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Choosing to lose it: The role of autonomous motivation in goal disengagement

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Abstract
When people hit roadblocks with their personal goals, goal disengagement is an adaptive response associated with improved mental and physical health. However, people can have trouble letting go of goals, even when pursuing them is problematic. We introduce a motivational model of goal disengagement by proposing that having autonomous motivation to disengage (a sense of truly identifying with the decision) as opposed to controlled motivation to disengage (feeling forced to let go) allows for people to make greater progress disengaging from specific goals, and prevents people getting stuck in an "inaction crisis" where they feel torn between disengaging further or re-adopting the goal. Using prospective longitudinal designs, we tracked the goal disengagement of personal goals in university students (Study 1, N = 510) and a general adult sample of Americans (Study 2, N = 446), finding that autonomous motivation for goal disengagement facilitated making disengagement progress. This work expands our understanding of the role of autonomous motivation throughout a goal's lifecycle and helps integrate different theoretical frameworks on goal motivation and self-regulation.

Keywords Autonomous motivation · Goal disengagement · Self-determination theory · Goal adjustment theory · Inaction crisis

> Your future is in your hands. Your life is what you make of it. And nothing—absolutely nothing—is beyond your reach, so long as you're willing to dream big, so long as you're willing to work hard—Barack Obama.

Barack Obama's (2010) "Back to School" speech, quoted above, captures the contemporary zeitgeist of having a "can-do" attitude about personal goals. We are told from an early age by our parents, teachers, coaches, and role-models, that persevering at our goals will pay off, no matter the goal, no matter the cost. Even when goal striving is wrought with setbacks or difficulties, relinquishing important goals violates the ethos of perseverance that characterizes modern-day goal pursuit. However, there is increasing evidence that continued effort and goal persistence are not adaptive if the goal is unattainable (Barlow et al., 2019). When goal progress stagnates because the goal has become overly costly or unrealistic, individuals experience increased psychological distress, biological dysregulation, and physical health problems (Miller & Wrosch, 2007; Wrosch et al., 2013). In such circumstances, individuals benefit from relinquishing behavioural effort and breaking up the psychological commitment towards the goal—what is referred to as *goal disengagement* (Wrosch et al., 2003a, 2003b).

While shedding a problematic goal can have important benefits for people's psychological well-being and general health, goal disengagement is not necessarily easy or straightforward. People often invest substantial effort and resources into their personal goals, structure their lives around specific pursuits, and even begin to identify strongly with the goals they strive for. As a result, personal goals can become sticky: The psychological adhesive glue that binds someone to their goal and enables them to pursue it wholeheartedly can be difficult—even painful—to peel off, despite a goal's dwindling feasibility or mounting costs (Wrosch et al., 2003a, 2003b). Moreover, sticky goals are rarely ever ripped off overnight. Rather, the very decision to disengage is often deliberated over for weeks and months, during which

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time the pursuer is torn between pushing harder to achieve the goal and letting it go (Brandstätter et al., 2013). Then, even after disengagement is initiated, there may be impulses to return to the old goal, such as people who reminisce about an ex-partner after breaking up or consider returning to a sport that caused them significant injury. In line with Klinger's (1975, 1977) theoretical "incentive-disengagement cycle", goal disengagement can be understood as a process in which breaking up psychological commitment to a goal unfolds over time and can vary in success between different people and between different goals. The question thus arises: why are some individuals able to let go of an important yet problematic personal goal, while others struggle to free themselves of this thorn in their side? We propose that the answer lies in the different motivations people have for *why* they disengage from personal goals. Specifically, we propose a model of goal disengagement in which we specify how motivational factors relate to whether people can successfully disengage from specific goals.

Motivation for disengaging

At the core of our theorizing, is the idea that people vary in their reasons for why they disengage from any given goal: in some instances, they may feel autonomous about disengaging from their goal, while at other times they may feel pressured by others, or by their own life circumstances to disengage, without truly feeling like it is their own choice to let go. For example, imagine two college students who both dreamed of medical school but then realize their grades and MCAT scores are not competitive. Although being a doctor was once the most important goal in her life, the first student has decided to let go of this goal because the sacrifice to raise her grades and retake tests is too great, and she no longer identifies with a medical career. This would be considered *autonomous motivation* for goal disengagement. The second student feels pressure from others to let go of his goal to get into medical school. His parents and career councillor have advised him to direct his focus to a more realistic career, and he feels ashamed for holding on to a goal that is simply not working out. Thus, he feels that he is forced to let go of his med-school goal—what we consider *controlled motivation* for goal disengagement. We propose that individuals with predominately autonomous motivation for letting go of their goal will make more progress disengaging from their goal than individuals who hold predominately controlled motivation for disengaging.

We base our motivational model of goal disengagement on self-determination theory (SDT; see Ryan and Deci (2017) for review). Decades of SDT research have robustly linked autonomous motivation for goal *engagement*—feeling a sense of volition and wholehearted endorsement towards one's goals during goal selection and pursuit—with subsequent effort, progress, and success at attaining the goal (Koestner et al., 2008; Ryan & Deci, 2017; Sheldon, 2014). In short, pursuing a goal because it is interesting, meaningful, or personally important, translates into positive goal outcomes. Meanwhile, pursuing a goal for controlled reasons, such as for external rewards or because of internal pressures, has little or no effect on goal progress (Koestner et al., 2008) and is associated with increased emotional distress and physical stress (Holding et al., 2019, 2021).

Although the benefits of feeling autonomous about one's goals are well-documented (Koestner et al., 2008), surprisingly little research has considered whether the process of successfully disengaging from a goal is governed by the same motivational processes. In the same way that autonomous motivation can govern people's engagement with a goal, we suggest that the decision to disengage from a goal can be determined by autonomous reasons such as identifying with the benefits of letting a goal go, recognizing that the goal no longer aligns with one's values (integrated autonomous motivation), or accepting that the goal is unattainable (identified autonomous motivation).[1] On the other hand, goal disengagement can also be based in controlled motivation, such as disengaging because other people have suggested one should "move on" (external controlled motivation), or because one feels guilty, ashamed or embarrassed for still holding on to a goal that is not working out (introjected controlled motivation).

Our motivational approach to studying goal disengagement differs from how other theoretical perspectives view this process. Research informed by goal adjustment theory (GAT) has primarily considered dispositional traits as predictors of disengagement, highlighting how some individuals may have a greater goal disengagement capacity than others (Wrosch et al., 2003a, 2003b). Conversely, research informed by an SDT framework has considered how motivation for goal pursuit relates to goal states that precede disengagement. The decision to disengage is often met with ambivalence, and occurs following an *"action crisis"* during which the pursuer is torn between increased goal investment and goal abandonment (Brandstätter et al., 2013). Having autonomous motivation for goal pursuit shields goals from action crises (Holding et al., 2017), relates to greater persistence in the face of goal difficulty (Ntoumanis et al., 2014a), and is associated with decreased cognitive ease of

[1] Our model did not include intrinsic reasons for letting go because parting from a valued goal is likely not undertaken for the inherent fun, interest, or enjoyment of the experience. If someone is disengaging to pursue an alternate goal that is very appealing (e.g., quitting medical school to become a jazz musician), there may be enjoyable aspects to disengagement associated with the intrinsic motivation to re-engage with the new goal.

disengagement when the goal becomes unattainable (Ntoumanis et al., 2014b). Critically however, most SDT research has not considered whether motivation for disengagement (i.e., the motivation for "letting go") also plays a role in disengagement (but see Holding et al., 2020 for an exception).

We integrated and extended key insights from SDT goal research (e.g., that motivation is a critical predictor of goal progress) and GAT (e.g., that disengagement is an adaptive response to blocked goals) by considering how motivation for goal disengagement relates to *disengagement progress*. An important assumption for why we seek to measure disengagement progress is that we distinguish between the moment when someone decides they want to reduce behavioural effort and psychological commitment towards a goal (*initiate disengagement*) and their subjective sense of having distanced themselves from their goal in terms of ending affective, cognitive, and behavioural involvement with the goal (*disengagement progress*). This distinction is similar to the difference between *initiating* goal pursuit and the desired consequence of making *goal progress*. Moreover, it is in line with the theoretical writings of Klinger (1975), who suggested that disengagement is a process that unfolds over time. As such, we propose that deciding to disengage does not automatically or concurrently result in disengagement progress, and for some, may not result in disengagement progress at all. We hypothesize that motivation for disengagement is a critical predictor of disengagement progress, beyond individual differences or goal-specific factors associated with disengagement. To our knowledge no other studies have tracked disengagement progress longitudinally.

Action crises and inaction crises

We propose that autonomous motivation for goal disengagement is crucial for successful disengagement because it reduces the conflict, doubt, and re-engagement impulses that people may have after deciding to relinquish a valued personal goal– what we term an *inaction crisis.* Like how people experience an action crisis when confronting difficulties in goal pursuit, people may experience an *inaction crisis* once they have started disengaging. We suggest that during an inaction crisis people feel torn about their decision to disengage from the goal. They experience doubt, regret and internal conflict about relinquishing a valued goal, and contemplate reengaging with the lost goal. Thus, while the action crisis is about deliberating one's commitment to *goal pursuit*, we suggest the inaction crisis is about deliberating one's commitment to *goal disengagement*. Experiencing an inaction crisis during disengagement should interfere with disengagement progress, much like experiencing action crises during goal pursuit interferes with goal progress (Brandstätter & Schüler, 2013; Brandstätter et al., 2013; Holding et al., 2017).

To illustrate this distinction using a relationship example, an *action crisis* would occur in the context of *pursuing* a difficult relationship. A partner may start to doubt the relationship and experience impulses to end things. Eventually this might prompt a re-commitment to improve the relationship (perhaps trying couples therapy), or a decision to break-up and disengage. An *inaction crisis* would occur in the context of the relationship having ended (i.e., during disengagement). Despite making a conscious decision to break-up, it is all too common for one or both partners to take many months to disengage (in terms of ending all emotional, cognitive and behavioural involvement). They may still care deeply about their ex, spend hours looking at their social media profile, and harbour a conflictual desire to "get back together". This would interfere with their disengagement progress (i.e., sense they have "let go" of the relationship).

Why might an inaction crisis occur? Although a goal which someone is attempting to abandon is less attractive than it once was when goal pursuit was initiated (Ghassemi et al., 2017), disengagement may still "shake one's self-image to its core" (Carver & Scheier, 2005, p. 536) and feel like a threat to one's identity, not least because the goal may reflect important values and core interests (Carver & Scheier, 1998, 2005; Emmons, 1986). We hypothesize that the sense of ownership and agency associated with autonomous motivation for disengaging from a goal will protect individuals from experiencing an inaction crisis during goal disengagement. In turn, this reduced decisional conflict about disengagement should result in greater disengagement progress. Meanwhile we expect controlled motivation for disengagement to be associated with more severe inaction crises, since the decision to let go is not fully integrated with the self. In turn, we expect more severe inaction crises to impede goal disengagement.

Motivation for disengagement as a unique factor in relation to disengagement progress

The viability of our theoretical model depends on distinguishing our predictor (motivation for goal disengagement) from existing predictors of disengagement. Past approaches to understanding goal disengagement have focused on underlying personality dimensions to explain variability in initiating goal disengagement among different people. For example, past research suggests that individuals differ widely and reliably in their general tendencies to disengage from unattainable goals (Wrosch et al., 2003; Wrosch et al., 2007a, 2007b). While some individuals readily distance themselves from unattainable or costly goals across contexts, other individuals experience more difficulty parting from problematic pursuits. Wrosch et al. (2007a, 2007b) refer to this tendency as goal disengagement capacity.

A second individual difference that may be relevant for goal disengagement is action orientation. Action orientation captures individuals' characteristic differences in the pursuit of goals through emotion control, performance efficiency, and information processing mechanisms (Kuhl & Goschke, 1994). While action-oriented individuals can effectively regulate thoughts, behaviours and emotions during goal striving, state-oriented individuals get stuck in currently experienced emotions, cognitions, and behaviours, and are thus unable to engage or disengage with goals effectively (Beckmann & Kuhl, 1984). Importantly, action orientation is the primary individual difference associated with the experience of action crisis in goal pursuit (Herrmann & Brandstätter, 2013), which typically precedes goal disengagement (Herrmann & Brandstätter, 2015). Since action-oriented individuals tend to be shielded from experiencing action crises in goal pursuit and are better equipped to resolve action crises when they arise (Herrmann & Brandstätter, 2013), this individual difference may be implicated in sustained goal disengagement.

A third individual difference that has been identified as relevant for adaptive goal striving is dispositional optimism (Aspinwall & Richter, 1999), which is defined as the extent to which people expect positive, versus negative, outcomes to occur in their future (Scheier et al., 2001). Research on this topic has yielded mixed results, with two studies finding a negative association between dispositional optimism and goal disengagement (Ramírez-Maestre et al., 2019; Smagula et al., 2016), one study finding no relationship between optimism and goal disengagement (Rasmussen et al., 2006), and one study finding a positive association (Amir, 2012), likely because optimistic individuals "may be better able to convince themselves that something [equally good or better] will come along to engage them later" (Wrosch et al., 2003b, p.1499). While our aim is not to resolve the debate on the role of optimism in disengagement tendencies, we seek to demonstrate that motivation for goal disengagement is not reducible to having an optimistic mind-set about future opportunities.

In summary, goal disengagement capacities, action orientation, and dispositional optimism have been identified as important individual differences in adaptive control striving (Heckhausen & Wrosch, 2016). Thus, in the present work we aim to test whether people's motivation for disengagement relates to disengagement progress above and beyond these dispositional traits.

Present studies

We tested our hypotheses across two longitudinal studies in which we tracked goal disengagement from idiographic, personally meaningful goals in the context of people's everyday lives, examining the relation between motivation for disengagement and disengagement progress in samples of university students and community adults.

These studies aimed to build upon the goal disengagement literature in five important ways. First, we tracked goal disengagement progress over time to account for the fact that this process is thought to unfold gradually (Klinger, 1975). To our knowledge no other studies have tracked disengagement progress longitudinally. This is based on our assumption that the decision to initiate goal disengagement does not automatically result in disengagement progress. Second, we investigated the role of motivation for goal disengagement (i.e., whether someone initiates disengagement for autonomous versus controlled reasons) in predicting disengagement progress. Third, we controlled for relevant dispositional predictors and goal-specific factors that may explain variance in disengagement progress. Finally, we examined whether inaction crises occurred during goal disengagement, whether they were associated with individuals' motivation to disengage, and how they were associated with disengagement progress over time.

We hypothesized that autonomous motivation for disengagement would be positively associated with disengagement progress, even when controlling for relevant individual differences (i.e., goal disengagement capacity, action orientation, and trait optimism) and specific features of the goal (i.e., the amount of time the individual had already spent disengaging, the importance of the goal, as well as the perceived challenge of disengagement). We did not have a directed hypothesis for controlled motivation for disengagement—similar to the goal pursuit literature we expected controlled motivation to have either a negative or non-significant association with goal disengagement progress (Koestner et al., 2008).

Drawing on the motivation and action crisis literature (Holding et al., 2017), we hypothesized that autonomous motivation for disengagement would be negatively associated with inaction crises severity during goal disengagement, whereas controlled motivation would be positively associated with inaction crises severity. In turn, we hypothesized inaction crisis severity would interfere with goal disengagement progress, such that individuals who felt especially torn and conflicted about their decision to abandon a goal would make less progress letting the goal go. We expected to find support for a trajectory through which inaction crises at T2 predicted less disengagement progress at T3, and inaction crises at T3 predicted less disengagement progress at T4. Finally, we sought to test a psychological mechanism whereby motivation for disengagement might be associated with disengagement progress via the experience of inaction crises. In other words, we expected participants who held autonomous motivation for their goal disengagement to experience fewer and less severe inaction crises with regards to their goal disengagement, which would allow

them to make greater disengagement progress. In contrast, we hypothesized that individuals who held controlled motivation for disengagement would experience more severe inaction crises, and less disengagement progress as a result.

Study 1

We conducted a longitudinal study at a large public North American university in which we tracked undergraduate and graduate students who indicated they were in the process of disengaging from a meaningful personal goal over the course of an academic year (9 months). Participants completed online surveys about their disengagement experience via four surveys administered over the course of the academic year.[2]

Methods

Participants and procedure

510 participants (82% females; 84% undergraduate, 60% Caucasian, 31% Asian, 5% Hispanic, 3% Black), ages 17–54 ($M = 21.18$, $SD = 4.02$) and attending a large public university were recruited for a year-long study of personal goals and motivation. The questionnaires were administered through the survey software Qualtrics. A panel was created with participants' idiographic responses such that we could plug-in their responses in subsequent follow-up surveys. T1 was administered in September at the beginning of the academic year; at this time, we asked participants if they were disengaging from a meaningful personal goal. 498 participants (97.6% of total sample) indicated they had a personal goal that they were currently disengaging from and typed out the goal.[3] T1 also assessed participants' motivation for goal disengagement, as well as relevant dispositional traits and goal-specific factors. At the end of the first semester (T2 = December) and mid-second semester (T3 = March), we assessed inaction crisis severity and disengagement progress. Disengagement progress was measured one subsequent time at the end of the academic year in May (T4). Attrition rates were 11.2% for T2, 7.2% for T3, and 16.1% for T4. Ethical approval for this study was obtained and participants were compensated for their participation.

Measures

Disengagement goal

At T1, participants read the following prompt to orient them towards the concept of goal disengagement: *The next set of questions will be about disengaging from a meaningful, personal goal. This means letting a goal go. Not all goal pursuits work out in the way we expect them to. Sometimes, we realize that we are not making progress on a goal for various reasons. The goal may have become too difficult or costly to pursue, unexpected life changes can impact our ability to pursue the goal, or new opportunities cause us to re-evaluate our goals. Thus, people distance themselves from old goals that were previously important to them. For example, an athlete might disengage from her goal of training for the Olympics when she sustains a serious injury. Or, a student may disengage from his goal of going to medical school after receiving failing grades in many of his classes. Please think of one goal you are currently disengaging from or that you want to start disengaging from.*

The kinds of goals that students indicated disengaging from most frequently related to social goals/hobbies (29.7%) (e.g., Staying friends with everyone, overcommitting to extracurriculars), academics (25.3%) (e.g., getting a perfect 4.0 GPA, getting into dentistry), aspects of their personality (18.3%) (e.g., trying to be perfect, pushing myself so hard to do be the best at everything I do), physical appearance, health, and exercise (11.2%) (e.g., losing 30 pounds), and romantic partners (10.2%) (e.g., staying together with my ex-girlfriend).

Time disengaging

At T1, we asked participants: *Please indicate how long you have been disengaging from your goal? (In days, weeks, months, or years)*. Participants reported a wide range in length in disengagement (0–120 months; $M = 8.11$ months, $SD = 13.40$).

Goal importance

At T1, participants were shown their disengagement goal and asked to rate *How important was this goal to you (before you decided to let it go)?* on a 7 point Likert Scale anchored 1—*Not at all* to 7—*Extremely*. Participants' mean goal importance was ($M = 5.36$, $SD = 1.31$), which was interpreted as relatively high, suggesting that participants did not select trivial pursuits to disengage from.

[2] This study was part of a larger investigation of goal pursuit, autonomy, and goal support with two additional follow-up surveys administered throughout the academic year that were not relevant for the present investigation.

[3] Four participants left this section blank, and eight participants answered subsequent questions about their disengagement goal at T1, but failed to type out the goal they were disengaging from. This meant that they did not see their disengagement goal plugged-in during follow-up surveys. As such, we could not use their data, since these participants may not have remembered what goal they typed in T1 and were not given the same reminder as other participants in the study.

Table 1 All items and factor loadings of the motivation for disengagement scale (study 1)

Items	Autonomous motivation factor	Controlled motivation factor
This goal no longer reflects who I am	0.92	−0.18
I have come to see that this goal doen't align with my values	0.86	−0.02
I have accepted that I will never attain this goal	0.43	0.14
I have come to realize that this goal isn't good for me	0.74	0.16
Continuing to pursue this goal would be a waste of time	0.76	0.01
I feel pressured to "move on" from this goal	−0.03	0.71
People have been telling me I have to let this goal go	−0.02	0.82
I feel badly about how long I have held on to this goal	0.09	0.68

Perceived disengagement challenge

At T1, participants were shown their disengagement goal and asked to rate *How challenging do you think it will be to disengage from this goal* on a 7-point Likert Scale anchored 1—*Not at all* to 7—*Extremely*. The mean of participants' perceived disengagement challenge ($M = 4.09$, $SD = 1.92$) was interpreted as the disengagement process being perceived as, on average, neither too easy nor too challenging.

Motivation for disengagement

At T1, participants were asked to rate their agreement with different reasons for disengagement. This scale was developed for the present study and was loosely adapted from a scale used to assess motivation for goal pursuit (Sheldon & Elliot, 1998). The items can be seen in Table 1. Items were rated on a 7-point Likert scale from 1 *Strongly disagree* to 7 *Strongly agree*. Five items corresponded to autonomous reasons for goal disengagement including: *I have come to see that this goal doesn't align with my values* and *This goal no longer reflects who I am*. Consistent with previous research which assesses integrated and identified motivation for goals (Koestner et al., 2008), we calculated the mean of these items to compute autonomous motivation for goal disengagement ($M = 3.96$, $SD = 1.53$, $\alpha = 0.81$). Three items reflected controlled motivation for disengagement, such as *People have been telling me I have to let this goal go*, which were averaged to compute controlled motivation for goal disengagement ($M = 3.19$, $SD = 1.48$, $\alpha = 0.61$).

Goal disengagement capacity

Goal disengagement was assessed with the goal adjustment capacity scale (Wrosch et al., 2003a, 2003b) at baseline. Participants responded to items measuring how they usually react if they must stop pursuing an important goal (5-point Likert-type scales anchored at 1 = *Almost never true*, 5 = *Almost always true*). Two items were reverse coded and then the four items measuring a person's tendency to disengage from unattainable goals (e.g., *It's easy for me to reduce my effort towards the goal*) were averaged to compute participants' disengagement capacity ($M = 2.66$, $SD = 0.87$, $\alpha = 0.84$).

Action orientation

Action (vs. state) orientation was measured with an abbreviated 12-item action-control scale (ACS-24; Kuhl, 1994) previously used in Holding et al. (2017). Each item describes a potentially stressful situation (e.g., *When I know I must finish something soon*) and has two answer options, one associated with action-orientation (e.g., *I find it easy to get it done and over with*) and one linked to state-orientation (e.g., *I have to push myself to get started*). The two subscales respectively assess failure (AOF) and decision-related (AOD) action orientation; we used six items for each. The scores were computed by adding the action oriented answers for possible totals between 0 and 6. Our abbreviated items yielded an AOD ($M = 2.99$, $SD = 1.77$, $\alpha = 0.64$) and an AOF ($M = 2.09$, $SD = 1.66$, $\alpha = 0.64$).

Optimism

Dispositional optimism was measured at T1 with the life orientation test—revised (LOT-R; Scheier et al., 1994) with 10 items on a 5-point Likert scale anchored *Strongly Disagree* to *Strongly Agree*. Of the 10 items, three items were reverse coded and four items served as fillers. Sample items included *In uncertain times, I usually expect the best* and *I hardly ever expect things to go my way* (reverse coded). The mean of the 3 positively worded and 3 reverse coded items was taken to compute dispositional optimism ($M = 3.43$, $SD = 0.72$, $\alpha = 0.78$).

Inaction crisis during goal disengagement

At T2 and T3 participants rated the degree of decisional conflict they experienced about their decision to disengage. We adapted three items from the English version (Holding et al., 2017) of the action crisis scale (ACRISS) (Brandstätter & Schüler, 2013), which were presented on a 7-point likert scale anchored 1—*Strongly disagree* to 7—*Strongly agree*. Items included: *I feel conflicted about my decision to disengage from this goal* (decisional conflict), *I feel torn about letting go of this goal* (decisional conflict) and *Part of me wants to re-engage with this goal and continue pursuing it* (re-engagement impulses) (T2: $M = 4.03$, $SD = 1.74$, $\alpha = 0.88$; T3: $M = 3.66$, $SD = 1.73$, $\alpha = 0.89$).

Disengagement progress

Disengagement progress was measured at T2, T3 and T4 with three items adapted from a measure that has been used in previous research assessing goal progress (Koestner et al., 2012). Participants responded to items such as *I feel like I have made a lot of progress disengaging from this goal, I feel like I am on track with my plan to disengage from this goal*, and *I am close to fully letting go of this goal*. All ratings were made on a 7-point scale, ranging from 1 = *Strongly disagree* to 7 = *Strongly agree*. Reliability was satisfactory with α's ranging from 0.91 to 0.93 for goal progress at T2 ($M = 4.66$, $SD = 1.61$), T3 ($M = 4.84$, $SD = 1.72$), and T4 ($M = 4.83$, $SD = 1.72$).

Results

Preliminary results

The motivation for disengagement items were subjected to a principal components analysis with Oblimin rotation. Two factors with Eigenvalues above 1.0 emerged and accounted for 58% of the variance. The first consisted of five items and represented autonomous motivation for goal disengagement with an Eigenvalue of 3.40 and internal reliability of 0.81; the second consisted of three items and represented controlled motivation for goal disengagement with an Eigenvalue of 1.24 and internal reliability of 0.61. Table 1 shows the names and factor loadings from the rotated matric for all items.

Table 2 illustrates the descriptive statistics and intercorrelations of all key variables of study 1. Overall, participants reported significantly higher autonomous motivation for disengagement ($M = 3.96$, $SD = 1.53$), compared to controlled motivation for disengagement ($M = 3.19$, $SD = 1.48$), $t(497) = 10.50$, $p < 0.001$. On average, students' inaction crisis about disengagement significantly decreased as the academic year progressed from T2 ($M = 4.03$, $SD = 1.74$) to

Table 2 Descriptive statistics and bivariate correlations—study 1

	M	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Autonomous motivation to disengage (T1)	3.90	1.32	–												
2. Controlled motivation to disengage (T1)	3.19	1.48	0.49**	–											
3. Inaction crisis (T2)	4.03	1.74	−0.21**	0.04	–										
4. Disengagement progress (T2)	4.66	1.61	0.15**	−0.04	−0.44 **	–									
5. Inaction crisis (T3)	3.66	1.73	−0.21**	0.01	0.56**	−0.33**	–								
6. Disengagement progress (T3)	4.84	1.72	0.15**	−0.07*	−0.43**	0.61**	−0.51**	–							
7. Disengagement progress (T4)	4.83	1.72	0.21**	−0.04	−0.37**	0.52**	−0.40**	0.65**	–						
8. Disengagement capacity	2.66	0.88	−0.05	−0.21**	−0.08	0.12**	−0.05	0.08	0.08	–					
9. Action orientation (failure)	2.09	1.66	−0.09*	−0.13**	−0.05	−0.04	−0.03	0.02	−0.02	0.19**	–				
10. Action orientation (decision)	2.99	1.77	−0.11*	−0.02	−0.06	0.00	−0.07	0.09	0.05	−0.09*	0.16**	–			
11. Optimism	3.43	0.72	−0.08	−0.06	−0.19**	0.21**	−0.14**	0.16**	0.09	0.11*	0.27**	0.22**	–		
12. Time spent disengaging	8.11	13.4	0.06	0.00	−0.06	0.05	−0.08	−0.00	0.06	0.08	−0.01	−0.01	−0.05	–	
13. Disengagement challenge	4.09	1.92	0.13**	0.30**	0.22**	−0.13**	0.18**	−0.12*	−0.10	−0.25**	−0.14**	−0.06	−0.12**	0.02	–
14. Goal importance	5.36	1.31	0.21**	0.46**	0.12*	−0.19**	0.00	−0.07	−0.07	−0.30**	−0.12**	0.04	−0.07	0.00	0.45**

*$p < 0.05$
**$p < 0.01$

Table 3 Hierarchical stepwise regression predicting T4 goal disengagement—study 1

Step	Variable	*B*	*t*	95% CI	*FΔ*	*R2*
1	Age	**−0.15****	−2.98	[−0.10, −0.02]	(1, 391) = 8.90**	0.02
2	Action orientation (failure)	**−0.03**	−0.52	[−0.14, 0.08]	(4, 387) = 1.27	0.01
	Action orientation (decision)	**0.04**	0.73	[−0.06, 0.14]		
	Goal adjustment capacity	**0.07**	1.39	[−0.06, 0.33]		
	Optimism	**0.08**	1.49	[−0.06, 0.44]		
3	Time disengaging	**0.07**	1.29	[−0.00, 0.02]	(3, 384) = 1.10	0.01
	Goal importance	**−0.07**	−1.13	[−0.24, 0.06]		
	Disengagement challenge	**−0.01**	−0.16	[−0.11, 0.09]		
4	Autonomous motivation to disengage (T1)	**0.27*****	4.75	[0.21, 0.51]	(2, 382) = 11.33	0.05
	Controlled motivation to disengage (T1)	**−0.15***	−2.38	[−0.31, −0.03]		
5	Inaction crisis (T2)	**−0.14****	−2.86	[−0.24, −0.04]	(2, 380) = 65.23***	0.23
	Disengagement progress (T2)	**0.45*****	9.22	[0.38, 0.59]		
	Autonomous motivation to disengage (T1)	**0.14****	2.89	[0.06, 0.33]		
	Controlled motivation to disengage (T1)	**−0.10**	−1.92	[−0.24, 0.00]		
6	Inaction crisis (T3)	**−0.14***	−2.29	[−0.21, −0.02]	(2, 378) = 56.84***	0.16
	Disengagement progress (T3)	**0.47*****	9.16	[0.37, 0.58]		
	Inaction crisis (T2)	−0.01	−0.26	[−0.11, 0.08]		
	Disengagement progress (T2)	0.19***	3.81	[0.10, 0.32]		
	Autonomous motivation to disengage (T1)	0.09	1.90	[−0.00, 0.23]		
	Controlled motivation to disengage (T1)	−0.04	−0.91	[−0.16, 0.06]		

Bolded values indicate they were entered into the regression at this step. Gender was not significantly related to disengagement progress and was not included in the model for clarity

*$p < 0.05$

**$p < 0.01$

***$p < 0.001$

T3 ($M = 3.66$, $SD = 1.73$), $t(429) = 4.62$, $p < 0.001$. Students also made more progress disengaging from T2 ($M = 4.66$, $SD = 1.62$) to T3 ($M = 4.82$, $SD = 1.74$), $t(429) = -2.28$, $p = 0.02$. There was no statistical difference in ratings of disengagement progress from T3 to T4 $t(414) = 0.71$, $p = 0.48$. Autonomous motivation for disengagement was positively associated with participants' disengagement progress at the end of the academic year (T4), and negatively associated with T2 and T3 inaction crises. Controlled motivation for goal disengagement was not associated with inaction crisis severity, or end-of-year disengagement progress. Inaction crisis severity at both time points was negatively associated with making disengagement progress at the end of the academic year (T4).

Predicting disengagement progress

We tested a hierarchical regression model to establish the effect of motivation for disengagement on disengagement progress.[4] Importantly, we controlled for individual differences and goal-specific factors that may be associated with disengagement progress, to show that motivation for disengagement predicted disengagement progress beyond these factors (see Table 3). In addition, we added T2 inaction crisis severity and goal disengagement progress, as well as T3 inaction crisis severity and disengagement progress in the last two steps of the regression. As can be seen in Table 3, at the first step, participants' age was negatively associated with disengagement progress, such that older participants made relatively less progress disengaging from their goal. At the second step, neither goal disengagement capacity, action orientation, nor trait optimism were associated with T4 disengagement progress. At the third step, goal-specific

[4] Without controlling for all the covariates, autonomous motivation for goal disengagement was significantly positively related to T4 disengagement progress ($\beta = 0.28$, $t = 5.46$, $p < 0.001$, *95% CI* [0.20, 0.43]), while controlled motivation for disengagement was significantly negatively related to T4 disengagement progress ($\beta = -0.15$, $t = -2.90$, $p = 0.004$, *95% CI* [−0.29, −0.06]), accounting for 7% of the variance in T4 disengagement progress [F (2, 415) = 15.22, $p < 0.001$].

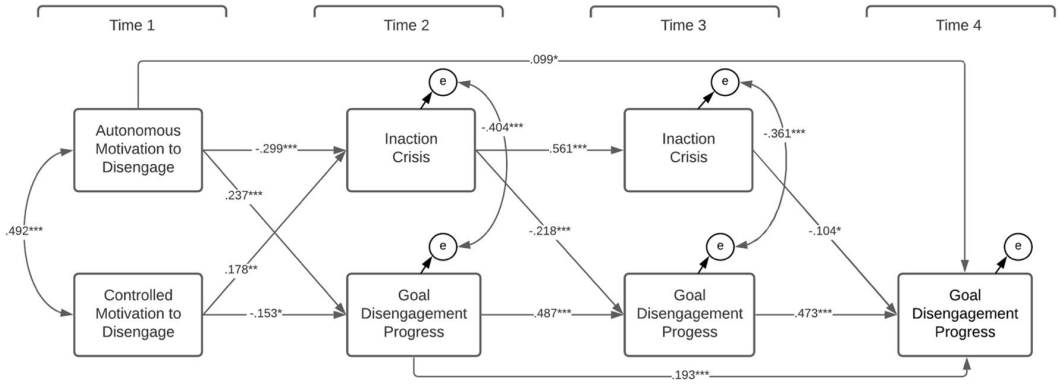

Fig. 1 Study 1 path model testing indirect effects of autonomous and controlled motivation for disengagement (T1), inaction crises (T2, T3) and goal disengagement progress (T2, T3, T4)

factors, such as time spent disengaging, the importance of the goal, or the perceived challenge of goal disengagement were also not significantly associated with T4 disengagement progress. At the fourth step, autonomous motivation for disengagement was significantly positively associated with T4 disengagement progress, while controlled motivation for disengagement was marginally negatively associated with T4 disengagement progress. At the fifth step, T2 reports of inaction crisis severity and perceived disengagement progress related to end-of-year disengagement progress in opposite directions: inaction crisis was negatively associated and disengagement progress was positively associated. The same pattern re-emerged at the sixth and final step of the regression with T3 inaction crisis severity and T3 disengagement progress predicting end-of-year disengagement. In total, this model accounted for 48% of the variance in T4 disengagement progress [F (14, 378) = 25.24, $p < 0.001$].

Testing a path model from motivation to disengage to disengagement progress via inaction crises

Next, a path model estimated the direct and indirect associations between autonomous and controlled motivation for disengagement (T1), inaction crisis (T2, T3) and disengagement progress over time (T2, T3, T4).[5] We performed the path model using the robust maximum likelihood estimation (MLR) procedures with MPLS 7.3 (Muthén & Muthén, 2012). The following fit indices were given priority in the model evaluation: the comparative fit index (CFI), the root mean square of approximation (RMSEA), and the standardized root mean squared residual (SRMR). According to Kline (2011), the CFI should be 0.95 or higher, while the RMSEA and SRMR should be 0.06 or lower for acceptable model fit.

Figure 1 illustrates the findings of our path model. We sought to test if changes in inaction crises mediated the associations between motivation for goal disengagement and disengagement progress. In line with our hypotheses with regards to the associations between motivation for goal disengagement and inaction crises, results revealed that T1 autonomous motivation for disengagement was negatively associated with T2 inaction crisis [$\beta = -0.30$, $SE = 0.05$, $p < 0.001$] while T1 controlled motivation for disengagement was positively associated with T2 inaction crisis [$\beta = 0.18$, $SE = 0.05$, $p < 0.001$]. The reverse pattern was observed for T2 disengagement progress: T1 autonomous motivation for disengagement was positively associated with T2 disengagement progress [$\beta = 0.24$, $SE = 0.05$, $p < 0.001$] while T1 controlled motivation for disengagement was negatively associated with T2 disengagement progress [$\beta = -0.15$, $SE = 0.05$, $p = 0.003$]. Inaction crisis severity at T2 was positively associated with inaction crisis severity at T3 [$\beta = 0.56$, $SE = 0.04$, $p < 0.001$]. In line with our hypothesis that inaction crisis precedes disengagement progress, we observed that T2 inaction crisis was negatively associated with T3 disengagement progress (controlling for T2 disengagement progress) [$\beta = -0.22$, $SE = 0.4$, $p < 0.001$], while T2 disengagement progress was positively associated with T3 disengagement progress [$\beta = 0.48$, $SE = 0.04$, $p < 0.001$]. Similarly, T3 inaction crisis was negatively associated with T4 disengagement progress (controlling for T2 and T3 disengagement progress) [$\beta = -0.10$, $SE = 0.04$, $p = 0.02$] while

[5] We estimated the same model two more times including the control covariates (1) individual differences (i.e., goal disengagement capacity, action orientation failure/decision and optimism), and (2) goal-specific factors (i.e., time since initiated goal disengagement, goal importance and perceived disengagement challenge). A similar pattern of results for the model emerged when controlling for these covariates, although the indirect effects for controlled motivation became non-significant. These alternate models can be seen in the supplemental materials.

Table 4 Indirect effects of the relations of autonomous and controlled motivation to disengage with T3 inaction crises, as well as T3 and T4 goal disengagement progress—study 1

Autonomous motivation to disengage to outcomes		Indirect effect	95% CI	
	Mediating variables		Lower	Upper
T3 inaction crisis	T2 inaction crisis	−0.168	−0.236	−0.104
T3 goal disengagement progress	T2 inaction crisis	0.065	0.033	0.107
	T2 goal disengagement progress	0.116	0.062	0.174
T4 goal disengagement progress	T2 goal disengagement progress	0.046	0.017	0.087
	T2 inaction crisis ⟶ T3 inaction crisis	0.017	0.004	0.037
	T2 inaction crisis ⟶ T3 goal disengagement progress	0.031	0.016	0.054
	T2 goal disengagement progress ⟶ T3 goal disengagement progress	0.055	0.029	0.088
Controlled motivation to disengage to outcomes		Indirect effect	95% CI	
	Mediating variable		Lower	Upper
T3 Inaction crisis	T2 inaction crisis	0.100	0.040	0.160
T3 goal disengagement progress	T2 inaction crisis	−0.039	−0.072	−0.015
	T2 goal disengagement progress	−0.075	−0.129	−0.026
T4 goal disengagement progress	T2 goal disengagement progress	−0.030	−0.065	−0.008
	T2 inaction crisis ⟶ T3 inaction crisis	−0.010	−0.025	−0.022
	T2 inaction crisis ⟶ T3 goal disengagement progress	−0.018	−0.036	−0.007
	T2 goal disengagement progress ⟶ T3 goal disengagement progress	−0.035	−0.064	−0.013

T3 disengagement progress was positively associated with T4 disengagement progress [$\beta = 0.47$, $SE = 0.05$, $p < 0.001$]. A significant positive direct association between T1 autonomous motivation for disengagement and T4 disengagement progress (controlling for all the other variables) was also observed [$\beta = 0.10$, $SE = 0.04$, $p = 0.016$].

The comprehensive list of indirect paths from autonomous motivation and controlled motivation to the outcomes, as well as from inaction crises to the outcomes, can be seen in Table 4. It was observed that autonomous motivation was indirectly positively associated with T4 disengagement progress through increases in disengagement progress at T2 and T3 [$\beta = 0.05$, $SE = 0.02$, *95% CI* (0.03, 0.09)], decreases in inaction crises at T2 and T3 [$\beta = 0.02$, $SE = 0.01$, *95% CI* (0.004, 0.04)], and decreases in inaction crises at T2 and increases in disengagement progress at T3 [$\beta = 0.03$, $SE = 0.01$, *95% CI* (0.02, 0.05)]. The total effect of T1 autonomous motivation on T4 disengagement progress was estimated at [$\beta = 0.25$, $SE = 0.05$, *95% CI* (0.16, 0.34)].

Meanwhile, it was observed that controlled motivation was indirectly negatively associated with T4 disengagement progress through decreases in disengagement progress at T2 and T3 [$\beta = -0.04$, $SE = 0.01$, *95% CI* (−0.06, −0.01)], increases in inaction crises at T2 and T3 [$\beta = -0.01$, $SE = 0.005$, *95% CI* (−0.03, −0.002)], and increases in inaction crises at T2 and decreases in disengagement progress at T3 [$\beta = 0.02$, $SE = 0.01$, *95% CI* (−0.04, −0.01)]. The total effect of T1 controlled motivation on T4 disengagement progress was estimated at [$\beta = -0.09$, $SE = 0.03$, *95% CI* (−0.15, −0.04)].

Together, these results support the mediating roles of change in inaction crises and disengagement progress in explaining the associations between autonomous and controlled motivation for disengagement and disengagement progress. Overall, the proposed model had an excellent fit to the data: MLR χ^2 ($df = 7$) = 13.18, $p = 0.068$, CFI = 0.99, RMSEA = 0.04 (0.00, 0.07), SRMR = 0.03.

Brief discussion

The results of Study 1 offered support for our first hypothesis that that autonomous motivation for disengagement would be positively associated with disengagement progress, even when controlling for relevant for individual differences (i.e., goal disengagement capacity, action orientation, and trait optimism) and specific features of the goal (i.e., the amount of time the individual had already spent disengaging, the importance of the goal, as well as the perceived challenge of disengagement). Autonomous motivation also appeared to protect individuals from experiencing inaction crises in their goal pursuit.

With regards to controlled motivation for disengagement, this appeared to have a negative effect on disengagement

progress, but indirectly through the effect of inaction crisis severity. In other words, when individuals felt pressured to let go of their goal, they reported being more torn about their decision to disengage, and this, in turn, was associated with making less disengagement progress over time.

We also found evidence that having less severe inaction crises at the end of the first semester, and at the middle of the second semester, mediated the association between motivation for disengagement and disengagement progress. Indeed, findings from this study suggested that decisional dilemmas about abandoning goal pursuit may continue even after goal disengagement is initiated and may impede disengagement progress over time. Thus, in line with previous research showing how autonomous motivation for engaging with a goal protects individuals from experiencing an action crisis in goal pursuit whereas controlled motivation poses a risk factor for action crises (Herrmann & Brandstätter, 2013; Holding et al., 2017), autonomous motivation for *goal disengagement* served a similar function in protecting individuals from feeling torn about their decision to disengage, while controlled motivation for goal disengagement served a similar function in heightening decisional conflicts in disengagement.

Goal-specific factors, such as the length of time the student had already been disengaging, the subjective importance of the goal, or the perceived challenge of disengagement, did not predict students' disengagement progress. Individual differences such as goal disengagement capacity, action orientation, or trait optimism did also not seem to be associated with end-of-year disengagement progress. Interestingly, there was a negative effect of age on the disengagement progress, suggesting that older students had more difficulty disengaging from their personal goals, as compared to younger students. Based on the Life-Span Development model (Heckhausen et al., 2010, 2019) we speculate that because older students may be nearing a timeframe where the window of opportunities for achieving certain goals is narrowing, there may be greater reluctance to part with their goal. An alternative explanation may be that the older students had been pursuing their goal for a longer period of time, and their goal might have been more intertwined with their personal identity, making the goal more difficult to shed. However, given we did not have a priori predictions about the effect of age, we consider these effects exploratory.

Study 2: tracking goal disengagement in the community

Study 1 provided clear initial evidence that people's motivation for disengaging from their goal predicts their disengagement progress almost one year later. However, Study 1 was limited to educated and relatively young adults, and, therefore, warranted replication in a diverse community sample of differing ages, to ensure the generalizability of the effects. Thus, in Study 2 we aimed to replicate the findings of Study 1 among an older (non-student) sample of adults. To this end, we recruited community adults to participate in a three-month longitudinal study on personal goals. At baseline (T1) participants were asked if they had a personal goal that had become unrealistic or unattainable that they were letting go of. We then assessed motivation for disengagement and goal-specific factors. Six weeks later (T2), we assessed participants' inaction crisis and disengagement progress. After three months (T3), we re-assessed disengagement progress. To accommodate the fast-paced Amazon Mechanical Turk (MTurk) survey environment, and to sustain our participants' attention, we opted to only assess one individual difference (i.e., goal disengagement capacity) and use brief measures for each construct.

Methods

Participants and procedure

American adults (N = 446) were recruited on MTurk in two waves for a 3-month study on personal goals (52% female; 80% Caucasian, 7% Black, 8% Asian, 5% Hispanic). The second survey (T2) was administered six weeks post T1, and the third survey (T3) was administered twelve weeks post T1. The average age of the first collected wave was approximately 2 years younger (range 22–70, $M = 37.17$, $SD = 10.40$) than the second collected wave (range 21–71, $M = 39.60$, $SD = 10.91$), $t\ (444) = -2.34$ $p = 0.02$. Most of the total sample (98.2%, N = 438) indicated a personal goal that they were currently disengaging from. Attrition rates were low with 9% attrition at T2 and 10.3% at T3. The questionnaires were administered through the survey software Qualtrics. At T1, we assessed whether participants were disengaging from a meaningful personal goal, their motivation for goal disengagement, as well as control variables related to their goal disengagement, such as goal importance, perceived disengagement challenge and time since disengaging. At T2, we assessed the degree to which participants felt conflicted about disengaging, and at T3, we assessed the progress they made in disengaging. Goal adjustment capacity was measured at T3. Ethical approval for this study was obtained and participants were compensated for their participation.

Measures

Disengagement goal

At T1 we asked participants to name a goal they were disengaging from with a similar prompt to Study 1. The kinds

Table 5 Descriptive statistics and bivariate correlations—study 2

	M	*SD*	1	2	3	4	5	6	7	8
1. Autonomous motivation to disengage	75.50	27.01	–							
2. Controlled motivation to disengage	24.03	29.15	−0.60**	–						
3. T2 inaction crisis	3.96	1.77	−0.25**	0.24**	–					
4. T2 goal disengagement progress	4.60	1.66	0.20**	−0.19**	−0.43**	–				
5. T3 goal disengagement progress	4.91	1.76	0.18**	−0.10*	−0.38**	0.49**	–			
6. Disengagement capacity	2.91	0.87	0.06	−0.10*	−0.25**	0.06	0.19**	–		
7. Time spent disengaging	14.04	25.94	0.01	−0.02	−0.10*	0.06	−0.01	0.002	–	
8. Goal importance	3.92	1.90	−0.12	0.24**	0.21**	−0.06	−0.12*	−0.19**	−0.08	–
9. Disengagement challenge	5.28	1.31	−0.18**	0.21**	0.20**	−0.14**	−0.22**	−0.20**	−0.08	0.32**

*$p < 0.05$

**$p < 0.01$

of goals that adults in this study indicated disengaging from most frequently related to their job/career (19.1%) (e.g., *Trying to get promoted, Becoming a real estate agent*), social goals/hobbies (19.1%) (e.g., *Regaining friendships lost during divorce, I'm disengaging from my goal of learning how to computer code*), physical appearance, health, and exercise (17.9%) (e.g., *Staying on a keto diet, Completing a marathon in under 4 h*), romantic partner(s) (9.9%) (e.g., *Finding a life partner, Pursuing my friend I like as a partner*), academic goals (11.4%) (e.g., *Returning to school for my law degree, Finishing college*), family goals (7.8%) (e.g., *having another child, having a relationship with my in-laws*) and financial/investment goals (7%) (e.g., *owning my own home*). Less frequently listed goals related to relocating (4%) (e.g., *I'm letting go of my goal of returning to Chattanooga*) and changing aspects of one's personality (2.2%) (e.g., *Becoming more social*).

Time disengaging

As in Study 1, we asked participants to indicate how long they had been disengaging from the goal at T1. Participants reported a wide range in length in disengagement (0.00–204 months; $M = 14.04$ months, $SD = 25.94$) with only 1.8% of participants indicating that they initiated goal disengagement during the survey.

Goal importance

At T1, participants were asked to rate goal importance as in Study 1 ($M = 5.28$, $SD = 1.31$).

Perceived disengagement challenge

At T1, participants were asked to rate how challenging they anticipated goal disengagement to be as in Study 1 ($M = 3.92$, $SD = 1.90$).

Motivation for disengagement

At T1, motivation for disengagement was measured using two slider scale items adapted from Holding et al. (2020). Autonomous motivation for disengagement was measured with the item *How much do you feel that it is your own choice/desire to disengage from this goal?* and controlled motivation for disengagement was measured with the item *How much do you feel that you are pressured/forced to disengage from this goal?* on a slider scale ranging from 0 = *Not at all* to 100 = *Completely*. Autonomous motivation for goal disengagement ($M = 75.60$ $SD = 26.96$) and controlled motivation for goal disengagement ($M = 23.87$, $SD = 28.95$) were negatively correlated, $r(438) = -0.62$, $p < 0.001$.

Goal disengagement capacity

Goal disengagement capacity was assessed with the same scale used in Study 1 at T3. Since goal disengagement capacity is thought to represent an enduring individual difference measure, we did not expect the later assessment to affect our results ($M = 2.91$, $SD = 0.87$, $\alpha = 0.84$).

Inaction crisis severity

Measured the same as in Study 1, at T2 ($M = 3.97$, $SD = 1.76$, $\alpha = 0.92$).

Table 6 hierarchical stepwise regression predicting T3 goal disengagement—study 2

Step	Variable	*B*	*t*	95% CI	F^{Δ}	R^2
1	Age	**−0.10**	−1.87	[−0.03, 0.00]	(1, 369) = 3.48	0.01
2	Goal adjustment capacity	**0.21****	4.07	[0.21, 0.61]	(1, 368) = 16.56***	
3	Time disengaging	**−0.03**	−0.52	[−0.01, 0.01]	(3, 365) = 3.98*	0.04
	Goal importance	**−0.03**	−0.51	[−0.18, 0.11]		
	Disengagement challenge	**−0.17****	−0.16	[−0.25, −0.06]		
4	Autonomous motivation to disengage (T1)	**0.17****	2.70	[0.01, 0.02]	(2, 363) = 4.23*	0.03
	Controlled motivation to disengage (T1)	**0.05**	0.75	[−0.01, 0.01]		
5	Inaction crisis (T2)	**−0.15****	−2.84	[−0.24, −0.04]	(2, 361) = 57.09***	0.23
	Disengagement progress (T2)	**0.41*****	8.37	[0.33, 0.53]		
	Autonomous motivation to disengage (T1)	0.09	1.67	[−0.00, 0.01]		
	Controlled motivation to disengage (T1)	0.10	1.72	[−0.00, 0.01]		

Bolded values indicate they were entered into the regression at this step. Wave of data collection and gender were not significantly associated with disengagement progress and were not reported here for clarity

*$p < 0.05$

**$p < 0.01$

***$p < 0.001$

Disengagement progress

Measured the same as in Study 1 at T2 and T3 (T2: $M = 4.58$, $SD = 1.67$, T3: $M = 4.90$, $SD = 1.76$, $\alpha = 0.91$).

Results

Preliminary results

Table 5 illustrates the descriptive statistics and correlations of all key variables of Study 2. Overall, participants reported significantly higher autonomous motivation for disengagement compared to controlled motivation for disengagement, $t(437) = 21.52$, $p < 0.0001$. As expected, participants made progress disengaging from their goal over the course of the study, with less disengagement progress at T2 ($M = 4.58$, $SD = 1.67$), than at T3 ($M = 4.90$, $SD = 1.75$), t (369) − 3.61, $p < 0.001$. Participants' autonomous motivation for disengagement was positively associated with their disengagement progress and negatively associated with controlled motivation for disengagement, the importance of the goal, the perceived challenge of disengaging and inaction crisis during disengagement. Controlled motivation for disengaging was positively associated with the importance of the goal, the perceived challenge of disengaging, inaction crisis severity and negatively correlated with disengagement progress. Goal disengagement capacity related positively to disengagement progress, while inaction crisis severity related negatively to disengagement progress.

Predicting disengagement progress

We sought to replicate our Study 1 findings by conducting a hierarchical regression in which we controlled for goal-specific factors and goal adjustment capacity to predict T3 disengagement progress (see Table 6). In the first step of the regression, we controlled for participants' age. In the second step, we entered participants' goal disengagement capacity. In the third step, we entered goal-specific factors, such as time spent disengaging, importance of the goal, and perceived challenge of disengaging. In the fourth step, we entered autonomous and controlled motivation for disengaging, and in the fifth step, we entered T2 inaction crisis severity and T2 disengagement progress. As can be seen in Table 6, at the first step participants' age was not associated with disengagement progress. At the second step, goal disengagement capacity was positively related to T3 disengagement progress, suggesting that participants with greater goal disengagement capacity made more disengagement progress, as compared to participants with lower goal disengagement capacity. At the third step, the perceived challenge of disengaging was negatively related to T3 disengagement progress, suggesting that participants who anticipated goal disengagement to be difficult made less progress disengaging, while the time spent disengaging or the importance of the goal were unrelated to disengagement progress. Autonomous motivation was positively related to T3 disengagement progress after controlling for all the aforementioned factors. Controlled motivation for disengagement was unrelated to making disengagement progress. In the last step of the regression, T2 inaction crisis severity was negatively related to making

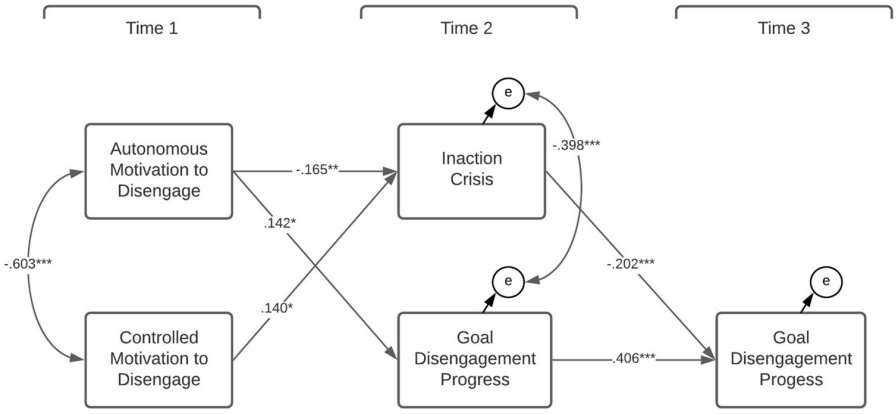

Fig. 2 Study 2 path model testing indirect effects of autonomous and controlled motivation for disengagement (T1), inaction crises (T2) and goal disengagement progress (T2, T3)

disengagement progress at T3, suggesting that decisional conflicts about goal disengagement impeded disengagement progress. Unsurprisingly, T2 disengagement progress was positively related to T3 disengagement progress. This model accounted for 31.8% of the T3 disengagement progress variance $F(9, 361) = 18.75$, $p < 0.001$.

Testing a path model from motivation to disengage to disengagement progress via inaction crises

Next, as in Study 1, a path model was estimated to examine the direct and indirect associations between motivation for disengagement (T1), inaction crisis (T2) and disengagement progress over time (T3, T4). We performed the path model using the same methods and model fit indices as Study 1.

Figure 2 illustrates the findings of our path model. We sought to test if changes in inaction crises mediated the associations between motivation for goal disengagement and disengagement progress. In line with our hypotheses, results revealed that T1 autonomous motivation for disengagement was negatively associated with T2 inaction crisis [$\beta = -0.17$, $SE = 0.06$, $p = 0.01$], while T1 controlled motivation for disengagement was positively associated with T2 inaction crisis [$\beta = 0.14$, $SE = 0.06$, $p = 0.02$]. The reverse pattern was observed for T2 disengagement progress: T1 autonomous motivation for disengagement was positively associated with T2 disengagement progress [$\beta = 0.14$, $SE = 0.07$, $p = 0.03$]. T1 controlled motivation for disengagement was not significantly associated with T2 disengagement progress [$\beta = -0.10$, $SE = 0.07$, $p = 0.16$]. In line with our hypothesis that inaction crisis precedes disengagement progress, we observed that T2 inaction crisis was negatively associated with T3 disengagement progress (controlling for T2 disengagement progress) [$\beta = -0.20$, $SE = 0.5$, $p < 0.001$], while T2 disengagement progress was positively associated with T3 disengagement progress [$\beta = 0.41$, $SE = 0.06$, $p < 0.001$].

It was observed that autonomous motivation was indirectly positively associated with T3 disengagement progress through increases in disengagement progress at T2 [$\beta = 0.06$, $SE = 0.03$, *95% CI* (0.01, 0.12)] and decreases in inaction crises at T2 [$\beta = 0.03$, $SE = 0.02$, *95% CI* (0.01, 0.07)]. The total effect of T1 autonomous motivation on T4 disengagement progress was estimated at [$\beta = 0.09$, $SE = 0.03$, *95% CI* (0.03, 0.16)].

Meanwhile, it was observed that controlled motivation was indirectly negatively associated with T3 disengagement progress through increases in inaction crises at T2 [$\beta = -0.03$, $SE = 0.01$, *95% CI* (-0.06, -0.01)]. The path from controlled motivation through T2 disengagement progress to T3 disengagement progress was non-significant.

These results support the mediating roles of change in inaction crises and disengagement progress in explaining the associations between autonomous and controlled motivation for disengagement and disengagement progress. Overall, the proposed model had an excellent fit to the data: MLR χ^2 ($df = 2$) = 3.11, $p = 0.21$, CFI = 0.99, RMSEA = 0.04 (0.00, 0.11), SRMR = 0.01.

Brief discussion

Study 2 conceptually replicated the results of Study 1 with a group of community adults of diverse ages. We found that autonomous motivation for disengaging from a personal goal at T1 promoted goal disengagement at T3. Despite this study being considerably shorter than Study 1—three months as opposed to nine months—the positive effect of autonomous motivation on goal disengagement progress still emerged. Also consistent with Study 1, we found that a reduction in inaction crises was a significant indirect path through which autonomous motivation for goal disengagement facilitated goal disengagement progress. In contrast, when community adults felt controlled about disengaging, they experienced more severe inaction crises, which, in turn, were associated with decreased goal disengagement 3 months later.

We also note some differences relative to the findings we observed in Study 1. Firstly, there was a significant positive effect for goal disengagement capacity on disengagement progress, such that individuals with a greater general tendency to relinquish psychological commitment and behavioural effort in the face of unattainable goals made more progress disengaging from their goal. While we did not find this effect in the young adult sample of Study 1, goal disengagement capacity may still be developing in young adults, as they may not have as much experience confronting unattainable goals as older adults (Heckhausen et al., 2019). Developmental research has documented consistently higher levels of goal adjustment capacities in older, as compared to young, adulthood (Brandtstädter & Renner, 1990; Heckhausen, 1997, 1999; Wrosch et al., 2007a, 2007b). Relatedly, it may be the case that goal disengagement capacity plays a significant role in disengagement progress for older adults who face increasing limitations to unencumbered goal pursuit, such as decline in reproductive functioning or increase in health problems, which render the trait more adaptive in later life. Goal disengagement capacity and disengagement progress were also measured concurrently in this study which may explain why we only found this effect in Study 2. Importantly, the relation between motivation for goal disengagement and disengagement progress remained significant after controlling for the dispositional capacity to disengage.

We also observed a significant negative effect for the perceived challenge of goal disengagement on disengagement progress. This finding is consistent with expectancy theory (Atkinson, 1957): holding a negative expectancy for goal disengagement (i.e., perceiving the goal as being too challenging to disengage from) might be associated with decreased efforts to disengage, and consequently, less disengagement progress. It should be noted that the different results observed between the two studies with regards to the covariates (i.e., age, goal disengagement capacity, challenge of disengagement) may have to do with the different study designs and time intervals rather than the specific populations.

In sum, Study 2 provides further evidence that having autonomous motivation for goal disengagement is associated with experiencing reduced inaction crises and making more progress when trying to disengage from a goal and that controlled motivation can impede the disengagement process through more severe inaction crises.

General discussion

Across two studies we followed individuals as they tried to disengage from their idiographic personal goals. We found consistent evidence that autonomous motivation for goal disengagement is an important goal-specific predictor of disengagement progress. To our best knowledge, this is the first series of longitudinal studies to consider *motivation for goal disengagement* as an antecedent of disengagement progress. Across both studies, having autonomous motivation for disengagement was robustly associated with disengagement progress over time, even when controlling for dispositional and goal-specific factors associated with adaptive goal striving. That is, the more individuals felt choiceful about letting go of a personal goal, identified with the importance of letting go, and realized the goal no longer aligned with their values or reflected their identity, the more they reported disengaging from the goal over time.

Across the two studies we also found consistent evidence of a psychological process through which autonomous motivation for disengagement facilitated disengagement progress. Specifically, we found that people with autonomous motivation for goal disengagement were less likely to experience an "inaction crisis"—a feeling of uncertainty and deliberation over whether to reengage with the abandoned goal. Experiencing less severe inaction crises was, in turn, associated with greater success at disengaging from one's goal over time.

The effects of autonomous motivation can be contrasted with the effects of controlled motivation. Feeling pressure from others to disengage or feeling ashamed for holding on to a goal indirectly interfered with disengagement progress via the inaction crisis. In other words, when individuals felt pressure to let go of a goal, this put them at increased risk of doubting their disengagement plan and experiencing impulses to reengage with the lost goal. In turn, experiencing inaction crises was negatively associated with disengagement over time. This underscores the potential costs of abandoning goals for reasons that are not aligned with one's core interests and values.

Implications for self determination theory

By considering the role of autonomous motivation in the context of disengagement our research provides an important extension to self-determination theory[6] (SDT; Ryan & Deci, 2017). Previous SDT-based research has mostly considered the different effects of autonomous and controlled motivation in goal striving for self-regulatory outcomes such as effort, performance, persistence, progress, and attainment. Importantly, autonomous motivation appears to optimize goal pursuit because it is associated with adaptive goal processes including greater subjective ease of effort (Werner et al., 2016), the perception of fewer future obstacles (Leduc-Cummings et al., 2017), less severe action crises (Holding et al., 2017), decreased conflict between goals

[6] Specifically, organismic integration theory (OIT).

(Kelly et al., 2015), shielding of goals from temptations and distractions (Milyavskaya et al., 2015), and more effective use of implementation plans (Koestner et al., 2002, 2006). The present research introduces a parallel process for the role of autonomous motivation in goal disengagement. In the same way that autonomous motivation for attaining a goal facilitates goal progress and achievement, autonomous motivation for relinquishing a goal seems to facilitate goal disengagement.

Our current contribution extends the evidence that SDT can be usefully applied to research on personal goals. In particular our results confirm the role of autonomous processes beyond the selection and the goal pursuit phase—where autonomous forms of implementation plans and interpersonal support appear to be especially helpful—downstream into the final phase of goal disengagement. Strikingly, autonomous motivation seems to protect individuals from both the action crises that bedevil goal pursuit and the inaction crises that haunt goal disengagement. Together, a SDT analysis of personal goals has demonstrated that autonomy is central to choosing, effectively pursuing, and losing personal goals (Holding & Koestner, 2022).

Implications for action crises in goal pursuit

By introducing the concept of an "inaction crisis" which can follow the decision to disengage, we extend past research which has considered the role of "action crisis" in goal pursuit (e.g., Brandstätter et al., 2013). Although Herrmann and Brandstätter (2015, p.122) argue that goal disengagement frequently results from, and represents the *endpoint* of the action crisis, our results suggest that decisional conflicts may re-surface even after the decision to abandon a goal has been initiated.

Theoretically, this points to the possibility of extending Gollwitzer's Rubicon Model (1990) in which individuals "cross the Rubicon" once they transition from a pre-decisional phase to choosing a goal and forming a commitment. Indeed, it appears as though individuals who are stuck with goal may need to cross a second "Rubicon" to initiate disengagement and commit to cutting cognitive, affective, and behavioural ties to the unattainable goal.

Implications for goal adjustment theory

The present findings that (1) motivation underlying goal disengagement can have consequences for the success of disengagement and (2) that inaction crises can interfere with goal disengagement also have implications for goal adjustment theory (GAT). GAT proposes two processes that enable a person to adapt to the experience of unattainable goals: goal disengagement and goal reengagement. One explanation put forward by GAT to address why people vary in the way they generally respond to blocked goals is individual differences in goal disengagement capacities (goal adjustment scale; Wrosch et al., 2003a, 2003b). Our motivational model of goal disengagement builds on GAT's core assumption that disengagement is a highly adaptive response to blocked goals and provides a complementary explanation for why individuals vary in the manner in which they regulate blocked goals. We argue that considering people's motivation for relinquishing goals, and their experiences during goal disengagement (i.e., inaction crises) are critical to understanding who can "let go" of a specific goal. Our findings suggest that even people who have personality traits that make them well-suited for goal disengagement generally may struggle to disengage from specific goals that they harbour little autonomous motivation to disengage from and feel perpetually conflicted about. Indeed, our focus on goal-specific disengagement is in line with a growing body of research suggesting that a significant level variance for understanding goal characteristics and outcomes tends to be at the level of the goal (Holding et al., 2017; Milyavskaya & Werner, 2018).

Clinical/applied implications

Our work answers the call of GAT researchers "to identify factors that facilitate goal adjustment processes, as such research could be used to improve quality of life for individuals who have difficulty adjusting to unattainable goals, or individuals who frequently encounter unattainable goals" (Mens et al., 2015, p. 3). Our motivational model for disengagement makes a unique and distinct contribution by exploring the motivational factors that support (and interfere with) the process of fully relinquishing unattainable goals. This is especially relevant for the clinical and counselling domain, where therapists can support clients struggling with personal goals through both the insights afforded by GAT (i.e., that disengagement is an adaptive strategy in the face of blocked goals) and our motivational model of goal disengagement (i.e., that motivation can influence the disengagement process). In this context, the utility of tracking goal disengagement via "disengagement progress" also becomes evident, as it can guide therapeutic interventions and signal improvement over the course of therapy.

Specifically, the present research could be applied in contexts where goal disengagement is an important task for maintaining adaptive functioning, such as certain medical contexts in which goals can become unattainable or overly costly (i.e., following cancer treatment (Castonguay et al., 2014; Schroevers et al., 2008), multiple sclerosis (Neter et al., 2009), and fertility issues (Heckhausen et al., 2001; Kraaij et al., 2010; Thompson et al., 2011). Likewise, goal disengagement is important during career transitions, such as following athletic career termination (Holding et al.,

2020), or during retirement (Farquhar et al., 2013; Gagné et al., 2011).

In these contexts, clinical practitioners and counsellors may play an important role in educating clients about goal disengagement by helping clients identify problematic goals, normalizing disengagement, and providing psychoeducation about the benefits of goal adjustment. Our findings suggest that it may be important to explore the motivations underlying goal disengagement to optimally facilitate this process. Clients with few autonomous reasons for disengagement may benefit from autonomy enhancing interventions designed to help the client internalise their motivation for letting go. These interventions could, for example, explore attitudes about disengagement, validate clients' emotional responses, and help them generate autonomous reasons for why disengagement may be in their best interest or congruent with their values. Clinical interventions drawn from acceptance and commitment therapy (ACT) may be especially useful, as this therapy invites people to open up to unpleasant feelings (e.g., sadness, shame, anger, fear about losing the goal) and to move toward valued behaviour (Hayes et al., 2012). By accepting negative emotions associated with loss and thinking about important values, interventions grounded in ACT may enhance autonomous motivation for relinquishing a goal and facilitate moving towards other pursuits that encompass core values.

Limitations and future directions

It is important to note the limitations of the present research. Replicating the effects with other methodologies, such as experimental paradigms or experience sampling, is warranted to establish the causality of the reported effects. The present studies also relied on self-report measures that may introduce the potential for socially desirable responding (Braun et al., 2001), or inaccurate self-perceptions (Paulhus & Vazire, 2007). This could be addressed with future studies that provide informant reports of goal disengagement, or where disengagement is measured using more objective metrics (e.g., monitoring posts on social media that relate to the former goal).

Typically, goal disengagement is studied with specific populations who have faced certain life events or have passed developmental deadlines which render specific goals unattainable, such as studies focusing on late-midlife adults who disengage from time-framed goals, such as bearing a child or finding a romantic partner (Heckhausen et al., 2001; Wrosch & Heckhausen, 1999). However, rather than focus on one specific type of goal or population, we studied goal disengagement in a general population of young and middle-aged adults who nominated heterogeneous blocked goals. A strength of this approach is the relative generalizability of our motivational model of disengagement to a broad population of North American adults and a diverse number of personal goals. However, a limitation is that even when the same goal was nominated by different participants, we could not judge whether this goal was feasible and within reach for some, and truly unattainable for others. That being said, a goal's objective "unattainability" may be less relevant in justifying the decision to disengage than the participants' subjective sense of a goal being overly costly, demanding, unrealistic, or problematic.

This brings up a related issue that the distinction between autonomous and controlled motivation for disengagement may have less to do with the objective circumstances of the blocked goal, but rather the individuals' subjective perspective on them. In other words, two people facing the same obstacles for the same unattainable goal may develop different motivations for letting go. Future studies are needed to examine whether certain boundary conditions are more likely to promote autonomous or controlled forms of disengagement. For example, one can feel like the increasing costs of goal pursuit are "externally" forcing one to abandon the goal, or one can freely decide to use one's resources for an alternate, more promising goal. These boundary conditions can vary not only between persons, but also situationally. For example, perhaps individuals who feel more emotionally detached from their goal are more likely to develop autonomous motivation to disengage. Preliminary research in this area has found that certain factors about the unattainable goal are indeed more likely to promote autonomous versus controlled motivation. For example, a study on retiring Canadian elite professional and Olympic athletes found that those retiring as a result of injury or conflict with the coach tended to have more controlled reasons for terminating their career than those retiring to pursue studies or start having a family (Holding et al., 2020).

Relatedly, an important limitation is that we did not assess participants' original motivation for goal pursuit and could not control for this in our analyses. Motivation for goal pursuit may be a condition that influences whether someone subsequently develops autonomous or controlled motivation for goal disengagement. The current research design would have introduced recall biases if we had also measured motivation for goal pursuit—after all, someone letting go for autonomous reasons may remember their motivation for pursuing the goal differently than someone letting go for more controlled reasons. That being said, it is critical for future studies to track goal motivation earlier in the goal's lifecycle. Ideally motivation for goal pursuit would be measured at goal setting, and the goal would be followed up until individuals potentially decided to disengage, at which time motivation for disengagement would be assessed. This design would allow for a comparison of both forms of motivation (pursuit and disengagement) when predicting disengagement progress. Our lab is currently pursuing this research.

GAT identifies two processes – goal disengagement and goal reengagement—that enable a person to adapt to the experience of unattainable goals. Therefore, an important area for future research is to examine whether motivation for goal disengagement impacts subsequent goal reengagement. According to GAT, goal reengagement consists of three components: identifying, committing to, and putting effort toward achieving alternative goals. Mens and collegues (2015, p. 2) argue that ideally, these alternative goals will express a core aspect of the self that the previous unattainable goal served. From an SDT perspective, this would be operationalized as the reengagement goal(s) being autonomously motivated, reflecting the person's core interests or values. Future research should investigate whether motivation for goal disengagement is related to the likelihood of selecting an alternative goal to pursue, and the motivation for reengaging with the new goal(s). For example, it may be the case that individuals who feel controlled about relinquishing a goal, (e.g., being accepted to medical school), may adopt new goals that reflects controlled motivation, (e.g., applying to another prestigious profession out of feelings of pressure). Likewise, individuals who feel choiceful and agentic about relinquishing a goal may choose a new goal that encompasses their authentic self. Moreover, the availability of an alternate goal may influence the motivation to disengage—perhaps those who see few alternatives feel more controlled about relinquishing the unfeasible goal.

While much SDT research is concerned with the reasons *why* someone engages in goal pursuit (i.e., organismic integration theory, Ryan & Deci, 2017), future research may bridge other important SDT mini theories with GAT to better understand adaptive goal disengagement. For example, considering the aspirational content of people's goals, the *what* of people's goal disengagement, may also be relevant for understanding which goals are easy or difficult to relinquish (goal contents theory; Ryan & Deci, 2017). Goal contents theory differentiates between two broad categories of goals: *extrinsic* aspirations (pursuit of wealth, fame, and image) and *intrinsic* aspirations (pursuit of personal growth, relationships, and community contribution), finding that a strong focus on extrinsic aspirations is related to lower well-being, whereas placing a priority on intrinsic aspirations is related to greater well-being (Kasser & Ryan, 1993, 1996; Hope et al., 2019). Future research could investigate whether Goal Contents Theory may contribute to our understanding of motivation for goal disengagement. For example, disengaging from an extrinsic goal, like being a high earning corporate lawyer (Sheldon & Krieger, 2004), may be associated with controlled motivation for disengagement.

Likewise, basic psychological needs theory (BPNT) offers a second promising avenue through which to bridge SDT and GAT research. BPNT focuses on the relations of basic psychological need satisfaction/frustration to well-being and ill-being. The three needs of autonomy, competence and relatedness are thought to be essential psychological nutrients for promoting optimal wellness and thriving (Ryan & Deci, 2017). In contrast, need frustration, is associated with greater ill-being and impoverished functioning (Vansteenkiste & Ryan, 2013). Assessing goal-specific need satisfaction and frustration may lead to additional insights with regards to which goals are adaptive to disengage from, and how disengagement from a need satisfying or a need frustrating goal typically unfolds. For example, it may be less adaptive to disengage from goals, such as recreational reading, which tend to satisfy basic psychological needs and buffer against emotional distress (Levine et al., 2022). In contrast, it might be more adaptive to disengage from goals that frustrate needs for autonomy, competence, and relatedness.

In summary, our research suggests that internalizing the reasons for goal disengagement can help individuals to let go of personal goals, but future research is needed to examine if the aspirational content of the goal or need-related experiences associated with goal striving may shed further light on factors that facilitate or hinder goal adjustment.

Conclusion

Abandoning the stranded or sinking ship of a blocked goal can be difficult. By examining the motivational underpinnings of goal disengagement, the present studies demonstrate that autonomous motivation for letting go helps people successfully disengage from blocked personal goals. When people feel autonomous about disengaging, they tend to experience less inaction crisis (i.e., internal conflict) about letting go, and with this clarity, are able to part ways with the goal. Conversely, when they feel controlled about disengaging, they tend to feel more internal conflict about disengagement, which interferes with this process. Goal disengagement is vital for preserving health, well-being, and motivational resources, and autonomous motivation for disengagement helps set people free of their burden.

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