. A sample of 1520 adolescents from one Western-European country (the Netherlands) and two Eastern European countries (Serbia, and Croatia) completed a survey at three time points.

The main finding was that across the three countries adolescents' promotion focus was positively related and their prevention focus was negatively related to FTP on school and professional career, which in turn was positively related to adolescents' investment in school and homework and career planning. Moreover, this study showed intriguing differences in both FTP on school and career and RF strategies among the three countries: adolescents from collectivistic countries had stronger motivational orientations (higher FTP and promotion and

prevention foci) than adolescents from the individualistic country. These findings suggest that adolescents from different countries use the same motivational strategies in reaching their goals. Also, young people who are raised in suboptimal political and economic conditions may be more strongly motivated to strive for a better future and may tend to develop a stronger orientation to approaching possible gains and avoiding possible losses in order to secure for a better future.

A general discussion of the three studies comprising this dissertation is provided in **chapter 5**. This chapter included a summary of the core findings, their theoretical and practical implications and limitations, and recommendations for future research.

The results of this dissertation clearly showed that FTP is a significant driver for human attitudes and behaviors in the education, work and health domains, and across different countries, and identified factors that influenced FTP and its outcomes. This dissertation has also provided the first evidence of adolescents' perceived parent RF and their own RF as determinants of their FTP and educational and career-planning goals. Also, this dissertation showed that adolescents across different countries are motivated by their RF and FTP in pursuing their goals. Finally, the findings suggest that RF and FTP may function as coping mechanisms for adolescents living in countries that face difficult circumstances such as Serbia and Croatia.

Overall, the findings of this dissertation offer an important contribution to RF, FTP theory and research, and motivation research in general. RF and FTP drive the motivation of adolescents from different cultural contexts. This conclusion is of great value since many adolescents face a decline in their motivation for school and career. At the same time, the empirical work in this dissertation raises several questions that need to be addressed in future FTP and RF theory and research. I hope that this dissertation is the onset of building a cumulative knowledge base that can guide the development of motivational programs.

SUMMARY IN DUTCH
(SAMENVATTING)

Gedreven door de toekomst: Toekomstperspectief binnen levensdomeinen en culturen

In hun leven denken mensen na over de toekomst wanneer ze bepaalde doelen nastreven. Het concept *Future Time Perspective* (FTP) – de houding van individuen ten opzichte van de toekomst als motivator voor verschillende attitudes en gedragingen – is onderzocht in verschillende disciplines en gerelateerd aan belangrijke levensdomeinen zoals gezondheid, werk en onderwijs. Meer dan tachtig jaar aan onderzoek op het gebied van FTP heeft echter nog geen eenduidige bevindingen opgeleverd. Daarom zijn er robuuste bewijzen nodig voor de generaliseerbaarheid van FTP als een drijvende kracht voor iemands motivatie, attitudes en gedragingen. Bovendien is er weinig bekend over de factoren die van invloed zijn op FTP en de uitkomsten ervan. Het overkoepelende doel van dit proefschrift was daarom om de relaties tussen FTP en de attitudes en gedragingen van individuen in de domeinen onderwijs, werk en gezondheid te onderzoeken. Daarbij werd ook onderzocht of en hoe FTP en de uitkomsten daarvan zijn geworteld in een ander motivatieconstruct, *Regulatory Focus* (RF; Lockwood, Jordan, & Kunda, 2002), in landen die op het gebied van culturele waarden, sociaal-economische omstandigheden en geschiedenis van elkaar verschillen. Hiertoe zijn drie studies uitgevoerd die samen de basis van het huidige proefschrift vormen.

De eerste studie (**hoofdstuk 2**) had als doel om te verkennen en verduidelijken welke rol FTP speelt als motivator voor doelen op het gebied van onderwijs, werk en gezondheid. Tevens werd er gezocht naar mogelijke culturele karakteristieken en onderzoekskenmerken die verantwoordelijk zijn voor de variaties in de relaties tussen FTP en uitkomstvariabelen. Er werden drie meta-analyses uitgevoerd, waarin FTP-onderzoeken op het gebied van onderwijs (28 studies), werk (17 studies) en gezondheid (32 studies) zijn opgenomen, met in totaal 31.558 participanten. Er is een conceptueel model voor het groeperen van FTP-constructies ontwikkeld om onder meer de diversiteit aan FTP-metingen binnen en tussen levensdomeinen te duiden. Voor een indeling van de verschillende uitkomsttypen, werden de resultaten van de studies bovendien gecodeerd op basis van de *Theory of Planned Behavior* (TPB; Ajzen & Fishbein, 1980).

De resultaten van dit multidisciplinaire onderzoek lieten ten eerste relaties tussen FTP en uitkomsten op het gebied van onderwijs, werk en gezondheid zien, met kleine tot middelgrote effecten, en dat deze te generaliseren zijn over verschillende domeinen. Ten tweede bleken de relaties tussen FTP en de drie levensdomeinen het sterkst wanneer het FTP-construct een mix van cognitie, gedragsintentie en affect bevatte en, in het onderwijsdomein, wanneer de FTP-meting meer domeinspecifiek dan algemeen was. Ten derde bleken culturele

verschillen in relaties tussen FTP en uitkomstvariabelen samen te hangen met de indeling van culturele waarden door Hofstede (2011). Tot slot bleek de omvang van de relatie tussen FTP en uitkomstvariabelen te variëren voor de uitkomsttypen: attitudes, waargenomen controle over gedrag (*perceived behavioral control*), gedragsintentie en gedrag. De effecten waren het grootst wanneer FTP een voorspellende factor bleek voor onderwijs-, werk- en gezondheidsattitudes, voor onderwijs- en gezondheidsgedragsintentie, voor waargenomen gedragscontrole en voor zelfgerapporteerd gedrag, zoals het investeren in leren in het onderwijsdomein. De kleinste effecten werden gevonden voor objectief gedrag, bijvoorbeeld wanneer het ging om het *grade point average* in het onderwijs. Deze studie levert hiermee de eerste meta-analytische steun voor de functie van FTP als motivator zowel binnen als tussen levensdomeinen. De studie laat daarnaast zien dat de FTP-meting, culturele context en studiekarakteristieken de omvang van de relaties tussen FTP en uitkomstvariabelen beïnvloeden.

In de tweede studie (**hoofdstuk 3**) is onderzocht of de *regulatory foci* (een stimulerende, dan wel terughoudende RF) van ouders en adolescenten situationele en persoonlijke determinanten zijn van de FTP van adolescenten op het gebied van onderwijs en hun toekomstige carrière. Omdat er geen instrument bestond om in kaart te brengen welke percepties adolescenten hebben van de RF van hun ouders, werd hiertoe een schaal ontwikkeld en gevalideerd. Bovendien werd een theoretisch kader van FTP-voorspellers voor onderwijs en de toekomstige loopbaan ontwikkeld en getoetst door middel van een cross-sectionele studie met 347 Nederlandse adolescenten. De resultaten toonden aan dat een stimulerende *regulatory focus* van jongeren positief was gerelateerd aan hun FTP met betrekking tot school en hun toekomstige carrière, terwijl een terughoudende focus negatief was gerelateerd aan hun FTP. Bovendien liet de studie een positieve relatie zien tussen een door adolescenten waargenomen stimulerende RF van hun ouders en FTP, via de RF van de adolescenten zelf. Met andere woorden, wanneer adolescenten het gevoel hadden dat hun ouders hen aanmoedigden om uitdagingen aan te gaan, waren ze meer stimuleringsgericht en werd er sterker nagedacht over hun toekomstige studie en carrière. Dit onderzoek levert daarmee sterke aanwijzingen op dat RF een voorspeller is van de FTP van adolescenten en dat een stimulerende focus van ouders een belangrijke rol speelt in de vorming van RF en FTP van jongeren met betrekking tot hun schoolloopbaan en toekomstige carrière.

De derde studie (**hoofdstuk 4**) bouwde voort op de bevindingen uit hoofdstuk 2 en 3. Het theoretisch model van relaties tussen RF en FTP van ouders en adolescenten enerzijds en de uitkomsten op het gebied van onderwijs en de toekomstige carrière van adolescenten

anderzijds, werd cross-cultureel getoetst onder adolescenten uit landen die verschillen op de culturele dimensies van Hofstede, en in hun sociaal-economische situatie en recente geschiedenis. De onderzoeksgroep bestond uit 1520 adolescenten uit een West-Europees land (Nederland) en twee Oost-Europese landen (Servië en Kroatië), die op drie tijdstippen een vragenlijst invulden.

De belangrijkste bevinding was dat de stimulerende *regulatory focus* van adolescenten en hun ouders in de drie landen positief aan elkaar gerelateerd waren en dat een focus op terughoudendheid negatief gerelateerd was aan FTP op het gebied van onderwijs en carrière, wat vervolgens positief gerelateerd was aan de investering van adolescenten in school en huiswerk en carrièreplanning. Bovendien toonde deze studie intrigerende verschillen aan in zowel FTP met betrekking tot onderwijs en carrière, als in RF-strategieën tussen de drie landen: jongeren uit meer collectivistische landen bleken sterker motivationeel georiënteerd (met hogere FTP en hogere stimulerende en terughoudende foci) dan adolescenten uit het meer individualistische land. Deze bevindingen suggereren dat adolescenten uit verschillende landen dezelfde motivatiestrategieën gebruiken om hun doelen te bereiken. Bovendien lijken jongeren die zijn opgegroeid onder suboptimale politieke en economische omstandigheden sterker gemotiveerd om te streven naar een betere toekomst en ontwikkelen zij wellicht een sterkere oriëntatie op het nastreven van potentiële voordelen en het vermijden van potentiële verliezen, om zich te verzekeren van een betere toekomst.

Een algemene discussie van de drie studies in dit proefschrift, wordt gegeven in **hoofdstuk 5**. Dit hoofdstuk bevat een samenvatting van de kernbevindingen, de theoretische en praktische implicaties en beperkingen en aanbevelingen voor toekomstig onderzoek.

Dit proefschrift heeft laten zien dat FTP, in verschillende landen, een drijvende kracht kan zijn achter attitudes en gedragingen op het gebied van onderwijs, werk en gezondheid, en identificeerde factoren die van invloed zijn op FTP en de uitkomsten ervan. Het onderzoek laat daarnaast zien dat de RF van ouders, zoals waargenomen door jongeren, evenals de RF van jongeren zelf, sterk samenhangt met hun FTP met betrekking tot hun onderwijs- en carrièreplanningsdoelen. Ook werd in dit proefschrift gevonden dat adolescenten in verschillende landen bij het nastreven van hun doelen gemotiveerd worden door hun RF en FTP. Ten slotte suggereren de bevindingen dat RF en FTP kunnen functioneren als coping mechanisme voor jongeren die leven in landen die te maken hebben met moeilijke omstandigheden, zoals Servië en Kroatië.

Al met al bieden de bevindingen van dit proefschrift een belangrijke bijdrage aan onderzoek naar *regulatory focus*, FTP-theorie en motivatie in het algemeen. RF en FTP

bepalen mee de motivatie van adolescenten uit verschillende culturele contexten. Deze conclusie is van grote waarde, omdat bij veel adolescenten hun motivatie voor school en hun carrière afneemt. Het empirische werk in dit proefschrift roept echter ook diverse vragen op die beantwoord moeten worden op basis van toekomstige FTP- en RF-theorieën en -onderzoeken. Ik hoop dan ook dat dit proefschrift de aanzet vormt van de ontwikkeling van een cumulatieve kennisbasis die richting kan geven aan de verdere ontwikkeling van motivatieprogramma's.

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Lucija Andre reviewed the studies included in the paper and coded the studies, performed the statistical analyses and wrote the paper. Lucija Andre, Annelies van Vianen, and Thea Peetsma designed the study and developed the study conception and the coding manual. Frans Oort supervised the statistical analyses. Annelies van Vianen and Thea Peetsma supervised the study. Annelies van Vianen, Thea Peetsma, and Frans Oort reviewed the paper and provided critical revisions.

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Lucija Andre performed the statistical analyses and wrote the paper. Annelies van Vianen supervised the statistical analyses. Lucija, Andre, Annelies van Vianen, and Thea Peetsma designed the study. Annelies van Vianen and Thea Peetsma supervised the study, reviewed the paper and provided critical revision.

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Lucija Andre collected the data and wrote the paper. Lucija Andre, Thea Peetsma, and Annelies van Vianen designed the study and translated the questionnaires. Lucija Andre and Joost Jansen in de Wal performed the statistical analyses. Thea Peetsma and Annelies van Vianen supervised the study. Thea Peetsma, Annelies van Vianen and Joost Jansen in de Wal

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ABOUT THE AUTHOR

About the author

Lucija Andre was born on September 29th, 1983 in Novi Sad, Serbia. After completing music school in 2002, she started the bachelor's degree in Pedagogical Sciences at the University of Novi Sad. She completed her bachelor studies in 2007 and in the same year started her master in Pedagogy at the same university. During her master years, Lucija worked as a teaching assistant in subjects related to educational psychology, pedagogy and informal education and as an educational program designer in the Gallery of Matica srpska, Novi Sad. In 2009 she graduated from her master studies with the highest average grade and also finished a Systemic Family Psychotherapy training at the Communication Center, BJANKO, Novi Sad. In 2010 Lucija was awarded with the Amsterdam Merit Scholarship and started her Research master in Child Development and Education at the University of Amsterdam. After completing her research master in 2012, she worked as a researcher at the Child Helpline International, Amsterdam. In 2013 Lucija started working as a research assistant on the project: 'Time perspective and self-regulation in learning and work careers' as part of the programme 'Affect Regulation' and a collaboration between Work and Organizational Psychology Department and Department of Child Development and Education, University of Amsterdam. During her PhD period (February 2014 – December 2017), Lucija presented her work at several national and international conferences, and was invited to present at the Future Time Perspective seminar at the Pontifical Catholic University of Peru. Lucija is currently working as a mentor and content editor of Methodological and Statistical courses at Coursera, University of Amsterdam.

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