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Abstract

This series of two longitudinal studies represents a comprehensive and systematic attempt to investigate the tenets of the reformulated learned helplessness model in a non-clinical undergraduate student population. These studies specifically addressed the diathesis-stress and mediation components of the model in an attempt to replicate and extend the findings of Peterson and Barrett (1987). A total of 661 undergraduate students completed the AASQ, real event attributions scales, a grade aspiration scale and a grade satisfaction scale. Performance outcome measures and G.P.A. were obtained from official university records. Without exception, the present studies could not replicate the findings of Peterson and Barrett. Despite repeated attempts, no support for any component of the reformulated learned helplessness model was obtained when the theoretical tenets were applied to academic performance. In fact, significant positive correlations were observed between the generality dimension and the specific performance outcome measures. Consistent with the results reported by Houston (1994), it would appear high achieving students tend to make stable and global attributions for negative academic events. Alternately, it may be that academic performance differs in some way from performance outcome measures previously used to support the reformulated model and may, therefore, be unsuitable to test the predictions of the model. Notwithstanding these concerns, this study failed to replicate the results of Peterson and Barrett (1987) and found only minimal support for the reformulated learned helplessness model.

The reformulated learned helplessness model was originally formulated by Abramson, Seligman and Teasdale (1978) to explain affective, motivational and cognitive deficits observed in humans following exposure to uncontrollable negative events. Although the learned helplessness reformulation presented an attributional account of human helplessness and depression, it failed to provide a clear, articulate theory of depression *per se*. Thus, the reformulated learned helplessness model was further revised and developed by Abramson, Metalsky and Alloy (1989) and termed the hopelessness model of depression. This revision is a hopelessness, rather than a pure attributional theory of depression and is, consequently, more similar to other cognitive theories of depression (e.g., Beck, 1967) than the 1978 reformulation. Since that time a substantial body of research has emerged on both the learned helplessness and hopelessness models of depression and, in particular, on the relationship between attributional style and depression. In general, an internal, stable and global attributional tendency, termed a depressogenic attributional style, is a risk factor for

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the development of a depressive reaction following a negative life event. However, a depressogenic attributional style should also manifest in behavioural and performance deficits as well as the well-documented affective disturbances. In contrast to the large research body that has investigated affective deficits, very few studies have examined the relationship between attributional style and behavioural and performance outcomes.

Although limited, research in the area of human performance has primarily focused on athletic performance (Seligman, Nolen-Hoeksema, Thorton & Thornton, 1990), insurance sales (Seligman & Schulman, 1986) and gambling (Atlas & Peterson, 1990). The paucity of studies examining performance in other settings is surprising given that the original learned helplessness theory was developed in terms of performance deficits following uncontrollable events. In particular, despite the fact many of the studies testing the models of depression have employed college or university students as participants, very little research has focussed on academic performance. Yet, the area of academic performance seems a particularly viable area in which to test the reformulated model as, in addition to failure, the majority of tertiary students encounter a plethora of negative and potentially negative life events during the course of their studies. These events include poorer than expected results, financial hardship, course exclusion due to pre-requisites and/or quotas and competition for limited library and computing resources.

In the initial study investigating the applicability of the model within an academic context, Peterson and Barrett (1987) argued that university students who demonstrate a negative attributional style, when confronted with a naturally occurring negative life event (e.g. a poor examination grade), would explain this event in an internal, stable and global fashion and respond in a fatalistic and passive manner. In contrast, students with a more positive attributional style would respond to such events with renewed effort and subsequently increase the likelihood of succeeding on future tasks. As such, a student's attributional style should influence not only their approach to studying and learning but also affect their academic performance. Their results did, in fact, support their predictions as students who explained hypothetical negative academic events with internal, stable and global causes did, in fact, receive lower grades (G.P.A.) than students who did not display this depressogenic style, even after the likely confounds of initial ability and initial depression were held constant.

In contrast, Tiggemann and Crowley (1993), found no relation between either academic attributional style or specific attributions and academic performance in their sample of Australian university students. Further, in a series of studies employing British university students, Houston (1994) found that students who made stable and global attributions actually performed well academically, although they were pessimistic regarding their future performance. This result remained significant even after initial level of depressed affect was controlled. These latter studies provide evidence against the reformulated learned helplessness model and indicate a 'depressogenic' attributional style provides some form of impetus to perform better.

Thus, at the present time, the limited number of studies investigating the relationship between attributional style and academic performance has produced equivocal findings. The present series of studies will attempt to extend these previous studies and address methodological differences in the assessment of academic performance that may, in part, explain the equivocal findings. More specifically, Peterson and Barrett (1987) found support for the model using a longer term overall performance indicator (G.P.A.) whereas other studies using a shorter term performance measure have reported no relation (Tiggemann & Crowley, 1993) or a positive relation (Houston, 1994). The present study will employ both a

short-term examination performance measure and a longer-term (G.P.A.) measure of academic performance. In addition to varying in time, these two outcome measures also vary in specificity as G.P.A. is a measure of overall academic performance whereas examination performance specifically relates to performance in one particular area of study. It is possible that the performance deficits predicted by the reformulated learned helpless model will only be observed in the specific area that the failure occurred. Accordingly, attributional style may be a better predictor of subsequent performance in Psychology as opposed to G.P.A.

In addition, the studies also vary in the academic ability of the participating students. Houston (1994), who failed to demonstrate support for the model, argued that her results may be an artefact of the British university system as only high academic achievers are able to enter British universities. Similarly, Tiggemann and Crowley (1993), who also provided no support for the model, employed an Australian sample of upper level students who could also be considered high achievers due to the highly competitive nature of entry into Australian Universities. In contrast, the only support for the model was provided by Peterson and Barrett (1987) whose participants could be considered less academically able as they were all non-declared majors and concerned with their academic performance. As such, the present study will employ both an academically gifted and a less academically able student population in an attempt to examine if population differences can, in part, account for the disparate findings.

In addition to predicting that performance decrements should be observed in students who exhibit the characteristic depressogenic attributional style, the reformulated learned helplessness model also predicts that attributional style (the diathesis) should interact with a negative academic event (the stress), in this case poor academic performance, and result in performance deficits. That is, a pessimistic attributional style will increase the risk of a depressive reaction only if students experience a negative life event. This diathesis-stress component of the model has received very little research focus in the area of academic performance despite being an integral component of the model. As such, it is predicted that performance deficits will be observed following a failure experience in students who evidence a depressogenic attributional style. Finally, in order to explore the causal mediation process explicated in the reformulated learned helplessness theory, it is hypothesised that (hypothetical) attributional style will predict specific real attributions, which will, in turn, predict subsequent academic performance. Furthermore, it is predicted specific real attributions will mediate the relation between hypothetical attributions and the performance outcome variables.

Method

Participants

Two undergraduate samples of Psychology 1 students were recruited in the first week of the academic year over two consecutive years. Quite fortuitously for the present research programme, in the second year of the current study, the number of students allowed into the course was increased. The consequences of the increase in the number of students gaining entry to the course included a larger enrolment, a greater diversity in student ability levels and entrance scores (the minimum score required to gain entry to a university program), and a participant sample that was more representative of the total student body in Australian universities. Consequently, the first sample of students may be more

representative of the high achieving British sample of Houston (1994) whereas the second sample of undergraduates may be more similar to the American sample obtained by Peterson and Barrett (1987).

Sample 1. The research participants were 367 undergraduate students (mean age=22.59 years) recruited, in the second week of the academic year. The sample (137 males, 210 females, 20 students failed to respond) had an average university entry score of 364, which is 88 points higher than the minimum university entry score requirement. Initial ability, as indicated by university entry scores was available for 334 participants

Sample 2. One year later, a total of 294 undergraduate Psychology 1 students (mean age=20.95 years) voluntarily completed the questionnaires during their normal tutorial times. The sample (105 males, 185 females, 2 students failed to respond) had an average university entry score of 345, which is 61 points above the minimum entry requirement and 27 points lower than the student population in Study 1.

Procedure

Ethical approval was obtained prior to any data collection. Students initially read a Plain Language Statement detailing the study and the requirements of their participation should they choose to participate. The students who agreed to participate then completed the AASQ during normal tutorial times in the second week of the first semester (Time 1). Those who chose not to participate were free to leave the tutorial room. Twelve weeks later, in the week immediately preceding the examination period (Time 2), students completed the Grade Aspiration questionnaire in which they reported the examination grade with which they would be satisfied. Students sat their examination at the end of Semester 1 and their results were published after the four-week mid-semester break on the first day of Semester 2. In both studies, specific real attributions (RAQ) were assessed within 2-5 days of student's receiving their examination grade.

Materials/Measures

Academic Attributional Style Questionnaire

In both years, the initial testing session occurred during normal tutorial times in the second week of the first semester. All students who volunteered to participate completed the AASQ. This questionnaire was developed by Peterson and Barrett (1987) and is identical in format to the Attributional Style Questionnaire. However, the AASQ presents participants with twelve hypothetical bad academic events, in contrast to the variety of hypothetical events posed in the original ASQ. As with the ASQ, respondents rate each cause on 7-point Likert scales according to its internality (vs. externality), stability (vs. instability) and globality (vs. specificity). Subjective ratings for each of these dimensions are then summed across events. An average for each dimension is then computed. The theoretical range of attributional scores for the internality, stability and globality dimensions is 1 to 7. Generality is computed by averaging the ratings for the stability and globality dimensions. Similarly, the composite measure is the average of the internality, stability and globality dimensions.

Specific real examination attributions were measured after the examination results were published by asking students to consider the result they obtained and to write down the one major cause of their performance. As with the AASQ, students then rated this cause on the

three attributional dimensions of internality, stability and globality. The generality and composite measures were computed as for the AASQ.

Performance Measures

Subjective performance. In order to obtain a measure of subjective performance, one week prior to the first semester examination period the students completed an Aspirations Questionnaire. Students were asked to report the grade they would be satisfied with. Students circled one of 9 possible grades (A+ to F), which were transformed into the same 9-point numerical scale as used for Psychology 1 examination results. Subjective performance was calculated as the difference between the grade students said they would be satisfied with and the grade they actually received on the examination. This procedure is consistent with Metalsky, Abramson, Seligman, Semmel, and Peterson, (1982), Metalsky, Halberstadt, and Abramson, (1987) and Follette and Jacobson (1987).

Objective Performance Measures. With the explicit permission of the students, Semester 1 (SA1) and Semester 2 (SA2) short answer examination scores and the composite end of year Psychology 1 grade were used as performance outcome measures. The Semester 1 and Semester 2 short answer exam grades allow a direct comparison of performance as they are identical task types, while the end of year grade was considered as an overall performance measure. The student's G.P.A. was also obtained from official university records.

Grade Point Average. In accord with Peterson and Barrett (1987), the G.P.A. of all students was obtained from official university records. This performance measure is an indicator of overall academic performance throughout the year and is not restricted to the student's performance in Psychology 1. G.P.A. is computed by assigning numerical values for each final topic grade received (A=4, B=3, C=2, D=1, F=0). As the unit value of topics vary, the unit value of each topic is then multiplied by the numerical value of the grade received. The total numerical value of all units attempted is summed and divided by the total number of units completed. This results in a G.P.A. score ranging in value from 0 to 4. All G.P.A. scores are calculated by the Central Administration of the university and are recorded on the student's official academic transcript.

Results

Initially, the reliability of the AASQ, the simple relations between the attributional dimensions and the performance outcome measures were examined and are reported in Table 1. Internality evidenced only moderate reliability (.69) whilst the remaining attributional measures evidenced reliabilities in excess of .80. The reliability co-efficients of this particular measure of attributional style are markedly higher than the reliabilities evidenced by the ASQ (range .27 to .75). The composite reliability co-efficient (.82) observed in the present study is consistent with the corresponding reliability co-efficient (.84) reported by Peterson and Barrett (1987). In contrast to the results reported by Peterson and Barrett (1987), the present study found no significant relation between G.P.A. and any of the attributional measures. In fact, as evident from Table 1, the correlations approached zero.

Table 1. Correlations between the attributional measures and the three performance outcome measures - the two Short Answer exams (SA1, SA2) and Grade Point Average.

	Cronbach α	Sample 1			Sample 2		
		SA1	SA2	G.P.A	SA1	SA2	G.P.A
Internality	0.69	-0.04	-0.07	0.02	-0.1	-0.06	-0.07
Generality	0.87	.24*	.18*	0.08	-0.07	-0.07	0.01
Composite	0.82	.19*	.13*	0.08	-0.1	-0.09	-0.02
N		291	276	288	292	291	255

*p<.05

However, consistent with Houston (1994), significant positive correlations were observed between the generality dimension and the two specific psychology performance measures in Sample 1. Although the composite attributional measure was significantly related to the two short answer examination measures this was mainly due to the influence of the generality dimension. This latter result indicates that, in this sample of high achievers, students who explained hypothetical negative academic events with stable and global causes actually tended to perform better on short-term academic tasks. In contrast, in the sample of lower academic achievers (Sample 2), no significant relations were evident between the attributional dimensions and performance. Taken together, these results suggest the attributional dimensions have very little predictive power over any of the performance measures.

The Diathesis-Stress Component

To test the diathesis-stress component, hierarchical multiple regression analyses were performed. The specific Psychology Semester 2 examination results (SA2) and G.P.A. were used, in separate analyses, as the dependent measures. The Semester 1 examination performance measure was entered into the equation first. The attributional dimension was then added at Step 2. Finally, to test the diathesis-stress component, the product of the interaction of the attributional dimension and the subjective performance measure was entered. This subjective measure was the difference between the grade students stated they would be satisfied with and the grade they actually received on the first short answer exam. Accordingly, the higher the score on this measure, the more disappointed the student would be in their performance.

As previously noted, the interaction terms are the relevant interactions for testing the diathesis-stress component. The separate regression analyses are summarised in Table 2. Only the relevant interaction terms are reported as they specifically test the predictions of the model.

Table 2. Summary of the results of the three separate regression analyses using Short Answer 2 as the dependent measure.

Variable	β	R	R2	Fchange	Sig F
Sample 1 – Short Answer 2 performance					
Subjective performance	0.02	0.09	0.01	2.05	0.15
Internal interaction	-0.21	0.11	0.01	0.06	0.81
Generality interaction	-0.77	0.21	0.04	0.81	0.37
Composite interaction	-0.75	0.17	0.03	0.37	0.54
Sample 2 – Short Answer 2 performance					
Subjective performance	1.86	0.45	0.2	48.43	0
Internal interaction	-0.26	0.47	0.22	4.68	0.03
Generality interaction	0.06	0.45	0.2	0.26	0.61
Composite interaction	-0.08	0.45	0.2	0.25	0.62

As is evident, only the internality interaction term was significant in Sample 2. In order to determine the form of the interaction the data were divided into two naturally occurring groups – subjective fail and subjective pass. The relationship between performance on the Short Answer 2 examination and the internality dimension was examined for each group separately. Although not significant, the form of this interaction fails to support the prediction of the model. Students who habitually attribute negative events to internal causes produced poorer performance in the absence of a negative event (r=-0.18). No decrement in performance was observed for students who had experienced a negative event (r=+0.16).

As is evident in Table 3, when G.P.A. was used as the performance outcome measure, subjective performance was a significant predictor of G.P.A. in Sample 1, $F(1,226)=11.75$, $p<.001$ and Sample 2, $F(1, 193)=16.76$, $p<.001$. In addition, in the sample of high achievers (Sample 1), the generality interaction term was a significant predictor of G.P.A. The composite interaction term was also significant mainly due to the contribution of the generality term.

Table 3. Summary of the results of the three separate regression analyses using Grade Point Average (G.P.A.) as the dependent measure.

Variable	β	R	R2	Fchange	Sig F
Sample 1 – G.P.A.					
Subjective performance	-41	0.22	0.05	11.75	0
Internal interaction	0.06	0.24	0.06	1.54	0.22
Generality interaction	-0.14	0.32	0.1	9.47	0
Composite interaction	-0.13	0.28	0.08	4.23	0.04
Sample 2 – G.P.A.					
Subjective performance	0.37	0.28	0.08	16.76	0
Internal interaction	0	0.28	0.08	0.01	0.93
Generality interaction	0.02	0.29	0.08	0.04	0.84
Composite interaction	0.01	0.29	0.08	0	0.95

As in the previous analyses the form of the interaction was examined. The form of the interaction failed to support the predictions of the reformulated learned helplessness model. In the group of students who subjectively failed the first examination there was no significant relation between the generality dimension and G.P.A., r=0.05. Therefore, students who habitually ascribe negative events to stable and global factors do not exhibit performance deficits following failure. In contrast, students who exhibit a stable and global attributional pattern for negative events tended to perform well in the absence of a negative event.

These results suggest that students who make internal, stable and global attributions for failure do not perform more poorly after experiencing subjective failure. In fact, the opposite pattern of results was observed.

The Mediation Component of the Reformulated Learned Helplessness Model

According to the mediation component, hypothetical attributional style should predict particular attributions which, in turn, should predict subsequent performance. In addition, for failure students, hypothetical attributions should not have a direct effect, beyond that of particular attributions, in predicting subsequent performance. As students were making specific attributions for their performance in a psychology examination, only subsequent performance in a comparable psychology examination (Semester 2) was used in the analyses as it is unlikely that a specific attribution made in reference to a mid-year psychology examination will produce deficits in the students overall final grade or G.P.A.

Table 4. The inter-correlations between the two attributional measures.

	Internal	Generality	Composite
Study 1 (N=131)	.28**	.29**	.21*
Study 2 (N=115)	.30**	.31**	.33**

**p<.01, *p<.05

As is evident in Table 4, the real and hypothetical attributional dimensions were all significantly and positively correlated. These results suggest students used the same attributional pattern to explain their real subjective failure as they did to explain a hypothetical failure. As the mediation component also predicts that real event attributions will predict subsequent performance, correlational analyses were performed on the data to examine the relation between real event attributions and subsequent performance measures.

Table 5. The relation between the real event attributional dimensions and subsequent performance.

	Sample 1	Sample 2
	Short Answer 2	Short Answer 2
Internality	-.28**	0
Generality	.29**	-0.16
Composite	0.09	-0.15
N	131	114

**p<.01

In Sample 1, students who explained their poor Short Answer 1 performance with a more internal attribution tended to perform poorly on the subsequent examination and continued to perform poorly overall (Table 5). In contrast, students who attributed their poor examination performance to more stable and global causes tended to perform better on the subsequent examination in comparison to their optimistic counterparts. No relations were evident in Sample 2.

Multiple regression analyses (Table 6) were also performed on the data. As no relations were evident in Sample 2, only the data derived from Sample 1 were used in the analyses.

Performance on the first examination was entered first followed by the real attributional dimension. The corresponding hypothetical attributional dimension was entered at the final step.

Table 6. Summarises the results of the three regression analyses using Semester 1 examination performance and real event attributions to predict Short Answer 2 performance.

Step	Variable	β	R	R2	Fchange	Sig F
Short Answer 2 Performance						
1	Short answer 1	0.75	0.64	0.42	85.87	0
2a	Real Internal	-1.31	0.66	0.44	5.5	0.02
2b	Real Generality	1.97	0.67	0.44	6.06	0.02
2c	Real Composite	1.03	0.65	0.42	0.68	0.41

Performance on the subsequent psychology examination was predicted by both the internality (β=-1.31) and generality (β=1.97) real attribution dimensions. Previous performance was not a significant predictor nor were any of the hypothetical attributional dimensions. In contrast to the predictions of the model, students who made a stable and global attributional ascription for their poor examination performance tended to perform better in the subsequent exam. However, in support of the predictions of the model, students who failed the examination and made internal causal attributions for their examination performance performed more poorly on the subsequent exam.

In summary, subsequent performance in Psychology was predicted by students' real attributions for their previous performance in psychology and, to a lesser extent, their previous performance. Stable and global causal attributions for failure were associated with improved performance whereas internal attributions for failure were related to performance deficits.

A Three Year Follow-up

Rationale and Aims

As previously noted, it is probable that first year university students in Australia have had little experience of academic failure. Accordingly, the prospect of failing is not a concept that our students would relate to on a personal level. However, as students progress through their university studies, it is almost inevitable that some form of academic failure or challenge will be experienced. Accordingly, the deficits associated with a pessimistic attributional style may not be evident in their first year results and may not become apparent until subsequent years. In view of this possibility, the G.P.A. of students participating in Sample 1 was obtained three years later. For full-time students this time frame corresponds to the completion of their degree programme. This long-term performance indicator was available for 256 students and was subsequently used to test the predictions of the reformulated learned helplessness model.

Results

Consistent with the initial results, no significant correlations were evident between the attributional dimensions and G.P.A (r(range)=.03 - .07). The only significant predictor of G.P.A. was student's initial ability as indicated by their university entry score (β=.24, t=3.67, p<.001). No further statistical analyses were deemed appropriate.

Discussion

Attributional Style and Performance

One of the major aims of the present study was to test the prediction that performance decrements should be observed in students who exhibit the characteristic depressogenic attributional style. However, the results were disappointing. Despite repeated attempts, no substantial support for any component of the reformulated learned helplessness model, as applied to academic performance, was obtained. That is, independent of the specificity of the attributional measure, the attributions students gave for both hypothetical and real academic events did not predict subsequent performance. In contrast to the predictions made by the model, students who exhibit a depressogenic attributional style are no more at risk for academic failure than students who do not evidence this particular attributional style. In fact, students who attributed their poor performance on the examination to stable and global factors performed well academically in all subsequent performance tasks. Furthermore, in opposition to the predictions of the mediation component, real event attributions did not predict subsequent performance. In attempting to explain these results, several methodological and theoretical issues need to be addressed.

The reformulated learned helplessness model posits that helplessness is a consequence of the experience of an uncontrollable negative event (e.g. redundancy, separation/divorce, rejection). Simplistically, once a response and outcome is perceived to be independent, a causal explanation is sought for the non-contingency which, in turn, influences the expectation of future non-contingency and determines the nature of helplessness and depression. Therefore, the theoretical tenets of the reformulated learned helplessness model are only applicable to uncontrollable events. As uncontrollability is a fundamental requirement for the development of helplessness, academic performance may not be an appropriate behaviour to test the predictions of the model as academic performance, in most cases, is not an uncontrollable event.

Alternately, attributional uncertainty may explain both the observed results and the equivocal previous findings. Attributional uncertainty is engendered by noncontingent success. More specifically, attributional uncertainty occurs when the cause of success is not readily identifiable. As a result of this non-contingency, the individual is uncertain of their self-image which they seek to protect against any debasement (Thompson, 1996). In terms of attributional analysis, these individuals would remain unaware of the causes of their successful or unsuccessful achievement outcomes. As the majority of our students and those of Tiggemann and Crowley (1992) and Houston (1994) are academically advantaged, it is likely they have experienced non-contingent success as many their achievements may not have required a large amount of effort. According to Thompson, this noncontingent feedback compromises the logical link between performance and the factors underlying that performance. Accordingly, these research participants may not have established a clear and logical link between their success and the causes of this success. Consequently, for these

students an attributional analysis of performance is seriously compromised, as these students are unaware of the causes of their performance. In contrast, the participants in the Peterson and Barrett (1987) study could be considered less academically able as they were non-declared majors and selected on the basis of underachievement and are less likely to exhibit attributional uncertainty.

The impostor phenomenon may also explain these contradictory results. According to the impostor phenomenon, high achievers often experience feelings of 'intellectual phoniness'. As described by Clance (as cited in Thompson, Davis & Davidson, 1998), high achieving students often doubt their own abilities and fear others will discover that they are not truly intelligent. As a result of these doubts and feeling, 'impostors' attribute their successes to a range of factors other than ability and effort. In terms of attributional research, impostors tend to exhibit a depressogenic attributional style as they externalise success and internalise failure. However, according to the reformulated learned helplessness model, this particular attributional tendency is related to poor performance, not high achievement. If, as argued by Thompson, at least half of the student population are 'impostors' and excel academically, when their data is combined with data from non-impostors, who also evidence this attributional pattern but perform poorly, any effect of a depressogenic attributional style on academic performance would be nullified. As the clinical symptoms of the 'impostor' phenomenon include depression and lack of confidence, the 'sadder, doomier and gloomier' high achievers identified in both the present studies and those of Houston (1994), may, in fact, be academic 'impostors'.

The application of the reformulated learned helplessness model in the academic domain also raises questions concerning the nature of a negative event. The majority of research in this area has examined depressive reactions and performance following the occurrence of one negative life event, examination failure. This raises several critical issues for future research to address. For example, the student must consider failing one examination a significant and major life event if the underlying assumptions of the model are to be met. Undoubtedly for most students, failing an examination is a major and significant event. However, for other students, particularly if they are experiencing success in their other university studies, failing one examination may not be a significant negative life event. In addition, the determination of a failure experience based solely on examination performance negates personal, social and professional factors that are equally likely to produce a failure experience. For example, in the present study, a student who passed the examination was considered not to have experienced a negative event. However, this student may have also experienced divorce/separation, redundancy, or failure in another area of study that they considered negative events. Therefore, it is necessary to clearly distinguish students who have actually experienced any significant and major negative life event as the model does not restrict the domain or the time frame of this experience.

Notwithstanding these concerns, the present study systematically tested the predictions of the reformulated learned helplessness model in a naturalistic environment and examined the temporal parameters of helplessness with the express intent of predicting academic performance among university students. This goal was not achieved, as academic performance appears resilient to the influence of attributional style.

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