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Emotion and Perceived Difficulty on Motivation in Goal Setting

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Previous research has identified the challenges associated with understanding and predicting motivation in individuals with completion of a given task. Forty participants, twenty male and twenty female, were randomly recruited by the researcher to complete a questionnaire that studied the effects of emotion and perceived difficulty of a given task on their motivation to complete said task. Questionnaires were handed out on a single day at a public facility within Huron University College at the University of Western Ontario. After testing, a 2x2 between subjects ANOVA found that participants rated their motivation below what was considered chance, and no statistical significance was noted, $F(1,36)=0.7, p<0.05$.

As psychological research has progressed new theories of motivation have emerged. In the field of motivation, psychologists have moved from predicting and determining motivation using the expectancy theory to progressively adopting more complex theories of multiple goal pursuit in achieving goals. From expectancy theory, the achievement theory of motivation and the attribution theory of motivation were developed; and from these theories, theories of multiple goal pursuit were born. Psychologists have narrowed their theories down to accept the fact that the plethora of events surrounding us on a daily basis inevitably is going to affect the way we complete a task (or achieve a specific goal). This notion that we are no longer subjected to one isolated activity at a time was alluded to in the development of the attribution theory. In combination with theories of multiple goal pursuit in motivation researchers have attempted to develop new ways of predicting and understanding this countenance. In modern society, we are constantly bombarded with media adverts, cellular devices going
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off, different music in every venue, and a never-ending plethora of arbitrary activity
surrounding us. The multitude of events that surround us on daily basis is overwhelming,
events that to the modern day layman may seem meaningless.

Expectancy theory of motivation was a long posited theory that explained
motivation based on three factors: expectancy (or the subject’s belief in the likelihood of
completing a given task), instrumentality (how a subject’s own performance level will
help or hinder the completion of a given task), and the valence (how eager a subject is to
engage in a particular task) (Pousa & Mathieu, 2010, pg. 37). Given these three factors in
combination with each other, researchers have also continued to take into account that
intrinsic and extrinsic rewards will have a further effect on the motivation of a given task.
A high intrinsic value (important to the subject) will likely lead to a high degree of
motivation toward completion of a given task. Pousa and Mathieu (2010) completed a
study that explored the use of expectancy theory in a training situation by sales managers.
Born out of the expectancy theory, Pousa et al. (2010) postulated that the motivation of a
manager based on intrinsic reward would ultimately effect how they perform at their own
tasks, and therefore their motivation in training new employees. Pousa et al. (2010)
determined through a mathematical algorithm that sales managers’ motivations can be
varied based on rewards that exist. This model is vague but its use of the expectancy
theory in prediction of sales managers’ motivation is imperative to the research presented
in this paper. The model presented in the research completed by Pousa et al. (2010) is
based only on one variable – intrinsic versus extrinsic reward of the sales manager. We
can assume that these were not the only factors that were affecting the way a sales
manager was performing on a specific day. The research completed by Pousa et al.
(2010) is inundated with an important oversight – other daily factors will ultimately affect how we perform on a given day.

The achievement theory of motivation was postulated three decades ago in an attempt to understand individuals’ flexible and inflexible responses to completing a given task through the description of two different goal types: mastery goals (which emphasize the development of an individual’s unprecedented competence of a given task) and performance goals (which emphasize an individual’s existing competency and need to outperform others on a given task) (Senko, Hulleman, & Harackiewicz, 2011, pg. 27).

Senko, Hulleman, and Harackiewicz (2011) identified that original research believed that mastery goals would produce stronger motivational results than performance goals, but that modern research has postulated that performance goals might, in fact, be stronger indicators of motivation. From this, Senko et al. (2011) were able to identify that new theories of motivation needed to be adopted to adapt individuals to the ever-changing world around us – thus the research realm moved into notions of multiple goal pursuit in motivation. Senko et al. (2011) criticized past research, accepting the new notions of multiple goal pursuit presenting the belief that the attempt to achieve multiple goals can actually increase motivation.

Vancouver, Weinhardt, and Schmidt (2010) criticized the multiple theories surrounding motivational research and the variable factors that are expressed in each theory. Vancouver et al. (2010) developed a complex computational model that works toward integrating all the theories of motivation that have emerged over many years within the psychological realm – attempting to incorporate all the available theories with one approach. One approach would provide a consistency within psychological research.
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The computational model ultimately can be viewed as a strategy toward refinement of long posited theories that do not remain true to the modern world. Although they did not come to any conclusions that are going to be widely accepted in the academic world, they can be credited with attempting to overcome a hurdle that the psychological world has found itself faced with in the past decade.

The attribution theory of motivation was an early theory that accepted the notion that extraneous factors can potentially affect the outcome of an individual's work. The attribution theory believed that an individual's performance outcome was directly affected by social and situational cues that said individual received (Karakowsky & Mann, 2008, pg. 260). Karakowsky and Mann (2008) developed a working theory that explored how an individual’s existing psychological underpinnings affected said individual’s performance at a given task. Karakowsky et al. (2008) postulated that success at a task would be dependent on an individual’s ability to relate to the given task, how involved the individual had already intended to be with the given task, and the individual’s attribution of success or failure to luck. Karakowsky et al. (2008) were able to present a conceptual framework for future research for the potential influence of self-attribution on success or failure of a given task.

Louro, Pieters, and Zeelenberg (2007) based their research on the notion that when emotions are involved in goal pursuit, the level of motivation associated with goal attainment will change. Louro et al. (2007) postulated that positive emotions were more likely to breed motivation. In their extensive research, Louro et al. (2007) completed a study that required participants to complete a questionnaire that studied the effects of goal proximity and emotion on motivation to complete a given task – believing that when
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a goal has a far proximity and is associated with a negative emotion, the individual is likely to decrease motivation to complete a given task. This theory was reversed when the proximity of the goal was closer, where they believed that a negative emotion would increase their motivation to complete a specific task. Louro et al. (2007) found their hypothesis to be true.

The present study partly replicated the work completed by Louro et al. (2007). The purpose of the current study was to examine the effect that emotion and perceived difficulty of a given task would have on an individual’s motivation to attain a given goal. Given the review of previously posited theories and literature studying the given theories, it is reasonable to hypothesize that when presented with a condition that has a high perceived difficulty of goal attainment and is associated with a negative emotion we will note a low level of motivation; compared with presentation of a condition that is low in perceived difficulty and associated with a positive emotion we will note a high level of motivation.

Method

Participants

There were forty participants involved in this study (20 male and 20 female). The participants were randomly recruited by the researcher in the Student Activity Center at Huron University College at University of Western Ontario. The participants were all undergraduate students as was stated as a requirement in the Letter of Information. Students that were not undergraduate students but were recruited by the researcher withdrew their voluntary involvement in the study. The participants’ year of study was non-specific and was not recorded. It was assumed their age was between 17 and 23 due
to their enrollment in an undergraduate program (participants that were evidently exceeding this age range here not recruited by the researcher). There was no specificity to the discipline the participants were studying to obtain their undergraduate degree. They were required to be fluent in English and not visually impaired as they were required to read a passage and answer a question following the passage that could not be read aloud. The participants were informed that participation was completely voluntary and they were able to withdraw from the study at any point in its duration. There was no known risk to participation in the study.

Study Design

The researcher randomly recruited participants in an on campus public facility. Participants were randomly assigned to four different categories. The two predictor variables were emotion and perceived difficulty of a given task. The two variables were separated into four different conditions: a positive emotion and a high perceived difficulty of a given task, a positive emotion and a low perceived difficulty of a given task, a negative emotion and high perceived difficulty of a given task, and a negative emotion and a low perceived difficulty of a given task. Each subject was randomly assigned to one of the four categories. There were equal numbers of males and females who completed each questionnaire (5 males and 5 females for each condition). The results were subjected to statistical analysis using a 2 (positive or negative emotion) x 2 (high or low perceived difficulty of a given task) between-subjects Analysis of Variance (ANOVA).
Procedure

The participants were given one booklet that included a Letter of Information regarding the study, a participation consent form, a one-page passage that included a single question afterward, and a debriefing form that provided information about the research being completed. After reading through the Letter of Information, participants were required to sign and date the consent form, as was the researcher.

Participants then read a passage that described their current involvement in training to compete in a 100-m sprint for this year’s track and field team. All four booklets contained the following:

“You have been training hard for this year’s competitive season which is due to start in two weeks, because you are eager to win a race. In fact, you have been spending all of your free time training which adds up to 18 hours per week.”

The booklets began to vary at this point. Here, the booklets associate with a low perceived difficulty at completion of a given task would read: “So far things are going well. In 95% of your training sessions were you able to achieve a time that would allow you to win a race”. This is compared with the booklets that were associated with a high perceived difficulty at completion of a given task, which read: “So far things are not going well. Only in 20% of your training sessions were you able to achieve a time that would allow you to win a race.”

Immediately after this manipulation, the emotion variable was introduced. In the booklets associated with a positive emotion, the participants would read: “You have
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recently received some good news. You just got accepted to the university of your choice.” This is compared with the booklets that were associated with a negative emotion, which read: “You have recently received some bad news. You have no been accepted to any of your choice universities.”

The rest of the booklet contains arbitrary information that is not useful to this research that includes information about job opportunities and is consistent throughout all four booklets. It reads:

“On your way home, you keep thinking about your goals and aspirations. Your mind shifts between thoughts about your chances of winning the 100-m sprint and thoughts about how good it would be to find a way to earn extra money. Later that day, you get a call from a museum offering you a part time job as a tour guide – a position you would likely accept to achieve your goal of earning extra money. You have been interested in art for many years now. The tour guide job is on a trial basis. The decisions of whether or not to hire you on a permanent basis as a part time tour guide will be dependent on your quality of work and visitor satisfaction. Given your previous experience you expect to be a good tour guide. The job is due to start in 3 days and you may choose to work between 6 to 18 hours each week. At the back of your mind, you are thinking that accepting this job would mean training less hours per week. The museum needs an answer today, and you promise that you will call back soon. You only have a few minutes to think about this before you make a decision.”
Immediately after reading the entire passage, the participants were given one question to answer. The question simply stated, "How motivated are you this season to reach the goal of winning the 100-m sprint?" Participants were asked to rate their motivation on a 7-point scale, 1 being only a little and 7 being lots. After completion of the questionnaire, the participant's were no longer involved in the study. They were offered the debriefing form which contained information about the conditions of the study and further reading should they be interested. The participants were recruited on a single weekday between 4PM and 6PM. Each trial took approximately five minutes (but ten minutes were allotted upon recruitment).

Results

At the completion of each questionnaire, the score the participants allotted on the seven-point scale was recorded and used in statistical analysis. The score that each participant rated as their motivation was used as the score in each block of the ANOVA. Each block contained 10 scores, 5 obtained from a male participant and 5 obtained from a female participant. A 2x2 between subjects Analysis of Variance (ANOVA) was conducted to examine whether the results were statistically significant and supporting the hypothesis or not. Each block contained ten trials (five male and five female). The blocks were grouped as follows: positive emotion with high perceived difficulty, positive emotion with low perceived difficulty, negative emotion with high perceived difficulty, and negative emotion with low perceived difficulty.

The ANOVA revealed that there was no statistical significance between any of the emotions as they were associated with perceived levels of difficulty, $F(1,36)=0.7$. 
p<0.05, partial $\eta^2 = 0.06$ (see Appendix I). Statistical significance could not be noted in this research.

Discussion

The scores that each participant rated on each of the forty questionnaires did not show to have any effect on their motivation to complete or not complete the 100-m sprint as mentioned in the questionnaire. The emotion that was being represented in each of the questionnaires did not have any effect on the outcomes, nor did the perceived difficulty by the participant have any effect on the outcomes. There cannot be any conclusions drawn from this research alluding to whether emotion or perceived difficulty was a stronger factor in influencing motivation. It is likely that the participants in this research had pre-existing ideas regarding their motivation to complete a 100-m sprint, whether those ideas be positive or negative is irrelevant.

Taking into account the three factors included in expectancy theory of motivation (expectancy to complete a task, instrumentality, and the valence) we can draw conclusions as to why the research was non-significant. It is likely that many of the participants recruited in the research had no expectancy at all as to complete this task, that is they could not visualize themselves even engaging in such a task let alone completing it should they attempt the task. We cannot draw many conclusions based on the participant’s instrumentality toward completion of the task, however, the valence of the subject was likely to have a large effect on the outcome of these results. As the aforementioned states, the participants may not have even been able to visualize themselves completing such a task, therefore they may not have been very eager when faced with the notion of engaging in a 100-m sprint. This could be avoided by making the
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scenario presented in the passage more likely to coincide with the participants’ daily lives.

Furthermore, with regard to expectancy theory of motivation we must take into account the value of the intrinsic and extrinsic awards. Recall that a high intrinsic value of a given task is more likely to breed motivation than a high extrinsic value – that is, a subject is more likely to engage in a specific task if it has importance, or meaning, to him or her. Congruent with the beliefs mentioned above, the task as outlined as a 100-m sprint in this passage might not have had a very high intrinsic value to the participant. Furthermore, the task of making money as outlined in this passage as a job opportunity might have had higher intrinsic value than the task being questioned. This suggests that perhaps participants could either have rated their scores lower due to the low intrinsic value of the 100-m sprint, or their scores of motivation could actually have been based on their motivation to make money (should this have higher intrinsic value than the completion of a 100-m sprint).

The achievement theory of motivation, and its attempt to understand the inflexibility of individual’s completion of specific tasks would be a seemingly useful theory to use here. Through the theory’s description of performance and mastery goals, we can assume that most attempts to even complete the 100-m sprint would be merely out of performance, rather than mastery. This runs congruent with the idea that the goal has a low intrinsic value. Based on the results, it is likely that the majority of the participant’s did not have existing competence in the field of the 100-m sprint, and would complete it only out of necessity.
The attribution theory is a framework that had this research been significant, could have explained a lot of the phenomenon existing within the results. The attribution theory places a high emphasis on the importance of social cues an individual received when completing a given task. Using the attribute theory, Karakowsky et al. (2008) were able to identify a conceptual framework that postulated that success at a task would be dependent on how an individual was able to relate to a given task. This is consistent with the findings in this research, and the presumed conclusion drawn from these results, that the participants were unable to relate to the scenario presented to them in the passage. Most consistently in this section, we have pointed to the failure to use a scenario that is relatable by the participants, and is the largest error within the research.

Louro et al. (2007) were able to show significant results in the same testing grounds. Their results included a larger sample and were dependent on different factors. Their scenario was also followed by a series of questions that were then scored and submitted to a two-way ANOVA (rather than a single question). This research was only dependent on one question because there was an attempt to avoid any extraneous questions that were not necessary to the research. The researcher wanted to ask a direct question that would not leave any room for interpretation – simply, “how motivated are you to do the run?” That being said, perhaps this direct question in turn left participants more open to interpretation than had been anticipated. The question drew the participants’ attention to the run alone. If the beliefs discussed above are true and the participants were unable to relate to the run, they would not be motivated to complete it at all. However, if the participants were individuals who had a high competitive nature and performed goals on a performance rather than mastery level, they might have been
more apt to rate a higher motivation than necessary. Future research in this area could focus on the idea of mastery versus performance goals in multiple situation goal pursuit.

There were many confounding variables and problems with the study design that could have affected the results of the research. First of all, although emotion was attempted to be evoked it was only through one sentence and perceived difficulty was presented as a percentage of likelihood that the participant would win at a 100-m sprint. In future experiments, it is probable that making the emotion-evoking portion of the passage and the perceived difficulty of the task more obvious would yield significant results. As they stand, they were not the main focus of the article, and their subliminal nature was not effective for this research. Secondly, the second portion of the passage was lengthy and mundane – and effectively unnecessary. In future research regarding this experiment, researchers should omit the portion of the passage that discusses the job opportunity. Omitting this passage will ensure that the participant stays focused on the task that is relevant to the research – the 100-m sprint.

Another issue that needs to be addressed is gender. Though I ensured that there were equal numbers of males and females that completed each questionnaire that eliminates a level of randomness to the research. This could be avoided by using all males or all females. Since this research clearly is in a phase where many improvements are needed, keeping as many factors as consistent as possible will be more conducive to gaining a better understanding of the results. Once the results have reached a statistically significant level then it would be ideal to introduce other factors into the equation to identify the actual variables that affect motivation.
Also, in future research, the questionnaire should contain goals that are specific to certain environments. These questionnaires were handed out to a myriad of academic students, rather than athletes – therefore their desire to complete a 100-m sprint without any other confounding variables may be low to begin with. Researchers should cater to the participants so they can relate to the goals being presented, rather than being presented with goals they have no interest in.

Had this research been significant, its results could have been used for training purposes in academic centers, to identify that student’s performance is lowest when their emotional states are not positive. It could be used in job performance reviews to determine whether the employee really operates at a low level, or whether their emotional state has had a recent effect on their performance.

In summary, the research presented in this paper did not yield significant results to show that negative emotion will lead to low motivation to complete a given task when the task has a high level of perceived difficulty. The results demonstrate that emotion and perceived difficulty do not have an effect on an individual’s motivation to complete a given task. Although the results were not satisfying, the have the potential to open up an interesting area of research. In future, eliminating confounding variables, revising the passage that is handed out to participants, using a passage that caters to the participants, and using a more consistent sample may yield statistically significant results.
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References


Appendix I - Table 1: Summary Table of 2x2 between subjects ANOVA

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**F_{crit}(1,36)=4.11 (two tailed), p<0.05**