

**Students' Goal Conflict and its Impact on Well-being:
The Role of Study Importance and Study Goal Attainment**

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Abstract

Students are prone to experience goal conflict, as they have to perform in their studies, and at the same time, have to establish a sense of self. Research evidence on goal conflict's impact on students' psychological well-being suggests that this may result in psychological well-being, depressive symptoms, or none of the both. These inconclusive findings share a need for a theoretical model. We argue that goal conflict affects students' goal attainment, which has a downstream effect on their well-being. Therefore, we propose goal attainment as a mechanism wherefore goal conflict influences well-being. In addition, we suggest that goal attainment has this influence on well-being, especially when students consider these goals as personally important. Yet, this actual interplay is hardly addressed. Therefore, this study delved into the question whether the relationship between goal conflict and students' psychological well-being is mediated by the attainment of their personally important study goals. To support our conceptual model with empirical data, we conducted an online questionnaire among 249 students. We analyzed this cross-sectional data using regression analyses. Our results did not show a moderated mediation effect wherein study goal importance interacts to affect the relation between goal conflict and students' psychological well-being through study goal attainment. However, the outcomes did show that goal conflict in students was associated with higher levels of negative affect and psychosomatic complaints. Thus, our outcomes indicate that students' goal conflict indeed impacts their psychological well-being. Furthermore, the theoretical importance of our model, future research directions and practical implications are discussed.

Keywords: Goal conflict, well-being, students, goal attainment, goal importance

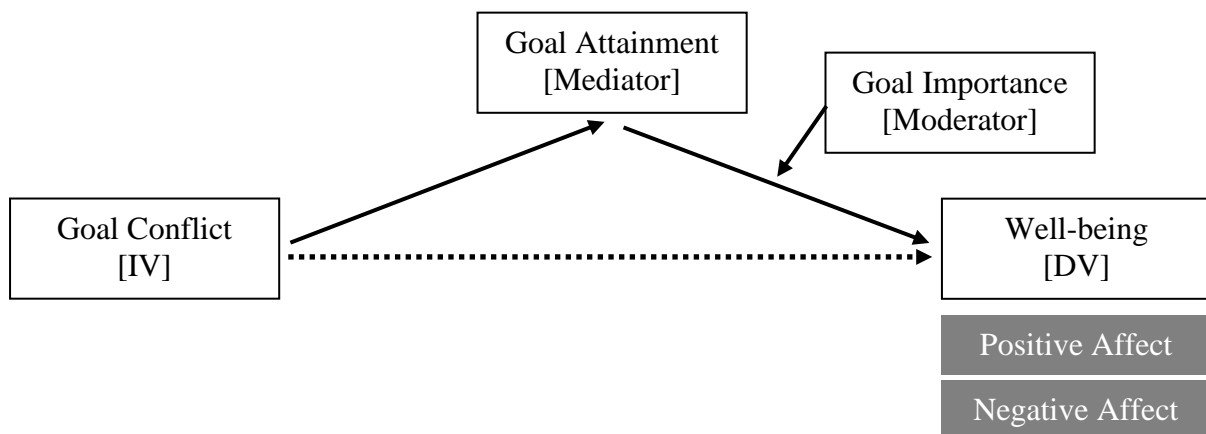
Students' Goal Conflict and its Impact on Well-being:**The Role of Study Importance and Study Goal Attainment**

Psychological well-being is inherent to human beings and universal to all cultures (Ryff, 1989). People can attain a state of psychological well-being when they efficiently balance between challenging and rewarding life events (Dodge, 2012). Moreover, setting, acting on, and working towards the attainment of multiple valued life goals is a predictor of people's well-being and happiness (e.g. Diener, 1984; Locke & Latham, 1991; Wiese & Freund, 2005). In such, people may encounter goal conflict in which the achievement of a particular goal might detract from or hinder the pursuit of another specific goal, or when particular plans and behaviors might be incompatible for two or more goals (Emmons et al., 1993; Riediger & Freund, 2004). Especially students are prone to experience goal conflict, as they have to perform in their studies, and at the same time, have to establish a sense of self in their private lives (Boudreaux & Ozer, 2013; Neely et al., 2009; Riediger & Freund, 2008). Facing goal conflict may either result in psychological well-being (Kelly et al., 2011), depressive symptoms (e.g., Boudreaux & Ozer, 2013; Sheldon & Kasser, 1995), or none of the both (e.g., King et al., 1998; Segerstrom & Solberg Nes, 2006). Despite these inconclusive findings, it has been argued that students can affect their choices, goals and thus psychological well-being by themselves (Diener, 1984). A viewpoint which this research uses to investigate whether the association between goal conflict and well-being is influenced by goal importance and attainment. As one can imagine, the conjunction between the importance and attainment of students' goals may function as a mechanism on which goal conflict's impact on well-being depends. Indeed, it has been theorized that well-being will be increased to the extent that both goal importance and attainment are increased (Tóth-Bos et al, 2018). Therefore, this study focuses on how students' goal conflict affects study goal attainment, and subsequently, students' well-being, measured using the Aspiration Index as postulated by

Kasser & Ryan (1996). We argue that goal conflict impacts students' goal attainment, which has a downstream effect on their well-being. Therefore, we propose goal attainment as a underlying mechanism wherefore goal conflict affects well-being. In addition, we suggest that goal attainment has this influence on well-being, especially when students consider these goals as personally important. See Figure 1 for our conceptual research model.

Figure 1

Conceptual Model of the Moderated Mediating Effect of Study Goal Importance on Study Goal Attainment on the Relation between Goal Conflict and Well-being in Students



With the research model of this bachelor thesis we aim to increase our understanding of the role that study goal importance and attainment have on the relation between goal conflict and well-being in students, and subsequently, to reduce the discrepancy between previous research findings. We underline that the interaction of study goal importance and attainment, resulting from goal conflict, is an important predictor for students' psychological well-being. Our study may provide inside to better understand the mechanisms that determine whether students are happy with their lives and that could be addressed in interventions to increase students' psychological well-being.

Goals and their Characteristics

Goals are desired states which people aim to accomplish in the future (Austin & Vancouver, 1996). Indeed, people often use goals as milestones in attempting to fulfill their

life plans (Chekola, 1974). Therefore, setting, striving for, and obtaining goals organize our behaviors, actions, and structure our lives (Emmons, 1986; Sheldon & Kasser, 1998).

Goals have a hierarchical organization and often are interrelated (Carver & Scheier, 1990; Kruglanski et al., 2002). To better understand the goal construct, this paper postulates Austin & Vancouver's (1996) framework of goal facets. According to this framework, goals consist of three characteristics: goal structure, process, and content. Goal content touches on life goal domains' underlying motives, such as status, affiliation and achievement (e.g., family, work, or leisure; Beach & Mitchell, 1990; Winell, 1987). The content of a goal is set based upon people's decisions on what they want and what is important to them (Tóth-Bos et al., 2020). Moreover, goal content yields to broader goals, such as having a good academic career for future job opportunities, and to sub-goals, like doing well on exams. These goals are part of a value structure (Austin & Vancouver, 1996), such as the value of competence.

Most life goal domains are applicable across cultures. Grouzet et al. (2005) found eleven different goal domains to be universal for fifteen cultures (e.g., community feeling, financial success, image, and self-acceptance). Two essential dimensions underlying these distinct goal domains are intrinsic and extrinsic aspirations (Kasser & Ryan, 1996). Intrinsic goals are aimed at the fulfilment of our inner needs, whereas extrinsic goals aspire external reward and praise (Niemiec et al., 2009). Intrinsic goals are congruent to community feeling, intimacy, acceptance and growth, while extrinsic goals include financial success, status and image (Sheldon & Kasser, 2001). Studies into intrinsic and extrinsic goal pursuit found that meaningful life goals are essential to social behavior, psychological well-being, and ecologically relevant activities (Deci & Ryan, 2000; Emmons, 1986; Kasser, 2002).

Goal Conflict and Psychological Well-being

People who succeed in keeping a balance between pursuing challenging and rewarding life goals can attain several positive effects, such as a state of psychological well-

being, self-acceptance and feelings of competence and mastery (Emmons, 1986; Niemiec et al., 2009; Ryan & Deci, 2000; Schippers & Ziegler, 2019). In addition, obtaining personally valued goals is crucial to feel a form of happiness, satisfaction with life, experience of positive affect and the absence of negative affect (Diener, 1984; 2000; Diener et al., 1999; Fredrickson, 2001). However, it has been noted that the achievement of a particular goal might detract from or hinder the pursuit of another specific goal, or when particular plans and behaviors are incompatible for two or more goals. This is the phenomenon of goal-conflict (Emmons et al., 1993; Riediger & Freund, 2004). Due to limited time, energy and resources multiple goals cannot be pursued all at the same moment (Boudreaux & Ozer, 2013).

As one can imagine, especially students are prone to experience goal conflict in their daily life, as they have to perform in their studies, and at the same time, have to establish a sense of self (Boudreaux & Ozer, 2013; Neely et al., 2009; Riediger & Freund, 2008). Students may have the goal to excel in their studies, to have good grades and to finish their study on time. Apart from these study goals, they also may want to obtain other life goals to a certain context, like living healthy, having relationships, helping others and knowing who they are, and earning money, being attractive and popular.

Goal conflict could make students stressed, sensitive for psychosomatic complaints and impact their psychological well-being negatively. However, research evidence on goal conflict is inconclusive. Some studies indicate that high levels of goal conflict are associated with lower well-being, increased negative affect and high levels of psychosomatic complaints (e.g., Boudreaux & Ozer, 2013; Buda & Lenaghan, 2005; Emmons & King, 1988; Kelly et al., 2011; Riediger & Freund, 2004; Sheldon et al., 2015; Sheldon & Kasser, 1995). Other studies failed to find a relation between goal conflict and well-being (e.g., Kehr, 2003; King et al., 1998; Segerstrom & Solberg Nes, 2006; Sheldon & Kasser, 1995). Recently, one paper even found a significant negative correlation with depression (Kelly et al., 2011), indicating

that students who experience more goal conflict are less vulnerable for depression and in fact better off emotionally. Kelly et al. (2011) explain that lower levels of goal conflict, combined with high levels of ambivalence, result in lower levels of approach motivation, causing increased depressive symptoms. In other words, students who experience low levels of goal conflict are less motivated in approaching and attaining goals and more inclined to psychological distress, whereas students with more goal conflict are more motivated to approach and attain goals, resulting in a protective effect for depressive symptoms.

Findings suggesting that goal conflict might either result in psychological well-being, depressive symptoms, or none of the both, seems contradictory at a first glance. However, goals do not have to be two exclusive opposite poles of a single dimension, but can be seen as separate and independent mechanisms of a unipolar scale which have dynamic interrelations (Boudreaux & Ozer, 2013; Hoet, 2017). Therefore, goal conflict is best measured using such an unipolar scale to evaluate discriminant correlations with psychological well-being and distress (Riediger & Freund, 2004). Our conceptual model uses this perspective and differentiates between positive affect (indicating psychological well-being, excitement, enthusiasm, attention and feelings of energy; Watson et al., 1988) and negative affect (characterized by psychological distress and the experience of intense unpleasant feelings; Watson & Pennebaker, 1989) to denote to students' subjective well-being (see Figure 1).

Goal Attainment and Goal Importance

Psychological well-being and happiness are not equally affected by all goals (Gorges et al., 2014; Tóth-Bos et al., 2019). In such, psychological well-being may be dependent on the conjunction of what students deemed important to achieve and their actual success in attaining those goals. The joint effect of the importance and the attainment of students' goals may thus function as a mechanism on which students' goal conflict's impact on their well-being depends. Indeed, it has been theorized that well-being will be increased to the extent

that both goal importance and attainment are increased (Locke & Latham, 2002; Tóth-Bos et al., 2018; Zimmermann et al., 1992). Moreover, Segerstrom and Solberg Nes (2006) argue that the effects of goal conflict are counteracted by the engagement with and the attainment of important goals. Particularly, goals that express personal interests and values are important to enhance well-being (Brunstein, 1993; Emmons, 1986; Sheldon & Elliot, 1999). It is reasoned that setting and acting upon important personal goals enhances not only goal attainment, but also affects well-being positively because these goals motivate to approach and act on putting sustained effort into purposeful behavior during goal pursuit (Hoet, 2017).

Niemiec et al. (2009) have pointed out that little is known about the actual effect of the interplay between the importance and the attainment of goals on well-being. Therefore, we aim to examine the role of goal attainment in the relationship between students' goal conflict and students' well-being, and investigate the moderating role of goal importance between goal attainment and their well-being. In such, we try to find empirical evidence to support our conceptual model (see Figure 1). Thus, we explore how students' educational goals interact with their other goals in daily life, impact their goal attainment, and their well-being, by taking into account the role of goal importance. We suggest that goal conflict affects students' goal attainment, which consequently impacts their well-being. Therefore, we propose goal attainment as a underlying mechanism wherefore goal conflict affects well-being. In addition, we argue that goal attainment has this influence on well-being, especially when students consider these goals as personally important. Hence, the research question of this bachelor thesis is: "how do conflicting goals affect students' well-being through the mechanism of goal attainment for personally important study goals?".

Hypotheses

We presume that among students increased goal conflict results in lower levels of well-being. Moreover, we argue that the relationship between students' goal conflict and

psychological well-being is mediated by the actual attainment of study goals. Furthermore, we reason that the attainment of study goals increases students' feeling of well-being, especially if these goals are personally important. Based on our conceptual moderated mediating model, we aim to test the following main, indirect and interaction effects:

Hypothesis 1a. The higher goal conflict between students' study goals and other life goals is, the lower the levels of positive affect are.

Hypothesis 1b. The higher goal conflict between students' study goals and other life goals is, the higher the levels of negative affect are.

Hypothesis 2a. Goal attainment mediates the relationship between goal conflict and well-being, such as lower goal conflict is associated with higher study goal attainment, which has a positive downstream effect on positive affect.

Hypothesis 2b. Goal attainment mediates the relationship between goal conflict and well-being, such as lower goal conflict is associated with higher study goal attainment, which has a negative downstream effect on negative affect.

Hypothesis 3a. Study goal importance moderates the relationship between study goal attainment and well-being, such that the negative relationship between study goal attainment and positive affect is stronger, if the study goal is more important.

Hypothesis 3b. Study goal importance moderates the relationship between study goal attainment and well-being, such that the positive relationship between study goal attainment and negative affect is stronger, if the study goal is more important.

Method

Ethical Statement

Ethical approval for this study (PSY-2122-S-0070) was granted by the Ethical Committee Psychology (ECP) affiliated with the University of Groningen, the Netherlands. Our study was conducted in agreement with the Declaration of Helsinki.

Participants

We recruited the total sample of participants ($N = 249$) through the research panel website (SONA) of the University of Groningen and via convenience sampling. Twenty-three participants were excluded for not meeting the required criteria; 17 for not completing the questionnaire, five for failing the attention check, and one for being under the age of 18. Then our sample consisted of 226 participants [women ($N = 173$), men ($N = 49$), gender non-conforming ($N = 2$), prefer not to say ($N = 2$)]. Participants' age ranged from 18 to 31 ($M = 20.48$, $SD = 2.49$). All participants were required to be students while they took part in the research. Participants' highest level of education in our sample ranged from primary school ($N = 1$), high school (or equivalent; $N = 184$), vocational school ($N = 1$), bachelor's degree ($N = 36$), to graduate or professional degree ($N = 4$). The majority of the students were from the Netherlands (41.2%) and Germany (27.9%), and the remaining belonged to other countries from Europe (22.7%), Asia (5.3%), North America (2.2%), Australia (0.9%) and Russia (0.5%). Of these students, 38.9% were engaged in paid employment, while 61.1% were not employed. Participants who were recruited through the SONA research panel website were granted class credit in the form of ECTS. We offered no inducements to those participants who were recruited through convenience sampling.

Procedure

Respondents were recruited through targeted advertisements via SONA and through personal social media. SONA respondents comprised mostly of first-year Psychology students who participate in research for ECTS. In addition, we employed convenience sampling to include a wider population of students of the general population between 18 to 65 years of age. Respondents were informed about the aim of the research in a transparent manner and no deception was involved. See Appendix A for the information form. Participation in the research was voluntary and respondents were informed they could

terminate their participation any time without any repercussions. Participants were assured that their data would remain anonymous and informed consent (see Appendix B) was obtained before the assessments began. Due to the nature and circumstances of the COVID-19 pandemic, all assessments were completed online.

Participants first provided their demographic information. Then, they completed the Positive and Negative Affect Scale (PANAS; Watson et al., 1988), a momentary affective instrument to measure and operationally define the dependent variable: subjective psychological well-being. Subsequently, study-goal importance (moderator), study-goal attainment (mediator), and goal conflict (independent variable) were assessed through the use of questionnaires that we designed for the purpose of this study. These questionnaires drew inspiration from Kasser and Ryan's (1996) Aspiration Index questionnaire, an instrument to measure the attainment and importance of goals. This scale assesses people's aspirations (goals) and categorize them into intrinsic aspirations and extrinsic aspirations, through the use of seven categories (wealth, fame, image, affiliation, community involvement, physical fitness, and personal growth). Additionally, we asked participants to provide their grade point average (GPA). To ensure participants were completing the assessment in an attentive and alert state, we included two attention check questions that asked them to click on number one on a Likert scale. Participants who failed these checks and failed to complete the entire questionnaire were excluded from the statistical analyses.

Measures

Goal Conflict

In order to measure goal conflict we created a questionnaire (see Appendix C) which consisted of six items that referred to other life goals (not related to education) that students may deem personally important. The item 'being famous' was excluded in our study, as it was considered the least important goal for the student population and had the lowest

reliability of all the items (Utvær et al., 2014). Of our six-item questionnaire, two goals were categorized as extrinsic (being good looking, and having a lot of money) and four goals were categorized as intrinsic (living a healthy life, having loving relationships, knowing oneself, and helping others improve their lives). Participants were asked to indicate to what extent they felt these other goals were in conflict with their study goals on a seven-point Likert scale ranging from (1 = *not at all conflicting* to 7 = *very much conflicting*). The reliability of our goal conflict scale was $\alpha = .79$.

Goal Importance

Similarly, to measure the importance of students' study goals, we created another survey inspired by Kasser and Ryan (1996). See Appendix D for our goal importance questionnaire. This instrument included five items that relate to students' study goals: a) having good grades, b) excelling in studies, c) obtaining their diploma, d) studying hard, and e) finishing their degree. Participants were instructed to indicate the personal importance of these items. They reported their answers through a seven-point Likert scale, ranging from (1 = *not at all important* to 7 = *very important*). The scale's reliability was $\alpha = .76$.

Goal Attainment

To measure goal attainment, we created yet another questionnaire (see Appendix E) influenced by Kasser and Ryan (1996). Items in this questionnaire were identical to the ones in the goal importance questionnaire. However, this time participants were asked to indicate how much they felt they achieved these goals on a seven-point Likert scale, ranging from (1 = *not at all attained* to 7 = *very much attained*). The reliability of this scale was $\alpha = .64$. It is important to mention that the Cronbach alpha for goal attainment was sufficient, but relatively low. Cronbach's alpha might be suppressed by the restricted nature of our questionnaire. Indeed, Cronbach alpha of short questionnaires often is lower than the cutoff point of 0.7 (Cronbach, 1951).

Dependent Variables

Positive Affect Subscale (PAS) from PANAS. In order to measure positive affect (PA) within participants, we utilized the PAS subscale from the PANAS (Watson et al., 1988). The subscale consists of 10 items that are markers of feelings and/or emotions that relate to PA (e.g. attentive, interested, excited, and proud). Students were required to indicate the extent to which they felt those feelings/emotions in the past two weeks on a five-point Likert scale, ranging from (1 = *very slightly or not at all* to 5 = *extremely*). A higher score indicates higher levels of PA within individuals. The Cronbach's alpha was $\alpha = .82$.

Negative Affect Subscale (NAS) from PANAS. In a similar vein, the NAS subscale from the PANAS (Watson et al., 1988) was used to measure negative affect (NA) among students. The subscale consists of 10 items that mark feelings related to NA (e.g. distressed, hostile, scared, and ashamed). Participants indicated to what extent they felt those feelings/emotions in the past two weeks on a five-point Likert scale, ranging from (1 = *very slightly or not at all* to 5 = *extremely*). A high score on the subscale indicated high levels of NA within individuals. The Cronbach's alpha of the NAS subscale was $\alpha = .86$.

Results

Preliminary Analyses

The descriptive statistics with means, standard deviations and intercorrelations of our study variables are presented in Table 1. Respondents' goal conflict was significantly positive related to negative affect ($r = .18, p = .007$) and goal importance ($r = .15, p = .028$). Goal attainment had a positive association with positive affect ($r = .27, p < .001$) and was negatively related to negative affect ($r = -.14, p = .045$). Students' goal importance showed a positive correlation with negative affect ($r = .31, p < .001$).

Table 1

Descriptive Statistics and Intercorrelations of the Study Variables

Variables	<i>M</i>	<i>SD</i>	1.	2.	3.	4.	5.
1. Goal conflict	3.49	1.32					
2. Goal attainment	4.06	1.10	.04				
3. Goal importance	5.90	.84	.15*	.04			
4. PAS	3.26	.64	-.06	.27**	.08		
5. NAS	2.67	.76	.18**	-.14*	.31**	-.26**	

Note. * $p < .05$; ** $p < .01$ (two-tailed significance).

Hypotheses Testing

We tested our model (see Figure 1) of the moderated mediating effect of study goal importance on study goal attainment on the relation between goal conflict and psychological well-being in students, and our corresponding hypotheses. We utilized regression analyses using Hayes' (2018) Process macro, model 7, to test our hypotheses. In these analyses, we were able to evaluate the joint effect of study goal importance and attainment on the association between goal-conflict and well-being in great depth and detail. In the regression analyses goal conflict was the independent predictor variable, psychological well-being was the dependent outcome variable (one analysis made use of PAS as dependent variable and one analysis was conducted using NAS as dependent variable), study goal attainment was the mediator and study goal importance was the moderator variable between study goal attainment and psychological well-being. Analyses of moderated mediation tested the conditional indirect effect of the moderator on the association between the predictor and the outcome variable via the hypothesized mediator within 95% confidence intervals. The absence of zero within these intervals supports significant effects of moderated mediation (Hayes, 2015). The outcomes of our moderated mediation model are shown in Table 2.

Table 2

Model Estimation Results for Assessing Moderated Mediation Wherein Study Goal

Importance Interacts to Influence Psychological Well-being Trough Study Goal Attainment

Mediator variable model					
(DV = Study Goal Attainment)					
Predictor	<i>B</i>	<i>SE</i>	<i>t</i> (221)	<i>LLCI</i>	<i>ULCI</i>
Constant	4.73	1.35	3.50**	2.07	7.39
Goal Conflict	-0.30	0.39	-0.78	-1.06	0.46
Study Goal Importance	-0.13	0.23	-0.58	-0.59	0.32
Goal Conflict x Study Goal Importance	0.06	0.07	0.86	-0.07	0.18
Dependent variable model					
(DV = PAS)					
Predictor	<i>B</i>	<i>SE</i>	<i>t</i> (221)	<i>LLCI</i>	<i>ULCI</i>
Constant	2.72	0.19	14.12**	2.34	3.10
Goal Conflict	-0.03	0.03	-1.01	-0.10	0.03
Study Goal Attainment	0.16	0.04	4.19**	0.09	0.24
Conditional indirect effects of the predictor at values of the moderator					
	<i>Index</i>	<i>SE</i>		<i>LLCI</i>	<i>ULCI</i>
PAS if importance low	-0.003	0.01		-0.027	0.02
PAS if importance high	0.013	0.02		-0.015	0.05
Dependent variable model					
(DV = NAS)					
Predictor	<i>B</i>	<i>SE</i>	<i>t</i> (221)	<i>LLCI</i>	<i>ULCI</i>
Constant	2.69	0.23	11.70**	2.24	3.14
Goal Conflict	0.11	0.04	2.84**	0.03	0.18

Study Goal Attainment	-0.10	0.05	-2.17*	-0.19	-0.01
Conditional indirect effects of the predictor at values of the moderator					
	<i>Index</i>	<i>SE</i>	<i>LLCI</i>	<i>ULCI</i>	
NAS if importance low	0.002	0.01	-0.01	0.02	
NAS if importance high	-0.008	0.01	-0.04	0.01	

Note. * $p < .05$; ** $< .01$ (two-tailed significance).

Hypothesis 1

Our first hypothesis predicted a significant main effect between students' goal conflict and well-being. While we did not find evidence supporting a significant main effect between goal conflict and PAS ($B = -.03, p = .31$), we did find results for a significant main effect between goal conflict and NAS ($B = .11, p = .005$). Thus, our results did not confirm Hypothesis 1a in which a significant association between students' goal conflict and positive affect was predicted, whereas they did provide support for Hypothesis 1b in which a significant relationship between students' goal conflict and negative affect was expected.

Hypothesis 2

In addition, we did not find results that support the in the second hypothesis which assumed significant mediation of study goal attainment between students' goal conflict and their well-being on PAS when study importance was high ($index = .013, 95\% \text{ CI } [-.02, .05]$) or low ($index = -.003, 95\% \text{ CI } [-.03, .02]$), or on NAS when study importance was high ($index = -.008, 95\% \text{ CI } [-.04, .01]$) or low ($index = .002, 95\% \text{ CI } [-.01, .02]$). These results were inconsistent with Hypothesis 2a in which a significant positive mediation effect of study goal attainment between students' goal conflict and positive affect was indicated, and Hypothesis 2b which predicted a significant negative mediation effect with negative affect.

Hypothesis 3

Furthermore, respecting the third hypothesis, we tested indirect effects of study goal attainment on students' well-being via moderation of study goal importance. Our outcomes revealed no significant negative interaction between study goal attainment and study goal importance on PAS or positive interaction on NAS ($effect = .06, p = .39$). Thus, study goal importance did not emerge as a significant moderator for the effect of study goal attainment on PAS as hypothesized in Hypothesis 3a, or on NAS as postulated in Hypothesis 3b.

Discussion

This study aimed to investigate whether goal conflict predicts students' well-being through study goal attainment, and moreover, specifically tried to test whether the relationship between goal conflict and well-being is mediated by the attainment of important study goals. In such, we made an attempt to find empirical evidence to support our conceptual model (see Figure 1). We argued that students who do not perceive high levels of goal conflict, would be more likely to achieve their important study goals, and thereby experiencing more positive and less negative affect, achieving a positive state of well-being. We conducted a cross-sectional survey and regression analyses to test our hypotheses.

First, our results showed no significant main effect between goal conflict and PAS, as predicted in Hypothesis 1a, whereas it did for NAS, as argued in Hypothesis 1b. This shows that goal conflict is associated with negative affect. In other words, students who face high levels of goal conflict do report increased negative affect, whereas they did not for positive affect. Thus, students' experience of goal conflict does affect their well-being, such that higher levels of goal conflict are aversive and give rise to greater psychological distress. These outcomes are in line with the Emmons and King (1988) who also reported that goal conflict was significantly associated with high levels of negative affect and psychosomatic complaints, but failed to find a relationship with positive affect. These findings suggest that goal conflict results in the inhibition of self-determined goal-directed behavior, such that

students spent more time thinking about and less time in acting out to progress successfully toward goal-conflict resolving behavior, resulting in unresolved goal conflict, unsuccessful goal pursuit and declined well-being (Boudreaux & Ozer, 2013).

Furthermore, we did not find a significant mediation effect of study goal attainment between students' goal conflict with PAS and NAS, as hypothesized in Hypothesis 2a and 2b respectively. Thus, study goal attainment did not appear to be a significant mediator on the relation between students' goal conflict and their positive and negative affect, hence well-being. Our results are inconsistent with most of the findings of goal conflict, but are in line with Boudreaux and Ozer (2013) who also did not find an effect of goal attainment on the relation between goal conflict and well-being, at the goal-level. Boudreaux and Ozer explain that conflicting goals are not necessarily less attainable than non-conflicting goals. That is, students may be quite successful at pursuing and achieving their study goals, despite that these goals conflict with their other life goals. This implies that students possess abilities for coping with goal conflict.

Then, we discovered no significant interaction effect of study goal attainment and importance on PAS, neither on NAS. Hence, study goal importance did not emerge as a significant moderator of study goal attainment on students' well-being, as argued in Hypothesis 3a and 3b correspondingly. These results are partially in accordance with the findings of Gorges et al. (2014), Niemiec et al. (2009) and Tóth-Bos et al. (2018). Gorges and colleagues (2014) did find, for low self-concordant goals, evidence for an interaction effect on NAS, but not on PAS, whereas the results for high self-concordant goals were the opposite. Gorges et al. argue that goal conflict varies systematically according to the levels of self-concordance. In such, goal conflict with low self-concordant goals are associated with NAS (and not with PAS), while for high self-concordant goals it is the contrary. This implies that goal conflict of low self-determined goals, apparently are those conflicting goals that

might be the most upsetting, whereas goal conflict of high self-determined goals, presumably are conflicting goals that do not upset that much and even alleviate. Thus, high levels of self-concordance seem to protect students from negative affect, whereas low levels do not. Moreover, Niemiec et al. (2009) and Tóth-Bos et al. (2018) differentiated between intrinsic and extrinsic goals in their studies. In such, they found that agreement between intrinsic goal importance and attainment was positively associated with well-being, whereas extrinsic goal importance was not positively nor negatively related to well-being. According to Deci and Ryan's (1985) self-determination theory only personal goals that support our intrinsic basic needs for autonomy, competence and relatedness are important enough to strive for, whereas extrinsic needs driven by external rewards and praise are not. This suggests that intrinsic important goals do have an effect on well-being, whereas extrinsic important goals have not. The fact that students' study goal importance does not impact the association between study goal attainment and psychological well-being, indicates that actual achievement of students' personally important study goals is thus not harmful, but not beneficial either. Hence, goal attainment's impact on well-being is not dependent on its importance. A plausible alternative explanation for the lacking moderation of study goal importance that may be worth to consider, is the COVID pandemic's impact on students' well-being. It is well-established that students' well-being nowadays is decreased and that mental health problems are increased (Holm-Hadulla et al., 2021). One can imagine that as a consequence of social distancing students' experience less-to-no goal conflict. In this, attaining private life goals is hindered because social activities are not allowed. Therefore, studying is the only activity left.

Strengths, Limitations, and Future Directions

The findings of our research build on previous work in several important ways. First, our conceptual moderated mediating model of study goal importance' effect on study goal attainment on the relation between goal conflict and well-being in students is well-thought,

based on contemporary research. Therefore, we consider our theorized model as a strength of this study. Moreover, our empirical data contributes to the literature about goal conflict and psychological well-being in general, and specifically to the impact of goal conflict on students' well-being via goal importance and attainment.

Considering the method of our research, a few points are noteworthy. First, our study was inexpensive and feasible. Then, it provided us individualized data of multiple assessed outcomes in a limited amount of time. Moreover, whereas there is no feasible measure available to measure goal conflict, importance and attainment yet, three out four of our instruments were self-constructed, with reliabilities ranging from $\alpha = .64$ to $.79$. Our self-constructed instruments heavily relied on the Aspiration Index questionnaire of Kasser and Ryan (1996), a measurement that is applicable across cultures (Grouzet et al., 2005). We posited that their set of seven goal domains were worth striving for, whereas students themselves might think differently. By measuring goal conflict, importance and attainment with fixed goals, we might have overlooked important personal information. In the future it would be worth to strengthen our model, questionnaire and its internal validity by asking students to describe and rank their own personally important goals. Hence, further research with more extensive goal measures shall deepen our knowledge about students' personally important goal domains and goal conflict's impact on the attainment of these goals.

To strengthen the validity of our study, we limited our focus to one specific group of the population: students. In such, our empirical study is applicable to the real-world situation and relevant to students, increasing its external validity. We aimed to include 200 respondents, and even exceeded that number. Nevertheless, our sampling was not ideal. Our SONA respondents comprised mostly of first-year Psychology students, which is biasing our data. Since these students are in the beginning of their studies, they probably need more finetuning in how to react to goal conflict. Therefore, the role of their studies, including their

study goal importance and attainment, might not be clear to them yet. We tried to overcome this weakness, by employing an additional convenience sample with a wider population of students. However, in the future it would be beneficial to include experienced students.

In our analyses we did not differentiate between different types of goals. Future research with more comprehensive analyses of these goal domains, would give us more information about students' intrinsic and extrinsic motivations to attain important goals. Moreover, it may be important to incorporate Emmons and King's (1988) and Kelly and colleagues' (2011) underlined factor of ambivalence, responsible for different levels of goal approach motivation and behavior. In this light, also Gorges and colleagues' (2014) factor of self-concordant goals might be important to incorporate. These factors may fruitfully explain why goal conflict is responsible for the (dis)encouragement of acting out self-determined motivated goal-directed behavior, such that students actual progress successfully toward the attainment of personally important goals and goal conflict resolving behavior, or not.

Furthermore, many individual variables that were not investigated in this research might be relevant to include in our model to better understand if, how and why the attainment of important study goals in goal conflict affects students' psychological well-being. It would be vital to gain insight into how underlying cognitive and personality factors affect students' well-being. For instance, self-efficacy beliefs may further explain the strength of the relationship of goal conflict resolving behavior and students' well-being. Self-efficacy is responsible for the amount of sustained effort and endurance that someone will spend in acting out facing conflict, and in successfully progress toward goal conflict resolving behavior (Bandura & Cervone, 1986).

Conclusion and Practical Implications

In this study we aimed to investigate the research question how conflicting goals affect students' well-being through the mechanism of goal attainment for personally

important study goals, to support our conceptual model with empirical data (see Figure 1). We tested the role of the interplay of study goal importance and attainment on the relation between goal conflict and well-being in students. In other words, we examined whether overcoming goal conflict predicts students' well-being, via the attainment of study goals that were considered important. While we argued that students who successfully face goal conflict and succeed in attaining personally important study goals achieve a positive state of well-being and happiness, this study failed to find conformation to this. Therefore, from these results we cannot conclude that study goal attainment serves as a mediator on the relationship between goal conflict and students' well-being and we cannot assume that study goal importance emerge as a moderator for the effect of study goal attainment on students' subjective well-being. However, we did find a significant main effect between students' goal conflict and perceived negative affect, but not for positive affect. Hence, we carefully conclude that students' goal conflict is responsible for higher levels of negative affect, rumination and psychosomatic complaints.

Especially in times of the COVID pandemic in which decreased psychological well-being and increased mental health problems are more apparent, there is a dire need to increase our understanding of the mechanisms underlying students' well-being. In such, better insight in psychological functioning could be addressed in interventions to maximize goal-directed behavior. Particularly facing and acting out on achieving study goals that deemed personally important gives students' everyday life structure, might help them to navigate in this unknown and uncertain COVID time and, as a consequence, increase their psychological well-being. Hence, for clinicians it might be fruitful to let students focus on finding study goals that are considered personally important, realistic and rewarding. Helping to set these goals in the COVID pandemic might help students to adjust, protect from negative thoughts, rumination and help to establish a satisfied life.

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Appendix A

Information Form

Goal Conflict and Its Impact on Well-being (PSY-2122-S-0070)

We would like to invite you to participate in our bachelor thesis research that investigates the impact of goal conflict on the well-being of students. To participate in this study, you have to be at least 18 years old.

In present research, we aim to explore how your educational goals interact with your other life goals. The questionnaire takes approximately 20 minutes. Our data collection starts on 04-11-2021 and ends no later than 28-11-2021. The study is conducted by Fruzsina Czine, Marleen Kremer, Anamika Saxena and Leonie Schmidt, under the supervision of Dr. Agnes Toth-Bos (principal investigator). The current research plan has been evaluated by the Ethics Committee of Psychology of the University of Groningen (the Netherlands).

Voluntary Participation

Participation in this research is voluntary and your consent is required. Therefore, please read this information carefully. If you have any doubts or questions, please do not hesitate to ask the researchers. You can decide at any point in the study to withdraw your participation without having to provide an explanation. If you decide to not participate, there will be no negative consequences for you. You have this right at all times, including after you have consented to participate in the research.

What Do we Ask you?

First, you provide informed consent to participate in this research, and then you are requested to fill out some information about demographics. In the following section, you will see statements regarding *goal conflict*, *satisfaction with life*, *positive and negative affect*, *goal importance*, and *goal attainment*. You are required to indicate to what extent you agree/disagree with each statement on a Likert scale.

Please make sure you complete this questionnaire in a quiet room without any distractions, by yourself.

Consequences of Participation

No direct or indirect personal benefits or disadvantages are expected to arise from participation in this research, apart from the theoretical contribution that the results of this research may provide.

Data Treatment: Privacy and Confidentiality

Data processing takes place for educational purposes, however scientific publication based on anonymous data may happen at a later point, using aggregate data that is not traceable back to individual respondents. We use Qualtrics software to register your answers. We handle and store your data according to the General Data Protection Regulation (GDPR). The data will be stored on a safe digital drive of the university.

What Else do you Need to Know?

You may always ask questions about the research: now, during the research, and after the end of the research. You can do so by speaking with one of the researchers present, or by emailing (a.toth@rug.nl) one of the principal investigators.

Do you have questions or concerns regarding your rights as a research participant? For this you may also contact the Ethics Committee Psychology of the University of Groningen: ecp@rug.nl.

Do you have questions or concerns regarding your privacy, or regarding the handling of your personal data? For this you may also contact the Data Protection Officer of the University of Groningen: privacy@rug.nl.

As a research participant you have the right to a copy of this research information.

Appendix B

Informed Consent

Goal Conflict and Its Impact on Well-being (PSY-2122-S-0070)

By continuing, you agree that:

- You are at least 18 years old.
- You have read and understood the information about this research.
- Your participation is voluntary and you can stop your participation at any point.
- You may refuse or skip answering any questions you wish not to answer.
- There are no right or wrong answers, and there are no advantages or disadvantages of participation.
- The data collection is fully anonymous and the researchers cannot identify who you are.
- All responses will be securely stored and the data will only be used for scientific and educational purposes.

I understand that this project subscribes to the ethical conduct of research and to the protection of the dignity, rights, interests and safety of participants at all times.

Furthermore, I understand that, in case I choose to provide my email address, my personal data will be processed, and handled according to the GDPR regulations, as explained previously.

Consent to participate in the research:

- ☐ Yes, I consent to participate
- ☐ No, I do not consent to participate

Appendix C

Goal Conflict Questionnaire

Apart from studying, you might have other goals as well that you want to obtain to a certain extent. We present you with various goals that you might have. Please rate to what extent each of the following goals are in conflict with your study goal? (e.g., making it more difficult to reach your study goals; 1= not at all conflicting, 7= very much conflicting).

	1	2	3	4	5	6	7
	(not at all						(very much
	conflicting)						conflicting)

To live healthy

To be good looking

To have loving relationships

To have a lot of money

To help others in need

To know who I am

All in all, how conflicting do you feel your other goals are with your goal to excel in your studies? (1= not at all, 7= very much).

	1	2	3	4	5	6	7
	(not at all)						(very much)

Other goals conflict with my goal

to excel in my studies

Appendix D**Goal Importance Questionnaire**

How important is this goal to you? (1= not at all important, 7= very important).

	1	2	3	4	5	6	7
	(not at all						(very
	important)						important)
<hr/>							
To have good grades							
To excel in my studies							
To obtain my degree							
To study hard							
To finish my degree							
<hr/>							

Appendix E**Goal Attainment Questionnaire**

How much have you already attained this goal? (1= not at all, 7= very much).

	1	2	3	4	5	6	7
	(not at all						(very much
	attained)						attained)
<hr/>							
To have good grades							
To excel in my studies							
To obtain my degree							
To study hard							
To finish my degree							
<hr/>							

What is your average grade this year? (e.g. 7.3).
