

The Effects of Affiliation Motivation on Feedback Seeking and Self-regulation

by

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Dissertation submitted in partial fulfillment of the requirements
for the degree of Doctor of Philosophy
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ABSTRACT

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Abstract

The present research investigates how motivation to affiliate with others shapes the way people search for feedback from others for their goal pursuits and its general implications on self-regulation. I hypothesize that affiliation motivation will influence how much people seek feedback from others and to whom they turn for feedback. People with high affiliation motivation will view feedback-seeking as a potential tool for strengthening their existing social ties and forming additional ones, whereas people with low affiliation motivation will perceive great costs in feedback seeking. As such, people with high affiliation motivation will seek feedback from a broad range of sources. People with low affiliation motivation, on the other hand, will seek feedback from those most willing and able to provide it, which may often be those with whom they are already close. Four studies support these predictions by showing how affiliation motivation is associated with feedback seeking from a broad range of sources (Study 1), how affiliation motivation moderates the effect of feedback source on goal performance (Studies 2 – 3), and how affiliation motivation influences goal progress indirectly through affecting the preference for feedback source in everyday goal pursuits (Study 4).

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Introduction

Every day, we navigate through various goal pursuits. Whether we successfully achieve those goals is determined by many intrapersonal processes. Self-regulation research has suggested that we are likelier to achieve our goals when we have clear knowledge about ourselves and our goals, the ability to monitor our own behavior, and strong will power (Baumeister et al., 2007). We are more likely to succeed if we have clear goal to strive for and the opportunity to assess our progress along the way. Yet, it is important to consider that self-regulation involves interactions with others. An increasing body of research on the nature of self-regulation has recognized that this process is social (e.g., Fitzsimons & Finkel, 2010). The current research explores how we utilize others in goal pursuits. More specifically, it examines how others may serve as valuable sources of feedback for goal pursuit and how our motivation may shape the way we seek for feedback from them. This research focuses on the role of affiliation motivation in feedback seeking for goal pursuit. In the present research, feedback is defined as information about how a goal pursuit should be done, how it is going, and how it might be adjusted for a more efficient pursuit. It contains information about the gap between the actual state and the reference state of a goal pursuit used to alter the gap in some way and may be focused on any stage of a goal pursuit, not just on its outcome (Ramaprasad, 1983).

Potential Benefits of Feedback Seeking

Self-regulation research has suggested how others can be helpful for goal pursuit. Others can activate a goal pursuit (Fitzsimons & Bargh, 2003), inspire a goal pursuit by serving as role models (Lockwood & Kunda, 1997), and transmit a goal pursuit by displaying goal directed behavior (Aarts et al., 2004). In addition to influencing what goal to pursue, others can influence how to go about goal pursuit as well. Others can facilitate goal pursuit by serving as means or opportunities for goal pursuit (Fitzsimons & Shah, 2008). For more direct help, others can provide useful information relevant to a goal pursuit, such as feedback, and motivate goal pursuit (Fishbach et al., 2010). For example, others can provide information on successful and failed actions and advise how efforts invested in a goal pursuit may be adjusted for a more efficient pursuit.

Impact on Motivation: Inspiration

Research on feedback has broadly identified two different types of feedback—positive and negative feedback—and suggested that they are useful for goal pursuit because they can increase motivation for goal pursuit. Positive feedback contains information about how successfully and strongly one has pursued goal-congruent actions. Negative feedback suggests how one has been lacking for accomplishments and strengths in pursuing those actions. While both types of feedback are helpful for goal pursuit, the effects of positive and negative feedback on motivation depend on whether it involves information about goal progress or goal commitment (Fishbach et al., 2010) and how

much of expertise a goal pursuer has developed in the relevant goal domain (Finkelstein & Fishbach, 2009).

Positive feedback can promote a goal pursuer's self-efficacy in general (Karl et al., 1993), but it can become more useful when it involves information about goal commitment. When positive feedback signals an increase in goal commitment, it encourages a goal pursuer to further engage in goal-congruent actions (Fishbach et al., 2010). Positive feedback is particularly useful for a novice who is new to a goal pursuit and has little expertise in the pursuit (Finkelstein & Fishbach, 2009). It encourages them to invest more effort into the pursuit.

Negative feedback becomes useful when it involves information about goal progress. When negative feedback signals an insufficient goal progress, it promotes the pursuit of further goal-congruent actions (Fishbach et al., 2010). Negative feedback is particularly useful for an expert who has gained expertise in a goal domain (Finkelstein & Fishbach, 2009). Learning about their own mistakes motivates an expert to further invest their effort into goal pursuit.

Potential Costs of Feedback Seeking

While feedback can certainly be beneficial for goal pursuit in general, it comes at potential costs. Feedback seeking may be counterproductive on some occasions.

Impact on Motivation: Discouragement

When feedback conveys information that does not account for the state of goal pursuit, it can decrease motivation. When positive feedback involves information about

goal progress, particularly signaling a sufficient progress that has been made in a goal pursuit, it can decrease motivation (Fishbach et al., 2010). Positive feedback is also not much useful when it is delivered to an expert who is sufficiently knowledgeable in a goal domain (Finkelstein & Fishbach, 2009).

Negative feedback can decrease motivation when it signals a decrease in goal commitment (Fishbach et al., 2010), and when it is provided to a novice (Finkelstein & Fishbach, 2009). When negative feedback is provided repeatedly, it may result in a decrease in self-efficacy (Nease et al., 1999) and a decrease in effort, which can lead to lowering goals, rejecting feedback, and disengaging from the task (Vance & Colella, 1990).

Regulatory Costs for the Pursuit and the Pursuer

Feedback can be time-consuming to receive and provide. To exchange feedback, it is essential for people to spend their time to interact with others and form relationships with them. Affiliating with others may take up some time and leave little time for people to spend on their goal pursuits.

Feedback can be energy consuming as well. Interacting with others and maintaining the relationships use regulatory resources, as they come with certain responsibilities (Finkel et al., 2006; Trawalter & Richeson, 2006). The more demanding the social interactions are, the greater amount of resource is required (e.g., Ackerman et al., 2009; Finkel et al., 2006). Thus, engaging in social interactions to acquire and provide feedback can divert people's effort away from the work of pursuing their focal goals.

Issues of Feedback Quality

Feedback from others may not always be helpful for goal pursuit. Feedback may not be helpful when it is not delivered consistently. Not only do different feedback givers provide different feedback, but any single feedback giver may also provide inconsistent feedback across time (Andrews & Kacmar, 2001). Receiving inconsistent feedback may cause confusion in goal pursuit.

Feedback from others may be inaccurate. It may simply be inaccurate because a feedback giver lacks prerequisite knowledge of the pursuit or the pursuer. Even when a feedback giver has sufficient knowledge about the pursuit or the pursuer, however, feedback may still be inaccurate. When feedback comes from close others, for example, even if they are sufficiently knowledgeable about the pursuit and the pursuer, there is a possibility that feedback that they provide may be biased. Close others who provide feedback may be concerned about maintaining the relationship with the feedback recipient and may thus provide feedback that the feedback recipient desires to receive rather than delivering the “hard truths.” Therefore, it may be challenging to find others who are in positions to provide accurate feedback while accounting for the bias they may have in providing it, especially when they have a close relationship with the pursuer that they wish to preserve.

Feedback from others may also be hurtful when it involves social comparison. Self-evaluation maintenance model (Tesser, 1988) suggests that when feedback comes from others who excel in areas that are personally important and highly relevant to a

pursuer, the pursuer may fail to maintain a positive self-evaluation and rate their abilities lower than they have.

The potential costs of feedback seeking may prevent some people from using it, while others may see more benefits in feedback seeking and choose to receive it. What would then determine whether people utilize or forgo feedback? If people choose to utilize feedback, how would they acquire it? More specifically, from whom would they like to receive it? Would people's motivation to form relationships with others play any role in feedback seeking?

Affiliation Motivation and Self-regulation

A large body of research on self-regulation has recognized that self-regulation is a social process that involves interactions with others and suggested how others may potentially benefit or undermine a regulatory process. But less work has explored how self-regulation may be significantly impacted by motivation to be social. The current research is designed to understand the role of social motivation in seeking regulatory information from others. More specifically, the current work aims to investigate how people's motivation to affiliate with others may influence the way they seek feedback from others for their goal pursuits and how such feedback seeking may impact the outcome of their goal pursuits.

Affiliation Motivation

Affiliation motivation—one of the fundamental human motives (Reiss & Havercamp, 1998)—is a motive that makes people want to be with others, form

friendships and associations, maintain interpersonal networks, and work well with others (Cheek & Buss, 1981; Hill, 1987). Research has identified four dimensions that underlie affiliation motivation: positive stimulation, attention, social comparison, and emotional support (Hill, 1987). Through forming and maintaining relationships with others, people desire to experience feelings related to liking and love (i.e., positive stimulation), enhance feelings of self-worth through approvals and praises (i.e., attention), acquire self-relevant information when objective criteria for evaluation are not readily available (i.e., social comparison), and receive sympathy (i.e., emotional support) (Hill, 1987).

Affiliation motivation seems to be closely related to one of the Big Five Traits, extraversion (Olson & Weber, 2004). Yet, it is important to note that it has been long recognized that motives and traits are two fundamentally different elements of personality. They are conceptually distinct and play different roles in regulating behavior (Winter et al., 1998).

Motives reflect people's goals, wishes, and desires, and initiate goal-directed behavior. Affiliation motivation causes people to engage in affiliative behaviors in various social settings as well (Twenge et al., 2007). For example, people with high affiliation motivation wish to be with others (Wong & Csikszentmihalyi, 1991), frequently engage in interpersonal thoughts (McAdams & Constantian, 1983), actively participate in a group discussion (Gifford, 1981), and prefer a living arrangement that promotes potential social interactions to the one that offers privacy (O'Malley & Schubarth, 1984). Affiliation motivation encourages people to display prosocial behavior

as well. People with high affiliation motivation volunteer their time to help others (Dyer, 1980), drive safely not only for themselves but also for others (Harano et al., 1975), and share rewards equally with others (O'Malley & Schubarth, 1984).

Affiliation Motivation and Feedback Seeking

How would affiliation motivation affect self-regulation and goal pursuit?

Particularly, when people have opportunities to receive feedback that comes from others, how would their affiliation motivation influence the way they go about utilizing it?

Would people with high affiliation motivation and those with low affiliation motivation acquire feedback differently?

People with high affiliation motivation are highly motivated to socially connect with others and have high priorities in expanding their social network (Cheek & Buss, 1981; Hill, 1987). Thus, they may see the process of seeking feedback from others as an opportunity to expand their social ties and perceive more benefits and fewer costs in the process. Especially when they have a chance to receive feedback from others who are distant from them, they may be willing to seek feedback from them in addition to their close others, as they may be less concerned about the quality of the feedback that could be inaccurate or inconsistent. They may be more motivated to connect with distant others. By investing in a relatively less amount of regulatory resource in seeking feedback from a broad range of others, people with high affiliation motivation may be able to fulfill their social desires.

People with low affiliation motivation, on the other hand, may find the feedback seeking process to be too effortful in general and perceive more costs and fewer benefits in the process. Because they may not aspire to expand their social ties through seeking feedback from others, they may be sensitive to possibilities that the feedback could be inaccurate and inconsistent when they seek feedback from others. Especially when they have the opportunity to receive feedback from others who are distant from them, they may be concerned about the quality of the feedback even more. When seeking feedback from their close others could already be somewhat effortful, people with low affiliation motivation would not risk receiving unhelpful feedback from distant others by investing in their extra efforts. To reduce potential costs, people with low affiliation motivation may prefer seeking feedback from their close others to distant others when they wish to receive feedback from others.

The Present Research

While past research has suggested the potential benefits and costs of seeking feedback, less work has examined under which conditions people decide to use feedback and how they acquire it if they choose to use it. The present research explores how the nature of feedback seeking may be significantly influenced by individuals' motivation to affiliate with others. I hypothesize that affiliation motivation may influence how much individuals seek out feedback for their goal pursuits and to whom they turn for feedback. People high in affiliation motivation may view feedback-seeking as a potential tool for establishing new social ties or strengthening their existing ones. As such, those

with high affiliation motivation will seek feedback not only from their close others but also from distant others and pursue their goals more efficiently regardless of the source of feedback. People low in affiliation motivation, on the other hand, will seek feedback from those most willing and able to provide it, which may often be those with whom they are already close to. People with low affiliation motivation will therefore pursue their goals efficiently when they receive feedback from close others.

In a series of studies, I test the hypotheses in three goal domains: health, achievement, and everyday goals. I first explore a relationship between affiliation motivation and feedback seeking from different sources (Study 1). Then, I manipulate a level of affiliation motivation and a source of feedback to examine how affiliation motivation moderates the impact of feedback source on goal pursuit in domains of a health goal (Study 2) and an achievement goal (Study 3). Lastly, I observe how people acquire and use feedback in their everyday goal pursuits by tracking their goal progress and positive motivational experience across two different time points (Study 4). I examine how affiliation motivation affects people's preference for different sources of feedback and how this preference for feedback ultimately influences goal pursuit.

Study 1: Affiliation Motivation and Feedback Seeking

Study 1 is designed to explore a relationship between the level of affiliation motivation and the preference for sources of feedback in feedback seeking. It explores how motivation to affiliate with others may shape the way people seek goal-related feedback from others and attempts to understand the social context that may underly this feedback seeking behavior. I hypothesize that the higher affiliation motivation people have, the more they seek feedback from others in varying degrees of closeness and expertise. To better understand such feedback seeking behavior, the quality and quantity of people's social support are assessed and examined in relation to the level of affiliation motivation. As an exploratory work, a relationship between the level of affiliation motivation and the preference for recipients of feedback in feedback giving is examined. I predict that the higher affiliation motivation people have, the more they give feedback to a range of others.

Method

Participants

Participants were 267 US residents recruited via Amazon Mechanical Turk. There were 148 (55.4 %) men and 119 (44.6 %) women. Ages ranged from 18 to 70 years ($M = 36.03$, $SD = 36.03$). Participants were primarily white (82.4 %).

Materials and Procedure

Participants were asked to complete a series of questionnaires.

Interpersonal Orientation Scale

First, participants started by completing an Interpersonal Orientation Scale (Hill, 1987) which measured levels of four different underlying dimensions of affiliation motivation: positive stimulation, attention, social comparison, and emotional support. Participants were presented with 26 statements that described the four different dimensions of affiliation motivation and were asked to indicate how true each statement was to them. Their responses were recorded on a 5-point Likert scale (1 = *Not at all true*; 2 = *Slightly true*; 3 = *Somewhat true*; 4 = *Mostly true*; 5 = *Completely true*). The scale yielded a total score that describes overall affiliation motivation and four subscales that represent different dimensions of affiliation motivation. Higher scores indicated greater affiliation motivation. These scores serve as a primary independent variable of this study.

Ten-item Personality Inventory

Participants then completed a brief measure of the Big Five that measures five domains of personality (Gosling et al., 2003). Participants were presented with 10 statements and were asked to indicate how much they agree or disagree with each statement. Their responses were recorded on a 7-point Likert scale ranging from *disagree strongly* to *agree strongly*. This measure was included in the study to assess a trait extraversion, a construct that seems to be related to affiliation motivation (Olson & Weber, 2004), and examine the unique effect of affiliation motivation on feedback seeking independently of extraversion.

Measure of Social Support Network

To measure social support, participants were asked to complete two sets of questionnaires: a measure of social support network (Antonucci & Akiyama, 1987) and an interpersonal support evaluation list (Cohen et al., 1985). The measure of social support network (Antonucci & Akiyama, 1987) assessed the actual size and the structure of social network. Participants were presented with a set of three concentric circles with the word “you” written in the innermost circle. Participants were told that the three circles include people who are important in their life right now and that each of the three circles represents different levels of closeness to them.

In the innermost circle, participants were asked to write down the first names of people whom they feel so close that it is hard to imagine life without. In the middle circle, participants were asked to write down the names of people whom they may not feel quite that close but who are still very important to them. In the outer circle, participants were asked to provide the names of people whom they have not already mentioned but who are close enough and important enough in their life that they should be placed in their personal network. The number of network members listed in the three circles yielded scores that reflect the overall size of network as well as the network structure described in terms of the level of closeness.

Interpersonal Support Evaluation List

To measure the perceived social support, participants completed a shortened version of Interpersonal Support Evaluation List (Cohen et al., 1985). It measures

perceived social support in three different domains: appraisal, belonging, and tangible (Cohen et al., 1985). As in Cohen and colleagues (1985), appraisal social support was defined as “advice or guidance” from others; belonging social support was defined as “empathy, acceptance, and concern” from others; and tangible social support was defined as “help or assistance, such as material or financial aid.” Participants were presented with 12 statements and were asked to indicate how true each statement was to them on a 4-point Likert scale (1 = *Definitely false*; 2 = *Probably false*; 3 = *Probably true*; 4 = *Definitely true*). The measure yielded a total score that describes overall perceived social support.

Feedback Sources Scale

Participants then completed a modified Feedback Sources Scale (Herold et al., 1987) that measures the perceptions of feedback and advice received from different types of sources in terms of their amount, usefulness, and consistency. Participants were asked to indicate how much feedback and advice they receive from others (i.e., amount), how useful feedback and advice are (i.e., usefulness), and how consistent the feedback and advice are (i.e., consistency). In this scale, close others, such as family and friends, others with relevant experience or expertise, and others on social media were assessed as different sources of feedback.

Close others, others with relevant experience or expertise, and others on social media were selected as feedback sources because they were assumed to be varying in degrees of closeness and expertise. A pilot test was conducted and confirmed this

assumption. Participants recruited via Prolific ($N = 165$) were asked to imagine times when they receive feedback and advice from each of those sources. Then, participants indicated how close they typically feel toward the sources and how much experience or expertise the sources typically have on 7-point scales (1 = *None at all*; 7 = *Extremely*). The results showed that participants felt closest toward close others ($M = 5.85$, $SD = 1.07$), then toward others with relevant experience or expertise ($M = 4.18$, $SD = 1.12$), and least close toward others on social media ($M = 2.56$, $SD = 1.12$). In terms of the level of expertise, participants believed others with relevant experience or expertise to have the most expertise ($M = 5.68$, $SD = 1.04$), then close others ($M = 4.92$, $SD = 1.19$), and others on social media to have the least expertise ($M = 3.30$, $SD = 1.35$).

The perceptions of feedback and advice provided to different types of recipients were also measured. Participants were asked to indicate how much feedback and advice they provide (i.e., amount) to close others, others with relevant experience or expertise, and others on social media, how useful the feedback and advice are (i.e., usefulness), and how consistent the feedback and advice are (i.e., consistency). These two sets of questions that measure the perceptions of feedback and advice received and provided were presented in a random order to eliminate any potential order effect.

All ratings were recorded on a 7-point Likert scale (1 = *Not at all*; 7 = *Extremely*). Higher scores on this scale reflects greater amount, usefulness, and consistency of the feedback and advice received from and provided to others. The scores on this scale,

particularly the amount, usefulness and consistency of feedback received from different sources, served as main dependent variables of this study.

Results

Effect of Affiliation Motivation on Feedback Seeking

The results of Pearson correlation indicated that three dimensions of feedback seeking—amount, usefulness, and consistency—were significantly positively associated (Table 1).

Table 1: Descriptive Statistics and Correlations for Three Dimensions of Feedback Seeking from Different Sources

Feedback seeking	<i>n</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1. Amount - close others	267	5.59	1.17	-								
2. Amount - experts	267	5.41	1.31	.38***	-							
3. Amount – social media	267	5.18	1.50	.31***	.48***	-						
4. Usefulness – close others	267	5.62	1.17	.54***	.46***	.33***	-					
5. Usefulness – experts	267	5.47	1.16	.34***	.61***	.28***	.39***	-				
6. Usefulness – social media	267	5.31	1.44	.37***	.48***	.71***	.26***	.36***	-			
7. Consistency – close others	267	5.57	1.29	.59***	.42***	.34***	.60***	.38***	.34***	-		
8. Consistency – experts	267	5.39	1.25	.40***	.59***	.45***	.47***	.52***	.45***	.40***	-	
9. Consistency – social media	267	5.15	1.58	.29***	.46***	.70***	.30***	.35***	.70***	.38***	.42***	-

*** $p < .001$.

Feedback Amount

A simple regression analysis was conducted to test if affiliation motivation predicts the total amount of feedback received from others. The total amount of feedback was computed by summing the amount of feedback participants received from close others, others with relevant experience or expertise, and others on social media. The results showed that affiliation motivation significantly predicted the total amount of feedback seeking ($B = 2.20$, $t(265) = 16.58$, $p < .001$) and explained a significant proportion of variance in the amount of feedback received from others in general ($R^2 = .51$, $F(1,265) = 275.03$, $p < .001$).

Multiple regression analyses were carried out to explore how different dimensions of affiliation motivation predict the overall amount of feedback seeking from others. The results indicated that positive stimulation, attention, and emotional support positively predicted the overall amount of feedback seeking (Table 2).

Table 2: Four Dimensions of Affiliation Motivation Predicting Overall Feedback Seeking Amount

Predictor	Estimate	SE	95% CI		p
			LL	UL	
Intercept	16.18	.132	15.924	16.443	<.001
Positive stimulation	.74	.219	.309	1.172	<.001
Attention	1.09	.200	.693	1.480	<.001
Social comparison	.29	.210	-.123	.705	.168
Emotional support	.40	.198	.007	.785	.046

Note. $R^2 = .52$, $F(4,262) = 70.36$, $p < .001$.

The results of the Pearson correlation indicated that there was a significant positive association between affiliation motivation and extraversion, $r(265) = .29$, $p < .001$. Thus, multiple regression analyses were carried out to investigate whether affiliation motivation could significantly predict the overall amount of feedback seeking from others after taking extraversion into account. The results indicated that even after holding extraversion constant, affiliation motivation remained to significantly predict the overall amount of feedback seeking, explaining a significant proportion of variance in the amount of feedback received from others in general (Table 3).

Table 3: Affiliation Motivation Predicting Overall Feedback Seeking Amount after Controlling for Extraversion

Predictor	Estimate	SE	95% CI		p
			LL	UL	
Intercept	16.18	.132	15.923	16.444	<.001
Extraversion	.11	.138	-.167	.378	.448
Affiliation motivation	2.17	.138	1.896	2.441	<.001

Note. $R^2 = .51$, $F(2,264) = 137.59$, $p < .001$.

Simple regression analyses were conducted to test a main hypothesis examining, if affiliation motivation predicts the amount of feedback seeking from different sources of feedback. The results showed that affiliation motivation significantly predicted the amount of feedback received from close others ($B = .58$, $t(265) = 9.28$, $p < .001$) and explained a significant proportion of variance in the amount of feedback received from close others ($R^2 = .25$, $F(1,265) = 86.09$, $p < .001$). Affiliation motivation significantly predicted the amount of feedback received from others with relevant experience or expertise ($B = .74$, $t(265) = 11.09$, $p < .001$) and explained a significant proportion of variance in the amount of feedback received from those with relevant experience or expertise ($R^2 = .32$, $F(1,265) = 122.90$, $p < .001$). Affiliation motivation significantly predicted the amount of feedback received from others on social media ($B = .88$, $t(265) = 11.82$, $p < .001$) and explained a significant proportion of variance in the amount of feedback received from those on social media ($R^2 = .35$, $F(1,265) = 139.79$, $p < .001$). The results of regression analyses suggested that participants high in affiliation

motivation were more likely to seek feedback from different sources compared to those low in affiliation motivation. The findings supported the main prediction of this study.

Multiple regression analyses were conducted to explore how different dimensions of affiliation motivation could predict the amount of feedback seeking from different sources. The results indicated that positive stimulation and emotional support positively predicted the amount of feedback seeking from close others (Table 4). Attention and social comparison positively predicted the amount of feedback seeking from others with relevant experience or expertise (Table 5). Positive stimulation and attention positively predicted the amount of feedback seeking from others on social media (Table 6). These results suggested that participants looked for feedback from different sources for different motivational reasons.

Table 4: Four Dimensions of Affiliation Motivation Predicting Feedback Seeking Amount from Close Others

Predictor	Estimate	SE	95% CI		p
			LL	UL	
Intercept	5.59	.062	5.469	5.714	<.001
Positive stimulation	.35	.103	.143	.550	<.001
Attention	.05	.094	-.132	.239	.570
Social comparison	-.02	.099	-.177	.213	.859
Emotional support	.24	.093	.057	.424	.010

Note. $R^2 = .26$, $F(4,262) = 22.87$, $p < .001$.

Table 5: Four Dimensions of Affiliation Motivation Predicting Feedback Seeking Amount from Others with Relevant Experience or Expertise

Predictor	Estimate	SE	95% CI		p
			LL	UL	
Intercept	5.41	.066	5.277	5.539	<.001
Positive stimulation	.17	.110	-.048	.387	.126
Attention	.38	.101	.179	.576	<.001
Social comparison	.23	.106	.019	.436	.033
Emotional support	.08	.099	-.120	.271	.448

Note. $R^2 = .33$, $F(4,262) = 31.88$, $p < .001$.

Table 6: Four Dimensions of Affiliation Motivation Predicting Feedback Seeking Amount from Others on Social Media

Predictor	Estimate	SE	95% CI		p
			LL	UL	
Intercept	5.18	.073	5.040	5.327	<.001
Positive stimulation	.23	.121	-.013	.463	.064
Attention	.66	.110	.438	.873	<.001
Social comparison	.05	.116	-.183	.275	.691
Emotional support	.08	.109	-.135	.295	.466

Note. $R^2 = .38$, $F(4,262) = 39.56$, $p < .001$.

Feedback Usefulness

A simple regression analysis was conducted to test if affiliation motivation predicts the overall perceived usefulness of feedback received from others. The overall perceived usefulness of feedback was computed by summing the usefulness of feedback participants received from close others, others with relevant experience or expertise, and others on social media. The results showed that affiliation motivation significantly predicted the overall usefulness of feedback seeking ($B = 1.96$, $t(265) = 15.49$, $p < .001$) and explained a significant proportion of variance in the usefulness of feedback from others in general ($R^2 = .48$, $F(1,265) = 239.88$, $p < .001$).

Simple regression analyses were conducted to test whether affiliation motivation predicts the perceived usefulness of feedback from others. The analyses revealed that affiliation motivation significantly predicted the usefulness of feedback from close others ($B = .62$, $t(265) = 9.62$, $p < .001$) with a significant proportion of variance explained (R^2

= .26, $F(1,265) = 92.56, p < .001$). Affiliation motivation significantly predicted the usefulness of feedback from others with relevant experience or expertise ($B = .53, t(265) = 8.47, p < .001$) with a significant proportion of variance explained ($R^2 = .21, F(1,265) = 71.69, p < .001$). Affiliation motivation significantly predicted the usefulness of feedback from others on social media ($B = .81, t(265) = 10.99, p < .001$) with a significant proportion of variance explained ($R^2 = .31, F(1,265) = 120.70, p < .001$). The results of these analyses suggested that the higher affiliation motivation participants had, the more they found feedback from others to be useful in general.

Feedback Consistency

A simple regression analysis was conducted to test if affiliation motivation predicts the overall perceived consistency of feedback received from others. The overall perceived consistency of feedback was computed by summing the consistency of feedback participants received from close others, others with relevant experience or expertise, and others on social media. The results showed that affiliation motivation significantly predicted the overall consistency of feedback seeking ($B = 2.26, t(265) = 16.26, p < .001$) and explained a significant proportion of variance in the consistency of feedback received from others in general ($R^2 = .50, F(1,265) = 264.27, p < .001$).

Simple regression analyses were conducted to test whether affiliation motivation predicts the perceived consistency of feedback received from others. The analyses revealed that affiliation motivation significantly predicted the consistency of feedback from close others ($B = .72, t(265) = 11.07, p < .001$) with a significant proportion of

variance explained ($R^2 = .32$, $F(1,265) = 122.63$, $p < .001$). Affiliation motivation significantly predicted the consistency of feedback from others with relevant experience or expertise ($B = .66$, $t(265) = 10.01$, $p < .001$) with a significant proportion of variance explained ($R^2 = .28$, $F(1,265) = 100.28$, $p < .001$). Affiliation motivation significantly predicted the consistency of feedback from others on social media ($B = .88$, $t(265) = 10.90$, $p < .001$) with a significant proportion of variance explained ($R^2 = .31$, $F(1,265) = 118.72$, $p < .001$). The results of these analyses suggested that the higher affiliation motivation participants had, the more they found feedback from others to be consistent in general.

Effect of Affiliation Motivation on Social Support

The quantity and quality of social support were examined in relation to the level of affiliation motivation using simple regression analyses. The quantity and quality of social support, measured via the size of social network and perceived social support, were found to be not correlated, $r(265) = -.02$, $p = .769$.

Size of Social Network

Participants' overall size of social network ranged from 3 to 27 ($M = 11.63$, $SD = 8.99$). Participants had an average network size of 4.37 members ($SD = 3.09$) for their closest network, 3.71 members ($SD = 3.12$) for their less close network, and 3.55 members ($SD = 3.10$) for their least close network.

A simple regression analysis was conducted to test if affiliation motivation predicts the overall size of social network. The results showed that affiliation motivation

marginally predicted the overall size of social network ($B = .92, t(265) = 1.68, p = .095$) and explained a marginal portion of variance in the overall size of social network ($R^2 = .01, F(1,265) = 2.81, p = .095$). To better understand the structure of social network in relation to affiliation motivation, simple regression analyses were used to test if affiliation motivation predicts the size of social network within each level of closeness. Affiliation motivation did not predict the number of network members listed in the innermost circle, $B = .29, t(265) = 1.53, p = .128$. However, it marginally predicted the number network members listed in the middle circle ($B = .32, t(265) = 1.65, p = .10$) with a marginal portion of variance explained ($R^2 = .01, F(1,265) = 2.73, p = .100$). Similarly, affiliation motivation marginally predicted the number network members listed in the outer circle ($B = .32, t(265) = 1.67, p = .096$) with a marginal portion of variance explained ($R^2 = .01, F(1,265) = 2.80, p = .096$).

The results suggested that participants with high affiliation motivation were likely to have a larger size of social network in general. They particularly had a larger size of social network composed of distant members.

Perceived Social Support

A simple regression analysis was carried out to test if affiliation motivation predicts the quality of social support reflected through the perceived social support. The results showed that affiliation motivation did not predict perceived social support ($B = .20, t(265) = .93, p = .353$) with only a small portion of variance explained ($R^2 = .003, F(1,265) = .87, p = .353$). The results suggested that compared to those with low affiliation

motivation, participants with high affiliation motivation did not necessarily receive a greater amount of social support, even if they typically have a larger size of social network.

Effect of Affiliation Motivation on Feedback Giving

As an exploratory analysis, feedback giving behavior was examined in parallel to feedback seeking behavior. The results of Pearson correlation showed that there was a significant positive association between feedback seeking and feedback giving behaviors in general (Table 7). Also, three dimensions of feedback giving—amount, usefulness, and consistency—were significantly positively associated (Table 8).

Table 7: Descriptive Statistics and Correlations for Three Dimensions of Overall Feedback Seeking and Giving

Overall feedback	<i>n</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Seeking – amount	267	16.17	3.08	-					
2. Seeking – usefulness	267	16.40	2.85	.80***	-				
3. Seeking – consistency	267	16.11	3.20	.80***	.79***	-			
4. Giving – amount	267	16.18	2.98	.79***	.75***	.77***	-		
5. Giving – usefulness	267	16.27	2.89	.76***	.74***	.82***	.76***	-	
6. Giving – consistency	267	16.25	3.00	.71***	.72***	.75***	.79***	.81***	-

*** $p < .001$.

Table 8: Descriptive Statistics and Correlations for Three Dimensions of Feedback Giving from Different Sources

Feedback giving	<i>n</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1. Amount - close others	267	5.55	1.19	-								
2. Amount - experts	267	5.34	1.24	.33***	-							
3. Amount – social media	267	5.30	1.49	.32***	.44***	-						
4. Usefulness – close others	267	5.56	1.21	.52***	.34***	.25***	-					
5. Usefulness – experts	267	5.33	1.14	.43***	.52***	.30***	.44***	-				
6. Usefulness – social media	267	5.38	1.42	.38***	.51***	.68***	.29***	.42***	-			
7. Consistency – close others	267	5.59	1.19	.59***	.34***	.28***	.59***	.42***	.36***	-		
8. Consistency – experts	267	5.37	1.23	.42***	.55***	.38***	.37***	.59***	.37***	.36***	-	
9. Consistency – social media	267	5.30	1.49	.37***	.47***	.70***	.40***	.42***	.71***	.35***	.43***	-

*** $p < .001$.

Feedback Amount

A simple regression analysis was conducted to test if affiliation motivation predicts the total amount of feedback provided to others. The total amount of feedback was computed by summing the amount of feedback participants provided to close others, others with relevant experience or expertise, and others on social media. The results showed that affiliation motivation significantly predicted the total amount of feedback giving ($B = 2.09$, $t(265) = 16.07$, $p < .001$) and explained a significant proportion of variance in the amount of feedback provided to others in general ($R^2 = .49$, $F(1,265) = 258.25$, $p < .001$).

Multiple regression analyses were carried out to explore how different dimensions of affiliation motivation could predict the overall amount of feedback giving. The results indicated that positive stimulation and attention positively predicted the overall amount of feedback giving (Table 9).

Table 9: Four Dimensions of Affiliation Motivation Predicting Overall Feedback Giving Amount

Predictor	Estimate	SE	95% CI		p
			LL	UL	
Intercept	16.18	.127	15.933	16.434	<.001
Positive stimulation	.90	.211	.478	1.311	<.001
Attention	1.23	.193	.849	1.608	<.001
Social comparison	.13	.203	-.273	.526	.533
Emotional support	.12	.191	-.251	.500	.515

Note. $R^2 = .52$, $F(4,262) = 70.79$, $p < .001$.

Multiple regression analyses were carried out to investigate whether affiliation motivation could significantly predict the overall amount of feedback giving after taking extraversion into account. The results indicated that even after holding extraversion constant, affiliation motivation remained to significantly predict the amount of feedback giving with a significant proportion of variance explained (Table 10).

Table 10: Affiliation Motivation Predicting Overall Feedback Giving Amount after Controlling for Extraversion

Predictor	Estimate	SE	95% CI		p
			LL	UL	
Intercept	16.18	.130	15.927	16.440	<.001
Extraversion	.01	.136	-.260	.276	.954
Affiliation motivation	2.09	.136	1.821	2.356	<.001

Note. $R^2 = .49$, $F(2,264) = 128.64$, $p < .001$.

Simple regression analyses were conducted to test if affiliation motivation predicts the amount of feedback participants give to others. The results of simple regression analyses showed that affiliation motivation significantly predicted the amount of feedback participants gave to close others ($B = .63$, $t(265) = 10.26$, $p < .001$) with a significant proportion of variance explained ($R^2 = .28$, $F(1,265) = 105.36$, $p < .001$). Affiliation motivation significantly predicted the amount of feedback provided to others with relevant experience or expertise ($B = .68$, $t(265) = 10.69$, $p < .001$) with a significant proportion of variance explained ($R^2 = .30$, $F(1,265) = 114.26$, $p < .001$). Affiliation motivation significantly predicted the amount of feedback provided to others on social media ($B = .78$, $t(265) = 9.99$, $p < .001$) with a significant proportion of variance explained ($R^2 = .27$, $F(1,265) = 99.82$, $p < .001$). The results of regression analyses suggested that participants high in affiliation motivation were more likely to give feedback to others compared to those low in affiliation motivation.

Multiple regression analyses were conducted to explore how different dimensions of affiliation motivation could predict the amount of feedback participants give to different types of others. The results indicated that positive stimulation positively predicted the amount of feedback giving to close others (Table 11). Positive stimulation and attention positively predicted the amount of feedback giving to others with relevant experience or expertise (Table 12). Positive stimulation and attention positively predicted the amount of feedback giving to others on social media (Table 13). These results suggested that while participants gave feedback to a range of others for different reasons,

one common motivational reason for them to give feedback to others was to experience feelings related to liking and love.

Table 11: Four Dimensions of Affiliation Motivation Predicting Feedback Giving Amount to Close Others

Predictor	Estimate	SE	95% CI		p
			LL	UL	
Intercept	5.55	.061	5.430	5.671	<.001
Positive stimulation	.47	.102	.270	.671	<.001
Attention	.10	.093	-.088	.278	.307
Social comparison	.04	.098	-.150	.235	.663
Emotional support	.10	.092	.077	.285	.258

Note. $R^2 = .30$, $F(4,262) = 28.19$, $p < .001$.

Table 12: Four Dimensions of Affiliation Motivation Predicting Feedback Giving Amount to Others with relevant experience or expertise

Predictor	Estimate	SE	95% CI		p
			LL	UL	
Intercept	5.34	.062	5.215	5.460	<.001
Positive stimulation	.20	.103	.000	.407	.050
Attention	.52	.094	.331	.702	<.001
Social comparison	.03	.099	-.161	.229	.730
Emotional support	.02	.093	-.164	.203	.835

Note. $R^2 = .33$, $F(4,262) = 32.67$, $p < .001$.

Table 13: Four Dimensions of Affiliation Motivation Predicting Feedback Giving Amount to Others on Social Media

Predictor	Estimate	SE	95% CI		p
			LL	UL	
Intercept	5.30	.076	5.145	5.446	<.001
Positive stimulation	.22	.127	-.029	.471	.083
Attention	.62	.116	.389	.845	<.001
Social comparison	.05	.122	-.190	.290	.683
Emotional support	.00	.115	-.225	.226	.994

Note. $R^2 = .31$, $F(4,262) = 28.95$, $p < .001$.

Feedback Usefulness

A simple regression analysis was conducted to test if affiliation motivation predicts the overall usefulness of feedback participants provide to others. The overall perceived usefulness of feedback was computed by summing the usefulness of feedback participants provided to close others, others with relevant experience or expertise, and others on social media. The results showed that affiliation motivation significantly predicted the overall usefulness of feedback giving ($B = 1.85$, $t(265) = 13.60$, $p < .001$) and explained a significant proportion of variance in the usefulness of feedback provided to others in general ($R^2 = .41$, $F(1,265) = 185.01$, $p < .001$).

Simple regression analyses were conducted to test whether affiliation motivation predicts the usefulness of feedback participants provided to others. The analyses revealed that affiliation motivation significantly predicted the usefulness of feedback provided to close others ($B = .54$, $t(265) = 8.04$, $p < .001$) with a significant proportion of variance

explained ($R^2 = .20$, $F(1,265) = 64.65$, $p < .001$). Affiliation motivation significantly predicted the usefulness of feedback provided to others with relevant experience or expertise ($B = .57$, $t(265) = 9.35$, $p < .001$) with a significant proportion of variance explained ($R^2 = .25$, $F(1,265) = 87.41$, $p < .001$). Affiliation motivation significantly predicted the usefulness of feedback provided to others on social media ($B = .75$, $t(265) = 10.09$, $p < .001$) with a significant proportion of variance explained ($R^2 = .28$, $F(1,265) = 101.71$, $p < .001$). The results of these analyses suggested that the higher affiliation motivation participants had, the more they provided useful feedback to others.

Feedback Consistency

A simple regression analysis was conducted to test if affiliation motivation predicts the overall consistency of feedback participants provide to others. The overall consistency of feedback was computed by summing the consistency of feedback participants provided to close others, others with relevant experience or expertise, and others on social media. The results showed that affiliation motivation significantly predicted the overall consistency of feedback giving ($B = 1.80$, $t(265) = 12.25$, $p < .001$) and explained a significant proportion of variance in the consistency of feedback provided to others in general ($R^2 = .36$, $F(1,265) = 149.95$, $p < .001$).

Simple regression analyses were conducted to test whether affiliation motivation predicts the consistency of feedback participants provided to others. The analyses revealed that affiliation motivation significantly predicted the consistency of feedback provided to close others ($B = .52$, $t(265) = 7.94$, $p < .001$) with a significant proportion of

variance explained ($R^2 = .19$, $F(1,265) = 62.97$, $p < .001$). Affiliation motivation significantly predicted the consistency of feedback provided to others with relevant experience or expertise ($B = .49$, $t(265) = 7.06$, $p < .001$) with a significant proportion of variance explained ($R^2 = .16$, $F(1,265) = 49.82$, $p < .001$). Affiliation motivation significantly predicted the consistency of feedback provided to others on social media ($B = .79$, $t(265) = 10.19$, $p < .001$) with a significant proportion of variance explained ($R^2 = .28$, $F(1,265) = 103.76$, $p < .001$). The results of these analyses suggested that the higher affiliation motivation participants had, the more they provided consistent feedback to others in general.

Study 2: Seeking Feedback for a Health Goal

In Study 2, I test a hypothesis that sources of feedback influence goal performance and that affiliation motivation moderates this effect. I believe that people with high affiliation motivation have no preference for sources of feedback between close others and distant others. Thus, they will pursue their goals efficiently regardless of the source of feedback. On the other hand, because people with low affiliation motivation prefer receiving feedback from close others, I predict that people with low affiliation motivation will pursue their goals efficiently when they receive feedback from close others versus distant others. To test this hypothesis, I manipulate the source of health feedback and measure subsequent health-related behavior.

As an exploratory work, I also test whether affiliation motivation moderates how people provide feedback to others in varying degrees of closeness. I predict that people with high affiliation motivation will provide an equal amount of feedback to close and distant others. On the other hand, people with low affiliation motivation will provide more feedback to close others than to distant others.

Method

Participants

Participants were 377 US residents recruited via Amazon Mechanical Turk. There were 239 (63.4%) men and 138 (36.6%) women. Ages ranged from 20 to 77 years ($M = 36.86$, $SD = 11.11$). Participants were primarily white (80.9%).

Materials and Procedure

Participants were told that in this study, they would provide their personal opinions on various topics. The study had a 2 (affiliation motivation: low vs. high) X 2 (feedback source: close vs. distant) between-subjects design.

Motivation Questionnaires

First, participants completed a set of questionnaires that measured their chronic levels of affiliation motivation (Hill, 1987) and healthy eating motivation (Naughton et al., 2015). Healthy Eating Motivation Scale (Naughton et al., 2015) contained 7 statements about making healthy food choices (e.g., “It’s important that the food I eat is nutritious.”) and participants were asked to indicate how strongly they disagree or agree with each statement on a 7-point Likert scale (1 = *Strongly disagree*; 7 = *Strongly agree*). The scale yielded a total score that reflects overall healthy eating motivation. Higher scores on this scale represent greater healthy eating motivation.

Affiliation Motivation Manipulation

Participants then played a Cyberball game (Williams et al., 2000). Participants were told that they would play a ball-tossing game with other participants who were logged in at the same time and answer some questions about the game afterward. Participants were randomly assigned to one of the two affiliation motivation conditions and played the game with two other computer players. In the low affiliation motivation condition, participants were highly included in the game. There was a total of 30 throws involved in the game and participants were passed the ball 12 times. The probability that

participants would be thrown the ball was 40%. In the high affiliation motivation condition, participants were highly excluded from the game. The ball was thrown to them twice. The probability that participants would receive the ball was about 7%. The number of throws involved in the game across the two conditions was implemented based on the past Cyberball studies (Hartgerink et al., 2015; Williams et al., 2000). Participants played the game for less than five minutes.

Once the game ended, participants were asked to answer two questions about the game. They were asked how much they enjoyed the interactive component of the game and how much they felt connected to other players of the game. Their responses were recorded on a 9-point scale (1 = *Not at all*; 9 = *Very much*). These questions served as a manipulation check.

Closeness to Feedback Source Manipulation

Next, participants were told that they would have an opportunity to provide their opinions on a menu. But before doing so, they were informed about what previous 50 participants of this study had suggested about healthy eating. Participants were randomly assigned to one of the two feedback source conditions. In the close condition, participants were told that based on their responses from an earlier questionnaire, previous 50 participants of this study and they match highly in personalities. By highlighting the similarities, the manipulation attempted to promote the feeling of closeness toward the previous participants who were about to provide feedback to participants. In the distant condition, participants were told that their responses from an earlier questionnaire suggest

that previous 50 participants of this study and they do not match in personalities. By highlighting the dissimilarities, the manipulation attempted to reduce the feeling of closeness toward the previous participants who were about to provide feedback to participants.

This manipulation was designed based on long-known empirical evidence that similarities promote feelings of closeness (e.g., Byrne et al., 1967; Izard, 1960). A pilot test that had been conducted also confirmed that this manipulation indeed evoked different levels of perceived closeness to feedback sources. One hundred and fifty participants recruited on Amazon Mechanical Turk completed a motivational questionnaire and randomly received one of the two feedback source manipulations before receiving feedback. Later, they were asked to report how close they felt to the previous participants of the study on a 5-point scale (1 = *Not close at all*; 5 = *Extremely close*) and how useful the feedback from the previous participants was on a 5-point scale (1 = *Not useful at all*; 5 = *Extremely useful*). Participants who received the close feedback source manipulation ($M = 3.73$, $SD = .91$) reported significantly higher levels of closeness than those who received the distant feedback source manipulation ($M = 3.42$, $SD = 1.18$), $t(127.17) = 1.74$, $p = .042$. Participants who received the close feedback source manipulation ($M = 4.06$, $SD = .86$) also perceived the feedback to be significantly more useful than those who received the distant feedback source manipulation ($M = 3.63$, $SD = 1.07$), $t(132.65) = 2.72$, $p = .004$.

Using Feedback in Making Healthy Food Choices

After randomly receiving one of the two feedback source manipulations, all participants received four pieces of feedback on healthy eating: (1) eat fresh vegetables, (2) eat fresh fruits, (3) eat foods that are high in protein and low in fat, and (4) eat foods that are low in refined sugar. Participants were then presented with a menu and asked to select foods that they would like to eat in a day for breakfast, lunch, dinner, and snacks. They had to include at least one food item in each meal and could pick the same item for more than one meal. The menu contained various appetizers, salads, entrees, sides, desserts, and non-alcoholic beverages, of which 27 items were pretested to be healthy and 24 items were pretested to be unhealthy. The total number of healthy and unhealthy items that participants selected were recorded. Then, the number of selected healthy items against the total number of selected items was calculated in percentage, and it served as a main dependent variable. A higher proportion of healthy items represented a greater utilization of provided feedback on healthy eating.

Giving Feedback

Lastly, participants had an opportunity to provide feedback on healthy eating to future participants of the study in an open-ended format. They had the maximum of 15 minutes to provide their responses and there was no word limit to their responses. The quantity of feedback that participants provided to future participants was assessed by counting the number of words used in their responses. A greater number of words reflected a greater amount of feedback participants gave to future participants.

Results

Manipulation Check for Affiliation Motivation

Participants assigned to the low affiliation motivation condition ($M = 7.23$, $SD = 1.85$) reported that they enjoyed the interactive component of the game significantly more than participants assigned to the high affiliation motivation condition ($M = 6.43$, $SD = 2.47$), $t(345.29) = 3.55$, $p < .001$. Participants in the low affiliation motivation condition ($M = 7.14$, $SD = 1.85$) also reported that they felt significantly more connected to other players of the game compared to participants in the high affiliation motivation ($M = 6.18$, $SD = 2.49$), $t(343.85) = 4.25$, $p < .001$. The results of independent t-tests suggested that the manipulation of affiliation motivation was successfully implemented.

Using Feedback in Making Healthy Food Choices

A two-way ANOVA was performed to analyze how affiliation motivation and perceived closeness to feedback source affected the amount of feedback utilization in making food choices (i.e., a percentage of selected healthy items to total selected items). The results revealed that the main effects of affiliation motivation ($F(1, 373) = .02$, $p = .876$) and perceived closeness to feedback source ($F(1, 373) = .13$, $p = .723$) were not significant. However, there was a marginally significant interaction between affiliation motivation and perceived closeness to feedback source, confirming the main hypothesis, $F(1, 373) = 2.78$, $p = .096$ (Figure 1).

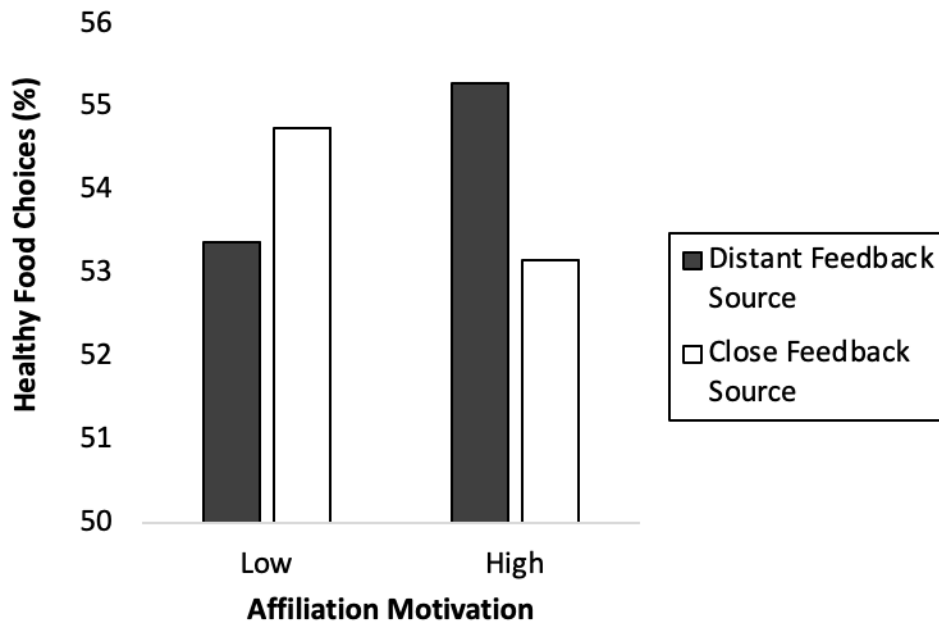


Figure 1: A Percentage of Healthy Items as a Function of Affiliation Motivation and Perceived Closeness to Feedback Source

Past research (e.g., Fishbach, Friedman, & Kruglanski, 2003) has suggested the likelihood of sex differences in the importance of health and fitness goal. Thus, a t-test was conducted to see if there is a sex difference in food choices. Consistent with the past findings, the results indicated that women ($M = 56.45$, $SD = 11.69$) made healthier food choices than men ($M = 52.84$, $SD = 9.07$), $t(232.64) = 3.13$, $p = .002$. A two-way ANOVA was performed within each sex to analyze the effects of affiliation motivation and perceived closeness to feedback source on the amount of feedback utilization. The analysis revealed similar patterns observed in the main findings but no statistical significance.

Giving Feedback

A two-way ANOVA was performed to analyze how affiliation motivation and perceived closeness to feedback sources affected the amount of feedback giving. The results revealed that the main effects of affiliation motivation ($F(1, 373) = 1.35, p = .246$) and perceived closeness to feedback sources ($F(1, 373) = .89, p = .346$) were not significant. However, there was a marginally significant interaction between affiliation motivation and perceived closeness to feedback sources, demonstrating similar behavior patterns displayed in feedback seeking, $F(1, 373) = 3.14, p = .077$ (Figure 2).

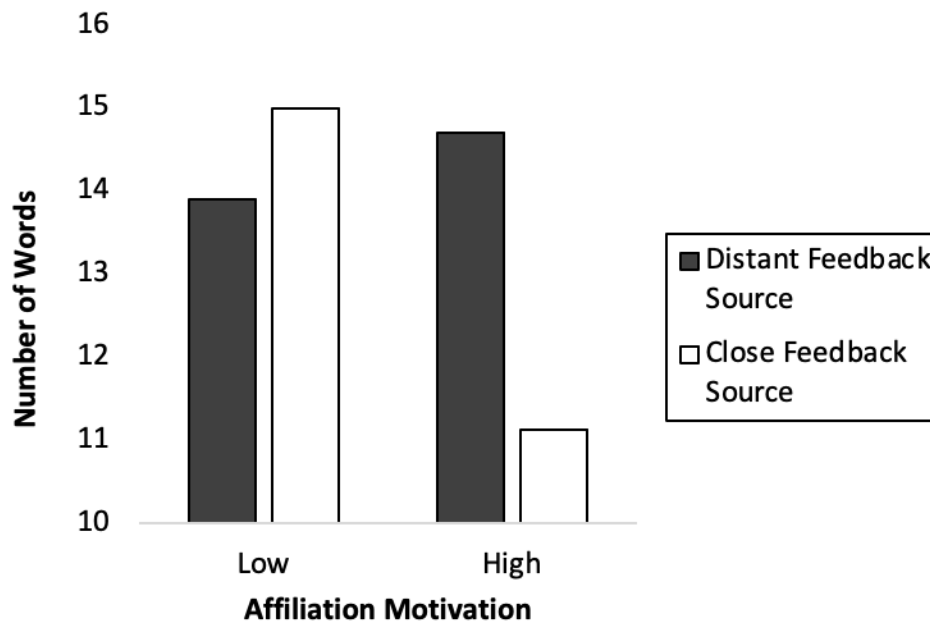


Figure 2: Amount of Feedback Giving as a Function of Affiliation Motivation and Perceived Closeness to Feedback Source

Pairwise comparisons indicated that among participants who felt close to feedback sources, those with low affiliation motivation provided a greater amount of feedback to future participants by using 3.87 more words on average, compared to those with high affiliation motivation ($p = .041$, 95% *CI* of the difference = .16 to 7.58). In contrast, among participants who felt distant to feedback sources, the amount of feedback provided to future participants did not significantly differ, regardless of whether they experienced high or low affiliation motivation ($p = .662$). Participants with high affiliation motivation provided a greater amount of feedback to future participants by using 3.58 more words on average when they felt distant toward feedback sources than when they felt close toward them ($p = .057$, 95% *CI* of the difference = -.10 to 7.26). In contrast, participants with low affiliation motivation did not significantly differ in the amount of feedback given to future participants, regardless of whether they felt close or distant to feedback sources ($p = .556$).

Study 3: Seeking Feedback for an Achievement Goal

In Study 3, I again test the hypothesis that affiliation motivation moderates how people seek feedback from others for their goal pursuits, but in a different basic goal domain. It is important to consider whether the effects observed in Study 2 are broadly applicable to different goal domains. Study 3, therefore, attempts to examine whether feedback choices generalize to an achievement goal domain, by providing participants feedback on productivity. Study 3 also attempts to address a potential limitation of Study 2 where participants self-reported what goal-relevant actions they would take, instead of actively engaging in those actions. In Study 3, participants will complete an achievement goal task and their performance on the task will be measured.

Method

Participants

Participants were 512 US residents recruited via Amazon Mechanical Turk. There were 304 (59.4%) men and 208 (40.6%) women. Ages ranged from 18 to 69 years ($M = 37.27$, $SD = 10.96$). Participants were primarily white (84.8%).

Materials and Procedure

The study had a 2 (affiliation motivation: low vs. high) X 2 (feedback source: close vs. distant) between-subjects design. The procedures of Study 3 were similar to Study 2, except participants completed a word search puzzle and received feedback on how to solve a word search puzzle.

Motivation Questionnaires

First, participants completed a set of questionnaires that measured their chronic levels of affiliation motivation (Hill, 1987) and achievement motivation (Jackson, 1984). The achievement motivation scale (Jackson, 1984) contained 20 statements and participants indicated whether each statement was true or false for them. Higher scores indicated higher levels of achievement motivation.

Affiliation Motivation Manipulation

Identical to Study 2, participants were randomly assigned to either high affiliation motivation condition or low affiliation condition and played one of the two versions of a Cyberball game.

Closeness to Feedback Source Manipulation

Participants were told that they would work on a word search puzzle that involves searching for fruits and vegetables and answer some questions about the puzzle afterward. The instructions said that the words were hidden either vertically from top to bottom or horizontally from left to right. But before working on the puzzle, like in Study 2, participants were randomly assigned to one of the two feedback source conditions and received feedback on how to successfully solve the word search puzzle from previous 50 participants of this study whose personalities either match highly (close condition) or do not match with theirs (distant condition).

Using Feedback in Solving a Word Search Puzzle

After randomly receiving one of the two feedback source manipulations, all participants received two pieces of feedback on the puzzle that they were about to solve. The feedback contained information about the directions and the themes of words hidden in the puzzle and was randomly delivered in one of the two versions. In one version, participants were told that more words were hidden vertically than horizontally and that there were more fruit words than vegetable words. In the other version, participants were told that more words were hidden horizontally than vertically and that there were more vegetable words than fruit words. Two versions of the feedback were used to counterbalance a potential feedback effect.

Participants were randomly assigned to solve one of the two versions of a word search puzzle. Two versions of the puzzle were identical. Both contained the same 16 words hidden in a 20x20 grid. Eight of them were vegetable words and the other eight were fruit words. Within each category of words, four of them were hidden vertically and the other four were hidden horizontally. All words were composed of 4 to 7 letters. Only differences observed between the two versions were the directions of the words and their locations. Words hidden vertically in one puzzle were hidden horizontally in the other. As the directions of the words changed, the locations of the words hidden in the grid changed as well. Finding words hidden horizontally is typically easier than finding words hidden vertically. Two versions of the puzzle were used to control a potential difference

in the difficulty of the puzzle that might be caused by the directions of words hidden in the grid.

Participants had the maximum of 15 minutes to solve the puzzle. The amount of time that participants spent on solving the puzzle was collected to use as an index for persistence. Participants' overall performance on the word search puzzle was measured by counting the total number of words that they correctly found. Feedback consistent performance was measured by counting the number of words correctly found that was consistent with the feedback participants received. Feedback inconsistent performance was measured by counting the number of words correctly found that was inconsistent with the feedback participants received. For example, if participants were told that more words would be hidden horizontally than vertically and that there were more vegetable words than fruit words, the total number of horizontal words and vegetable words that they found was recorded as feedback consistent performance. The total number of vertical words and fruit words was recorded as feedback inconsistent performance.

The difference between feedback consistent performance and feedback inconsistent performance was calculated to measure the amount of feedback utilization in solving the word search puzzle. This difference score would be called *feedback-based performance* and served as a main dependent variable. A higher feedback-based performance score represented a greater utilization of provided feedback on solving the word search puzzle.

Once participants completed the puzzle, they were asked to answer a series of questions regarding the puzzle and their experience of solving the puzzle. On 5-point scales, they were asked to indicate how difficult the puzzle was (1 = *Not at all*; 5 = *Very difficult*), how much they enjoyed solving it (1 = *Not at all*; 5 = *Very much*), and how useful the feedback that they got from the previous participants was (1 = *Not useful at all*; 5 = *Extremely useful*).

Giving Feedback

Lastly, like in Study 2, participants had an opportunity to provide feedback to future participants of the study in an open-ended format. This time, they had to describe how to successfully solve the word search puzzle that they had just worked on. The quantity of their feedback that participants provided to future participants was assessed by counting the number of words used in their responses.

Results

Puzzle Effect

Independent t-tests were conducted to test if two versions of the puzzle did not differ in participants' experience of solving the puzzle, in terms of the perceived difficulty, enjoyment, overall performance, and persistence. The results indicated that one version of the puzzle ($M = 3.89$, $SD = .91$) was perceived to be more difficult than the other ($M = 3.65$, $SD = .99$), $t(508.99) = 2.82$, $p = .005$, while both versions of the puzzle were perceived to be equally enjoyable, $t(510) = 2.82$, $p = .870$. Participants' overall performance ($t(510) = 1.12$, $p = .263$) and persistence ($t(510) = 1.26$, $p = .207$) did not

vary based on the version of the puzzle they were assigned to solve. Although one version of the puzzle was perceived to be more difficult than the other version, participants' overall performance, persistence, and enjoyment did not vary. Therefore, the version of the puzzle that participants were assigned to solve was not considered in further analyses.

Feedback Effect

Independent t-tests were conducted to test whether two different versions of the feedback were perceived differently in terms of their usefulness and affected participants' overall performance and persistence in solving the puzzle. The results indicated that the both versions of the feedback were perceived to be equally useful, $t(510) = 1.06, p = .292$. Participants' overall performance ($t(510) = .88, p = .380$) and persistence ($t(510) = .44, p = .663$) also did not vary based on the version of feedback they received. Therefore, the version of the feedback that participants received was not considered in further analyses.

Using Feedback in Solving a Word Search Puzzle

A two-way ANOVA was performed to analyze how affiliation motivation and perceived closeness to feedback source affected the amount of feedback utilization in solving a word search puzzle (i.e., feedback-based performance). The results revealed that the main effects of affiliation motivation ($F(1, 508) = 1.19, p = .276$) and perceived closeness to feedback source ($F(1, 508) = .21, p = .644$) were not significant. However, there was a significant interaction between affiliation motivation and perceived closeness to feedback source, confirming the main hypothesis, $F(1, 508) = 4.00, p = .046$ (Figure 3).

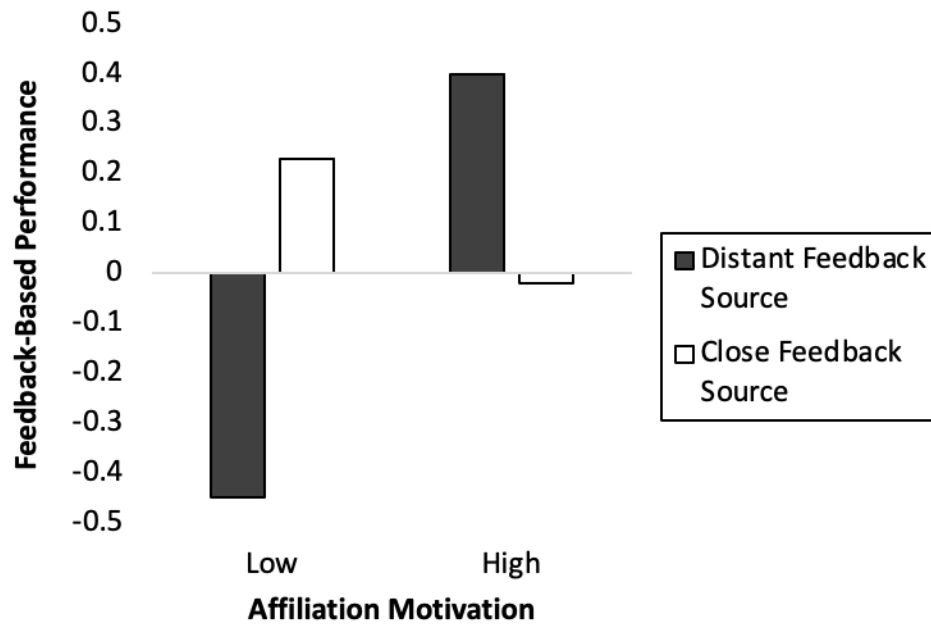


Figure 3: Feedback-based Performance as a Function of Affiliation Motivation and Perceived Closeness to Feedback Source

Pairwise comparisons indicated that among participants who felt distant to feedback sources, those with high affiliation motivation utilized a greater amount of feedback than those with low affiliation motivation by finding .85 more feedback consistent words as opposed to feedback inconsistent words on average ($p = .031$, 95% *CI* of the difference = .08 to 1.63). In contrast, when participants felt close to feedback sources, the amount of feedback utilization did not significantly differ by the level of affiliation motivation ($p = .518$). Participants with low affiliation motivation utilized a greater amount of feedback by finding .68 more feedback consistent words versus feedback inconsistent words when they felt close to feedback sources ($p = .086$, 95% *CI*

of the difference = -.10 to 1.45). In contrast, participants with high affiliation motivation did not significantly differ in the amount of feedback utilization, regardless of whether they felt close or distant to feedback sources ($p = .272$).

A two-way ANCOVA was conducted to understand the effects of affiliation motivation and perceived closeness to feedback source on feedback-based performance whilst controlling for overall performance and persistence. While one covariate, the amount of time participants spent on solving the puzzle, was significantly related to the feedback-based performance ($F(1,506) = 9.31, p = .002$), the other covariate, overall performance, was not related to the feedback-based performance ($F(1,506) = .21, p = .644$). Even after controlling for these effects of persistence and overall performance, there was a significant interaction between affiliation motivation and perceived closeness to feedback source, $F(1,506) = 4.31, p = .039$.

The interaction effects of affiliation motivation and perceived closeness to feedback source were unique on the feedback-based performance. A two-way ANOVA was performed to test how affiliation motivation and perceived closeness to feedback source affected persistence and overall performance. The results revealed that there was no significant interaction between affiliation motivation and perceived closeness to feedback source on persistence ($p = .532$) and overall performance ($p = .304$). These results implied how much participants utilized the feedback that they received in solving the puzzle and how their motivation and their feeling toward the source of feedback played significant roles in the feedback utilization.

Giving Feedback

A two-way ANOVA was performed to analyze how affiliation motivation and perceived closeness to feedback sources affected the amount of feedback participants provided to future participants. The results revealed that the main effects of affiliation motivation ($F(1, 508) = .86, p = .354$) and perceived closeness to feedback sources ($F(1, 508) = .03, p = .859$) were not significant. There was no significant interaction between affiliation motivation and perceived closeness to feedback sources, $F(1, 508) = .14, p = .713$ (Figure 4).

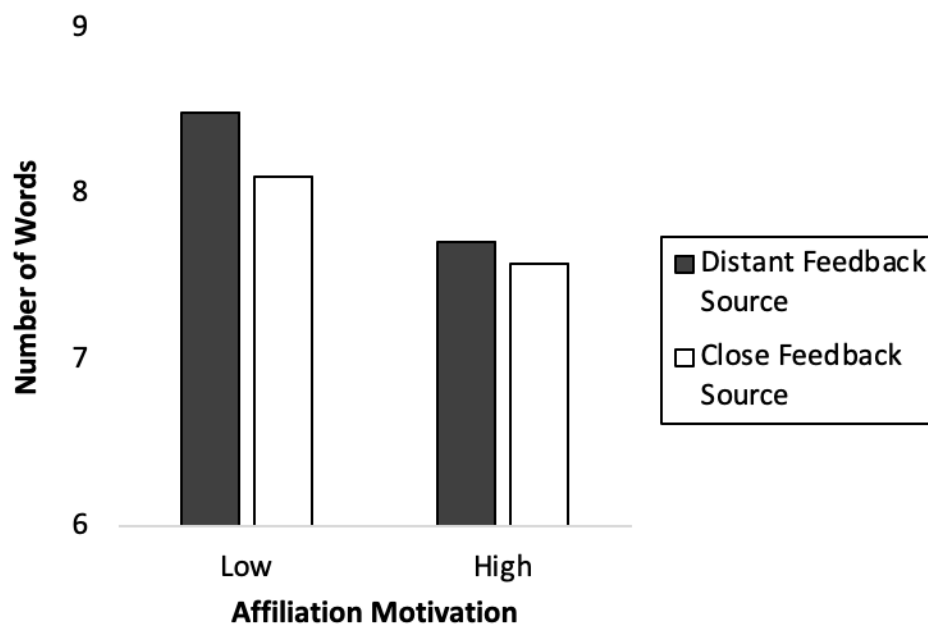


Figure 4: Amount of Feedback Giving as a Function of Affiliation Motivation and Perceived Closeness to Feedback Source

A two-way ANCOVA was conducted to understand the effects of affiliation motivation and perceived closeness to feedback source on the amount of feedback giving whilst controlling for overall performance and persistence. Both covariates, overall performance ($F(1,506) = 3.25, p = .072$) and persistence ($F(1,506) = 11.73, p < .001$), were related to the amount of feedback giving. However, after controlling for these effects of overall performance and persistence, there was no interaction between affiliation motivation and perceived closeness to feedback source, $F(1,506) = .04, p = .847$.

Study 4: Seeking Feedback for Everyday Goal Pursuits and a Role of Affiliation Motivation

Studies 2 and 3 examined how affiliation motivation and the feeling of closeness toward feedback sources influenced the amount of feedback seeking and the performance on a related goal pursuit. In those studies, participants' motivation to affiliate with others and feeling toward feedback sources were manipulated in the moment. Then, the way they utilized feedback in completing a given goal task was observed. In everyday life, however, people pursue more complex and diverse goals and interact with others in varying degrees of closeness and expertise. Study 4 is designed to explore how people seek feedback from various sources for their own goal pursuits based on their affiliation motivation and how such feedback seeking may help achieve their goals in everyday life. It examines how motivation to affiliate with others has an indirect impact on goal achievement in everyday life.

Consistent with Studies 1-3, I hypothesize that affiliation motivation may increase the social breadth of feedback sought and used for goal pursuit. Those high in affiliation motivation may seek and use feedback from a variety of sources whereas those low in affiliation motivation may primarily seek out and utilize feedback only from close others. I also hypothesize that the greater quality and quantity of feedback may promote goal achievement. To test these hypotheses, I track progress and positive motivational experience of people's everyday goal pursuits over a course of two different time points.

I assess the quality and quality of feedback people seek along the way of their goal pursuits, examine the influence of feedback on their goal progress and observe how such influence may vary based on people's affiliation motivation.

Method

Participants

Participants were US residents recruited via Prolific at two different time points. During the first time point, 301 participants were recruited to complete the first part of the study. During the second time point, 280 participants (93.0%) returned to participate in the second part of the study. Responses from 280 participants who completed both parts of the study were analyzed. There were 74 (26.4%) men and 200 (71.4%) women (six participants preferred not to answer). Ages ranged from 18 to 81 ($M = 38.59$, $SD = 14.58$). Participants were primarily white (71.4%).

Twenty-one participants who only completed the first part did not differ in any meaningful way. There were 4 (19%) men and 17 (81%) women. Their ages ranged from 19 to 74 ($M = 34.38$, $SD = 15.69$). Participants were primarily white (61.9%).

Materials and Procedure

This study was composed of two parts and conducted at two different time points. In the very beginning of the study, participants were informed that the study was composed of two parts and that they would be invited to complete the second part of the study within the next couple weeks after completing the first part.

Part 1

Participants completed a set of questionnaires. Participants first completed an Interpersonal Orientation Scale (Hill, 1987). Then, they completed a questionnaire titled “My Top Three Goals”. In this questionnaire, participants were asked to list the top three goals that they have for the next couple weeks. Goals were defined as “projects that they think about, plan for, carry out, and sometimes (though not always) complete or succeed at” (Linley et al., 2010). Participants were instructed to think carefully about their top three goals that accurately represent their main aspirations for the next couple weeks (Linley et al., 2010).

After listing their top three goals, participants answered a set of questions that assessed a current progress of each of the goals that they identified. They were asked to indicate (1) how much progress they have already made toward achieving each of the goals on a scale ranging from 0% to 100% (0% = *I haven't started yet*; 50% = *I'm halfway through*; 100% = *I'm done*) and (2) how well they are doing in achieving each of the goals on a 7-point scale (1 = *Not at all well*; 7 = *Very well*; Linley et al., 2010). For analyses, responses across three goals were summed for each item. Then, the combined responses of each item were summed using their z-scores and generated a composite score that represented goal progress at time 1 or baseline goal progress.

Then, participants answered a set of questions that measured general experiences of their goal pursuits. On 5-point scales (1 = *None at all*; 5 = *A great deal*), participants indicated (1) how clearly they know what to do to achieve each of the goals, (2) how

committed they are to each of the goals, (3) how much effort they expect to invest in each of the goals, (4) how much they expect to enjoy pursuing each of the goals, (5) how stressful they expect it will be to pursue each of the goals, and (6) how optimistic they are about achieving each of the goals. Responses on these items were combined after reverse coding a response on the stress measure. A composite score that reflects participants' positive motivational experience at time 1 or baseline positive motivational experience was created. Participants were then informed that they would be contacted within the next two weeks for the second part of the study.

Part 2

Eight days after the completion of the first part of the study, all participants were invited to complete the second part of the study. The second part of the study was active for a week for participants to complete. Participants again completed a questionnaire titled "My Top Three Goals". In the questionnaire, participants were reminded of the top three goals that they had identified during the first part of the study and answered a set of questions about each of the goals. The questions included in the questionnaire were identical to those used in the first part of the study assessing goal progress and general experiences of the goal pursuits. Responses from this questionnaire were used to compute a composite score that represented goal progress at time 2 and a composite score that reflected positive motivational experience at time 2. These composite scores served as dependent variables.

Participants then completed a modified Feedback Sources Scale (Herold et al., 1987) to assess the amount, usefulness, and consistency of feedback and advice they received from different types of sources for each of their goals. On 7-point scales (1 = *Not at all*; 7 = *Extremely*), participants indicated how much feedback and advice they got from close others (e.g., family and friends), others with relevant experience or expertise, and others on social media. Then, they reported how useful the feedback and advice were (1 = *Not useful at all*; 7 = *Extremely useful*) and how consistent the feedback and advice were (1 = *Not consistent at all*; 7 = *Extremely consistent*) from each of the sources. The amount, usefulness, and consistency of feedback and advice from close others, others with relevant experience or expertise, and others on social media were calculated across three goals.

Results

Goal Progress and Motivational Experience

Results of a paired t-test indicated that participants made further progress toward achieving their goals from time 1 ($M = 11.31$, $SD = 4.66$) to time 2 ($M = 12.78$, $SD = 5.16$), $t(278) = 5.05$, $p < .001$. General positive motivational experience, however, decreased from time 1 ($M = 66.92$, $SD = 9.16$) to time 2 ($M = 64.24$, $SD = 11.10$), $t(277) = 6.09$, $p < .001$. The results were consistent with prior research that has suggested how goal progress may lead to decreased motivation (Carver & Scheier, 1990). Especially in everyday situations where people balance multiple important goals to maximize overall

success, it is common that progress reduces motivation toward the goal at hand (Fitzsimon & Fishbach, 2010).

Effect of Affiliation Motivation on Feedback Seeking

The results of Pearson correlation indicated that three dimensions of feedback seeking—amount, usefulness, and consistency—were significantly positively associated (Table 14).

Table 14: Descriptive Statistics and Correlations for Three Dimensions of Feedback Seeking from Different Sources for Goal Pursuits

Feedback seeking	<i>n</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1. Amount - close others	280	8.49	4.40	-								
2. Amount - experts	280	7.41	4.32	.58***	-							
3. Amount – social media	280	6.17	4.07	.40***	.55***	-						
4. Usefulness – close others	280	9.21	4.79	.83***	.48***	.33***	-					
5. Usefulness – experts	280	8.61	4.65	.51***	.82***	.47***	.60***	-				
6. Usefulness – social media	280	7.10	4.51	.39***	.49***	.84***	.44***	.57***	-			
7. Consistency – close others	280	10.13	5.05	.69***	.32***	.22***	.77***	.44***	.35***	-		
8. Consistency – experts	280	9.08	4.86	.40***	.62***	.34***	.46***	.75***	.47***	.64***	-	
9. Consistency – social media	280	7.85	4.94	.30***	.37***	.64***	.36***	.48***	.80***	.54***	.71***	-

*** $p < .001$.

Feedback Amount

A simple regression analysis was conducted to test if affiliation motivation predicts the total amount of feedback received from others for participants' goal pursuits regardless of the source. The total amount of feedback was computed by summing the amount of feedback participants received from close others, others with relevant experience or expertise, and others on social media. The results showed that affiliation motivation significantly predicted the total amount of feedback seeking ($B = 2.49$, $t(278) = 16.47$, $p < .001$) and explained a significant proportion of variance in the amount of feedback received from others in general ($R^2 = .06$, $F(1, 278) = 16.47$, $p < .001$).

Simple regression analyses were conducted to test if affiliation motivation predicts the amount of feedback seeking from different sources. The results showed that affiliation motivation significantly predicted the amount of feedback received from close others ($B = 1.01$, $t(278) = 3.94$, $p < .001$) with a significant proportion of variance explained ($R^2 = .05$, $F(1, 278) = 15.56$, $p < .001$). Affiliation motivation significantly predicted the amount of feedback received from others with relevant experience or expertise ($B = .87$, $t(278) = 3.44$, $p < .001$) with a significant proportion of variance explained ($R^2 = .04$, $F(1, 278) = 11.83$, $p < .001$). Affiliation motivation significantly predicted the amount of feedback received from others on social media ($B = .60$, $t(278) = 2.49$, $p = .013$) with a significant proportion of variance explained ($R^2 = .02$, $F(1, 278) = 6.19$, $p = .013$). The results indicated that affiliation motivation led to more feedback seeking regardless of the source of feedback.

Feedback Usefulness

A simple regression analysis was conducted to test if affiliation motivation predicts the overall perceived usefulness of feedback received from others for participants' goal pursuits. The overall perceived usefulness of feedback was computed by summing the usefulness of feedback participants received from close others, others with relevant experience or expertise, and others on social media. The results showed that affiliation motivation significantly predicted the overall usefulness of feedback seeking ($B = 2.32$, $t(278) = 3.40$, $p < .001$) and explained a significant proportion of variance in the usefulness of feedback from others in general ($R^2 = .04$, $F(1, 278) = 11.54$, $p < .001$).

Simple regression analyses were conducted to test whether affiliation motivation predicts the perceived usefulness of feedback from others in varying degrees of closeness. The analyses revealed that affiliation motivation significantly predicted the usefulness of feedback from close others ($B = .98$, $t(278) = 3.49$, $p < .001$) with a significant proportion of variance explained ($R^2 = .04$, $F(1, 278) = 12.15$, $p < .001$). Affiliation motivation significantly predicted the usefulness of feedback from others with relevant experience or expertise ($B = .86$, $t(278) = 3.12$, $p = .002$) with a significant proportion of variance explained ($R^2 = .031$, $F(1, 278) = 9.75$, $p = .002$). Affiliation motivation marginally predicted the usefulness of feedback from others on social media ($B = .48$, $t(278) = 1.78$, $p = .076$) with a marginal proportion of variance explained ($R^2 = .01$, $F(1, 278) = 3.18$, $p = .076$). The results of these analyses suggested that the higher affiliation motivation participants had, the more they found feedback from others to be useful in general.

Feedback Consistency

A simple regression analysis was conducted to test if affiliation motivation predicts the overall perceived consistency of feedback received from others for participants' goal pursuits. The overall perceived consistency of feedback was computed by summing the consistency of feedback participants received from close others, others with relevant experience or expertise, and others on social media. The results showed that affiliation motivation significantly predicted the overall consistency of the feedback they received from others in general ($B = 1.53$, $t(278) = 1.99$, $p = .048$) with a significant proportion of variance explained ($R^2 = .01$, $F(1, 278) = 3.94$, $p = .048$).

Simple regression analyses were conducted to test whether affiliation motivation predicts the perceived consistency of feedback received from others in varying degrees of closeness. The analyses revealed that affiliation motivation significantly predicted the consistency of feedback from close others ($B = .62$, $t(278) = 2.06$, $p = .041$) with a significant proportion of variance explained ($R^2 = .02$, $F(1, 278) = 4.23$, $p = .041$). Affiliation motivation significantly predicted the consistency of feedback from others with relevant experience or expertise ($B = .58$, $t(278) = 2.01$, $p = .046$) with a significant proportion of variance explained ($R^2 = .01$, $F(1, 278) = 4.02$, $p = .046$). Affiliation motivation, however, did not predict the consistency of feedback from others on social media ($B = .33$, $t(278) = 1.10$, $p = .270$) and explained no proportion of variance in the amount of feedback received from others on social media ($R^2 = .00$, $F(1, 278) = 1.22$, $p = .270$). The results of these analyses suggested that the higher affiliation motivation

participants had, the more they found feedback from others to be consistent in general, except for the one from others on social media.

Effect of Feedback Seeking on Goal Progress

Multiple regression analyses were conducted to test if the amount, usefulness, and consistency of feedback from others predicted goal progress. The effects of feedback on goal progress measured at time 2 were examined after controlling for goal progress measured at time 1.

Feedback Amount

The results of a multiple regression analysis indicated that total amount of feedback from others positively predicted goal progress at time 2 after controlling for goal progress at time 1 ($B = .08$, $t(276) = 3.08$, $p = .002$) and explained a significant proportion of variance ($R^2 = .29$, $F(2, 276) = 56.37$, $p < .001$). A further multiple regression analysis was conducted to investigate whether feedback from others in varying degrees of closeness had different impacts on goal progress. The analyses revealed that the amount of feedback participants received from others with relevant experience or expertise positively predicted goal progress reported at time 2 (Table 15).

Table 15: Feedback Seeking Amount from Different Sources Predicting Goal Progress at Time 2

Feedback source	Estimate	SE	95% CI		p
			LL	UL	
Intercept	6.70	.696	5.328	8.070	<.001
Goal progress at time1	.54	.057	.425	.650	<.001
Amount – close others	.31	.322	-.328	.941	.342
Amount – experts	.98	.353	.287	1.677	.006
Amount – social media	-.36	.315	-.978	.263	.257

Note. $R^2 = .30$, $F(4,274) = 29.98$, $p < .001$.

Feedback Usefulness

The results of a multiple regression analysis indicated that overall perceived usefulness of feedback from others positively predicted goal progress at time 2 after controlling for goal progress at time 1 ($B = .09$, $t(276) = 3.77$, $p < .001$) and explained a significant proportion of variance ($R^2 = .30$, $F(2, 276) = 59.62$, $p < .001$). A further multiple regression analysis was conducted to investigate whether feedback from others in varying degrees of closeness had different impacts on goal progress. The analyses revealed that the more participants found feedback from others with relevant experience or expertise to be useful, the greater goal progress they made toward achieving their goals at time 2 (Table 16).

Table 16: Feedback Usefulness from Different Sources Predicting Goal Progress at Time 2

Feedback source	Estimate	SE	95% CI		p
			LL	UL	
Intercept	6.87	.692	5.508	8.232	<.001
Goal progress at time1	.52	.057	.411	.634	<.001
Usefulness – close others	.47	.327	-.173	1.113	.151
Usefulness – experts	.95	.356	.246	1.647	.008
Usefulness – social media	-.26	.318	-.885	.368	.417

Note. $R^2 = .31$, $F(4,274) = 31.33$, $p < .001$.

Feedback Consistency

The results of a multiple regression analysis indicated that overall perceived consistency of feedback from others positively predicted goal progress at time 2 after controlling for goal progress at time 1 ($B = .06$, $t(276) = 2.96$, $p = .003$) and explained a significant proportion of variance ($R^2 = .29$, $F(2, 276) = 55.89$, $p < .001$). A further multiple regression analysis was conducted to investigate whether feedback from others in varying degrees of closeness had different impacts on goal progress. The analyses revealed that the more participants found feedback from others with relevant experience or expertise to be consistent, the greater goal progress they made toward achieving their goals at time 2 (Table 17).

Table 17: Feedback Consistency from Different Sources Predicting Goal Progress at Time 2

Feedback source	Estimate	SE	95% CI		p
			LL	UL	
Intercept	6.64	.694	5.269	8.001	<.001
Goal progress at time1	.54	.057	.432	.655	<.001
Consistency – close others	.27	.346	-.413	.947	.441
Consistency – experts	.91	.415	.097	1.731	.028
Consistency – social media	-.31	.377	-1.049	.437	.418

Note. $R^2 = .30$, $F(4,274) = 28.83$, $p < .001$.

Effect of Feedback Seeking on Positive Motivational Experience

Multiple regression analyses were conducted to test if the amount, usefulness, and consistency of feedback from others predicted positive motivational experience. The effects of feedback on positive motivational experience measured at time 2 were examined after controlling for positive motivational experience measured at time 1.

Feedback Amount

The results of a multiple regression analysis indicated that total amount of feedback from others positively predicted positive motivational experience at time 2 after controlling for positive motivational experience at time 1 ($B = .13$, $t(275) = 3.04$, $p = .003$) and explained a significant proportion of variance ($R^2 = .58$, $F(2, 275) = 193.25$, $p < .001$). A further multiple regression analysis was conducted to investigate whether feedback from different sources had different impacts on positive motivational experience. The analyses revealed that the amount of feedback participants received from others with relevant experience or expertise positively predicted positive motivational experience reported at time 2 (Table 18).

Table 18: Feedback Seeking Amount from Different Sources Predicting Positive Motivational Experience at Time 2

Feedback source	Estimate	SE	95% CI		p
			LL	UL	
Intercept	4.01	3.200	-2.287	10.311	.211
Positive motivational experience at time1	.90	.047	.807	.993	<.001
Amount – close others	.54	.534	-.508	1.596	.310
Amount – experts	1.23	.585	.078	2.379	.036
Amount – social media	-.24	.521	-1.265	.786	.646

Note. $R^2 = .59$, $F(4,273) = 97.42$, $p < .001$.

Feedback Usefulness

The results of a multiple regression analysis indicated that overall perceived usefulness of feedback from others positively predicted positive motivational experience at time 2 after controlling for positive motivational experience at time 1 ($B = .10$, $t(275) = 2.79$, $p = .006$) and explained a significant proportion of variance ($R^2 = .58$, $F(2, 275) = 191.56$, $p < .001$). A further multiple regression analysis was conducted to investigate whether feedback from different sources had different impacts on positive motivational experience. The analyses revealed that the more participants found feedback from others with relevant experience or expertise to be useful, the more positive motivational experience they reported at time 2 (Table 19).

Table 19: Feedback Usefulness from Different Sources Predicting Positive Motivational Experience at Time 2

Feedback source	Estimate	SE	95% CI		p
			LL	UL	
Intercept	4.27	3.215	-2.058	10.601	.185
Positive motivational experience at time1	.90	.048	.803	.990	<.001
Usefulness – close others	.48	.548	-.600	1.556	.384
Usefulness – experts	1.39	.592	.224	2.554	.020
Usefulness – social media	-.48	.531	-1.524	.566	.368

Note. $R^2 = .59$, $F(4,273) = 97.45$, $p < .001$.

Feedback Consistency

The results of a multiple regression analysis indicated that overall perceived consistency of feedback from others positively predicted positive motivational experience at time 2 after controlling for positive motivational experience at time 1 ($B = .09$, $t(275) = 2.55$, $p = .011$) and explained a significant proportion of variance ($R^2 = .58$, $F(2, 275) = 190.06$, $p < .001$). A further multiple regression analysis was conducted to investigate whether feedback from different sources had different impacts on positive motivational experience. The analyses revealed that the consistency of feedback participants received from others with relevant experience or expertise marginally predicted positive motivational experience reported at time 2 (Table 20).

Table 20: Feedback Consistency from Different Sources Predicting Positive Motivational Experience at Time 2

Feedback source	Estimate	SE	95% CI		p
			LL	UL	
Intercept	3.72	3.205	-2.591	10.029	.247
Positive motivational experience at time1	.91	.047	.811	.998	<.001
Consistency – close others	.61	.573	-.519	1.737	.289
Consistency – experts	1.20	.686	-.156	2.546	.083
Consistency – social media	-.56	.627	-1.791	.677	.375

Note. $R^2 = .58$, $F(4,273) = 95.91$, $p < .001$.

General Discussion

The purpose of this research was to gain a better understanding of the role of affiliation motivation in self-regulation. It investigated how this basic social motivation could shape the way people utilize others as valuable sources of feedback for their goal pursuits. The results of the present study supported the hypothesis that affiliation motivation moderates how much individuals seek out feedback for their goal pursuits and to whom they turn for feedback. Four studies demonstrated that people with high affiliation motivation seek feedback from various sources and pursue their goals efficiently regardless of the source of feedback. On the other hand, people with low affiliation motivation seek feedback from those with whom they are already close and pursue their goals efficiently when they receive feedback from them.

To summarize, Study 1 explored a basic relationship between affiliation motivation and feedback seeking. Participants with higher affiliation motivation tended to have a larger size of social networks, suggesting that they might be motivated to seek feedback from a broader range of people. Participants with higher level of affiliation motivation were likely to seek a greater amount of feedback from various sources and perceive the feedback to be more useful and consistent. Dimensions of affiliation motivation explained that participants with higher level of affiliation motivation may seek feedback from others to experience feelings of liking and love, enhance feelings of self-worth, acquire self-relevant information, and receive emotional support. They also

explained that participants with higher level of affiliation motivation sought feedback from various sources for different motivational reasons.

Studies 2 and 3 examined how affiliation motivation moderated the impact of feedback provided by close versus distant others on feedback-based goal performance. Participants who received a low affiliation motivation manipulation utilized the feedback more when the feedback was provided by close others versus distant others by displaying feedback consistent behavior to a greater degree in completing a goal task. Participants who received a high affiliation motivation manipulation, however, did not vary in the amount of feedback utilization—if not higher in the amount of feedback utilization when the feedback was from distant others—in completing the goal task regardless of from whom they received the feedback.

Study 4 investigated how affiliation motivation had an indirect impact on goal progress and positive motivational experience in everyday goal pursuit. Affiliation motivation motivated participants to seek feedback from various sources, and seeking a great amount of feedback that's useful and consistent promoted their goal progress and positive motivational experience. This was particularly true when participants sought feedback from others with experience or expertise. The results of Study 4 suggested that a source of feedback played an important role in goal progress and positive motivational experience and that affiliation motivation affected how much participants were willing to receive feedback from others and to whom they turned to receive it.

Contributions and Implications

These findings contribute to research on self-regulation by examining the role of affiliation motivation in feedback seeking and how feedback from others impacts goal performance.

There is a long history in psychology examining how motivation influences the way people respond to relevant cues present in the environment. For example, motivation can influence how people perceive visual stimuli relevant to their motivational state. When people have a high need for money, they are more likely to estimate the size of a coin much larger than it really is (Bruner & Goodman, 1947). Motivation can also influence how people perceive others. When people find others to be useful for their active goal, they tend to perceive those instrumental others more like them and evaluate them more positively (Fitzsimons & Shah, 2008). Consistent with past research, the current set of studies suggests that motivation to affiliate with others affects not only with whom people establish social ties but also how they perceive values of feedback from various sources and to whom they turn when they are in need for feedback.

The findings suggest that affiliation motivation shapes the sensitivity to the potential benefits and costs related to feedback seeking from others. People with high affiliation motivation are more sensitive to the potential benefits of feedback than its costs. When feedback comes from various sources, they are willing to receive feedback from any source. They perceive benefits in seeking feedback from a source who may offer a potential social opportunity of expanding their social ties. If they find the

feedback to be helpful for their pursuits, they seem to use it efficiently in their pursuits. If they perceive the feedback to be unhelpful, they may not use it directly to facilitate their goal progress but manage to find ways to make a use out of it by considering feedback seeking process as an opportunity to connect with others. Their high level of affiliation motivation seems to buffer the potential negative effects that unhelpful feedback may have on their pursuits.

People with low affiliation motivation, on the other hand, are more sensitive to the potential costs of feedback than its benefits. When feedback comes from various sources, they prefer receiving feedback from a source whom they perceive fewer potential costs in achieving their goals. People with low affiliation motivation do not desire to expand their social network through seeking feedback from others. Thus, when they choose to seek feedback from others, they may seek feedback that can facilitate their goal achievement. The quality of feedback may serve as a crucial role in determining the likelihood of seeking feedback from others.

Therefore, feedback is not equally useful to everyone. Social motivation that underlies the feedback seeking behavior needs to be considered to determine the usefulness of feedback.

Limitations and Future Directions

The present research represents only an initial exploration of the role that affiliation plays in self-regulation. Future research could profitably take many directions to explore subsequent questions. The current research did not explore under which

circumstances people choose to forgo feedback from others completely, regardless of the level of affiliation motivation. If people have the ability to search for goal-relevant information, monitor their pursuit efficiently and provide themselves with necessary feedback on their own, would they choose not to receive feedback from others? Under which circumstances would it be more beneficial to not receive feedback from others? To provide a full picture to the understanding of how others influence self-regulatory processes, it would be important to understand the potential benefits of forgoing feedback from others and under what conditions it may occur.

The present research suggested that a source of feedback plays an important role in goal achievement. It did not, however, explore in what manners different sources of feedback supported goal achievement. Just as there are multiple dimensions of social support (Cohen et al., 1985), people may have different beliefs for different feedback sources and expect to receive different types of help from them. Future research would be able to explore beliefs and expectations that people have for different feedback sources and examine how those beliefs may be related to goal progress.

In the present research, as an initial attempt to explore the effect of affiliation motivation on feedback seeking, feedback was defined broadly as information about goal pursuit, regardless of its stage. In future research, feedback could be defined more specifically to reflect different stages of goal pursuit. Feedback may contain different types of information across different stages of goal pursuit. For example, feedback provided in the beginning stage of goal pursuit may be more general than feedback

provided in the later stage. Feedback provided in the later stage of goal pursuit may be more personalized to pursuers and may contain more evaluative information about them. It would be interesting to explore how feedback seeking behavior may vary depending on the types of feedback people receive from other in various stages of their goal pursuit and how affiliation motivation may play a role in this process.

The present research emphasized the role of affiliation motivation in determining the sensitivity to the potential benefits and costs related to seeking feedback from others in a regulatory process. This behavioral tendency of assessing the potential benefits and costs in the regulatory process is also reflected in another motivational principle, regulatory focus (Higgins, 1998). People with a promotion focus are concerned with advancement, growth, and accomplishment, and thus, are likely to be sensitive to benefits involved in a regulatory process. People with a prevention focus are concerned with security, safety, and responsibility, and thus, are likely to be sensitive to costs involved in the process. It would be interesting to explore how these two motivational constructs—one that is social and the other that is less so—interact with one another to shape people's preference for seeking feedback from others in the process of their regulatory pursuits.

The current research could lend insight into the role of social motivation in group performance. When group members pursue a common goal, oftentimes, they need to navigate problem solving and motivations that arise from being in a group (Turner et al., 1992). Such navigation may ultimately impact the group's performance. Indeed, work on process loss (Taylor, Berry, & Block, 1958; Mullen, Johnson, & Salas, 1991) has

suggested that social motivations that arise within a group, particularly the motivation to adhere to a group and its standards, may often disrupt effective functioning in terms of both quality and quantity (Turner et al., 1992). But what if group members have a strong motivation to affiliate with others outside of their group as well? How would that motivation influence their group performance? Even within a group, unique information (vs. commonly shared information) from its members tends to get lost (Stasser & Titus, 1985). If group members have a strong motivation to affiliate with members of the group individually by paying attention to their uniqueness, group performance may not be hindered as much. If affiliation motivation can be directed not just toward those who are close but also toward those who are distant with regards to a group membership and an individual uniqueness within a group, it may motivate group members to seek outside information or unique information for their common pursuit. Being exposed to various perspectives of problem solving could then prevent groupthink from happening and lead the group to function at its optimal level.

Conclusions

By demonstrating how others can serve as valuable sources of feedback, I wish to contribute to the fundamental understanding that the process of self-regulation often involves other people, and that basic social motivation can modify the process of self-regulation. Basic social motivation, such as affiliation motivation, influences the way people seek regulatory support from others. Having a certain preference for social support may imply that some people benefit more from this social component of the regulatory process and that social support is more useful for some than others. “The more the better” may not be true for all with regards to social support and self-regulation. Social support becomes beneficial to self-regulation when it is provided in a way that meets individuals’ social motivational need.

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Biography

Jee Young Kim received M.A. in Psychology from Duke University and 2019 and graduated magna cum laude from Emory University with B.A. in Music and Psychology in 2014. Her research mainly focuses on how people are motivated to connect with others to pursue their goals efficiently. During her time at Duke, she presented her work at the annual meetings of Society of Personality and Social Psychology and taught summer courses including Personality Psychology and Introduction to Social Psychology to Duke undergraduates.