

Separation Anxiety, Perceived Controllability, and Homesickness¹

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The present study examined the multidimensional interactionism model of anxiety, stress, and coping by investigating trait separation anxiety, controllability, and homesickness in 152 university students living away from home. Participants completed measures of trait separation anxiety, state anxiety, perceived controllability of the situation, and homesickness. Correlational tests confirmed that trait separation anxiety and homesickness were associated. Also, low perceived controllability was associated with state anxiety and homesickness. Finally, tests of a mediational model confirmed that both perceived controllability of the situation and state anxiety are significant mediators of the association between trait separation anxiety and homesickness. The findings provide support for models of homesickness that focus on diminished sense of personal control and proximity to attachment figures.

Homesickness is a phenomenon that is experienced by many people. Although research has tended to focus on homesickness in university and college students (Fisher & Hood, 1987, 1988; Lu, 1990), homesickness has been studied in a variety of populations and contexts, including military recruits (Eurelings-Bontekoe, Vingerhoets, & Fontijn, 1994), foreign employees of multinational corporations (Eurelings-Bontekoe, Brouwers, & Verschuur, 2000), prison inmates (Ireland & Archer, 2000), and children attending summer camp (Thurber, 1999).

Homesickness was defined by Thurber (2005) as the distress or impairment caused by actual or anticipated separation from home. Extensive

¹This paper was completed by the first and third authors following the death of our colleague and co-author Norman Endler in May 2003. An earlier version of the paper was presented at the annual meeting of the American Psychological Association, Toronto, Ontario, Canada (August 2003). This research was supported by a major research grant (#510205) from the Social Sciences and Humanities Research Council of Canada awarded to the first and second authors. Gordon Flett was also supported by the Canada Research Chairs Program. We would like to thank some anonymous reviewers for their constructive suggestions and comments on an earlier draft of the paper.

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1 research has indicated that homesick individuals can experience extreme
2 distress and are at increased risk for a range of health problems, in terms
3 of physical and psychological functioning and well-being (Thurber &
4 Walton, 2007; Van Tilburg, Vingerhoets, & Van Heck, 1996; Van Tilburg,
5 Vingerhoets, Van Heck, & Kirschbaum, 1999). Research on the nature of
6 homesickness is important in its own right, given the fact that a substantial
7 proportion of people are debilitated by homesickness (Carden & Feicht,
8 1991; Fisher, 1989; Fisher & Hood, 1987, 1988). In fact, one investigation
9 found that approximately half of the Dutch students and 80% of the students
10 at a British university reported feelings of homesickness (Stroebe, van Vliet,
11 Hewstone, & Willis, 2002). Given that homesickness is believed to reflect a
12 highly stressful experience, research on homesickness is a particularly viable
13 way of testing the predictions derived from models of stress, coping, and
14 distress (Pennebaker, Colder, & Sharp, 1990).

15 The purpose of the current research is to investigate the respective roles of
16 separation anxiety and low perceived controllability in homesickness.
17 Various authors have posited models of homesickness that involve the possi-
18 bility of loss of proximity to attachment figures (Brewin, Furnham, &
19 Howes, 1989; Fisher, 1984, 1986, 1989) and a diminished sense of controllability
20 in a challenging situation (Fisher, 1984, 1989). Research has provided
21 extensive empirical evidence for the role of perceived lack of control in
22 homesickness (e.g., Burt, 1993; Fisher, 1989; Thurber, 1999; Thurber &
23 Weisz, 1997a, 1997b), but there is a relative paucity of research that has tested
24 directly the role of separation anxiety in homesickness, despite the fact that
25 homesickness is often regarded as a manifestation of separation anxiety. The
26 similarities of these constructs have often been noted (e.g., Vingerhoets,
27 2005), but it is also recognized that these constructs have unique features
28 (for a discussion, see Van Tilburg, 2005).

29 Why has there been little empirical investigation of separation anxiety and
30 homesickness? One likely explanation is that a substantial proportion of the
31 research on homesickness is based on adults, but it is only recently that
32 research on separation anxiety has become a central focus in the literature as
33 a result of the prevailing and misguided belief that separation anxiety is
34 something that is experienced mostly by children. Accordingly, measures to
35 assess separation anxiety in adults are now beginning to appear in the litera-
36 ture (e.g., Manicavasagar, Silove, Wagner, & Drobny, 2003).

37 Regarding separation anxiety, it has been suggested that the trait anxiety
38 construct needs to be expanded to include facets of social anxiety that
39 reflect stable responses to a variety of interpersonal threats (Endler, Flett,
40 Macrodimitris, Corace, & Kocovski, 2002). Additional facets of trait anxiety
41 involve concerns about social evaluation, separation from significant others,
42 and self-disclosure, as a supplement to other facets of trait anxiety (Endler,

1 Parker, Bagby, & Cox, 1991). Implicit in this expansion is the notion that
2 there are various forms of trait interpersonal anxiety that merit additional
3 consideration.

4 This expanded conceptualization of trait anxiety was incorporated into a
5 modified version of the Endler Multidimensional Anxiety Scales (Endler &
6 Flett, 2002), which focuses on different facets of social anxiety. These facets
7 include a measure of trait social evaluation anxiety, as well as new measures
8 of trait separation anxiety and trait self-disclosure anxiety. Initial findings
9 with this new measure confirmed the multidimensional nature of trait social
10 anxiety in two separate studies (Endler et al., 2002).

11 Numerous issues involving the dimensions of trait social anxiety remain
12 to be investigated. As noted previously, the current study was conducted to
13 examine the link between trait separation anxiety and homesickness in uni-
14 versity students living away from home. In addition, we explored the possi-
15 bility that the perceived controllability of the situation of attending university
16 (transition to university as a stressful context) is a factor that mediates the
17 perceived link between trait separation anxiety and homesickness.

18 As suggested earlier, the transition to university and separation from
19 home are regarded as significant stressors that not only can result in feelings
20 of homesickness, but can also contribute to health problems (including
21 decreased immune system functioning), reduced psychological well-being,
22 and other maladaptive outcomes (Van Tilburg, Vingerhoets, Van Heck et al.,
23 1999). The relevance of both personality factors and situational appraisal
24 factors is suggested by the fact that only a portion of the students who are
25 separated from their homes and families develop severe problems with
26 homesickness.

27 In the current study, trait separation anxiety is regarded as a personality
28 factor associated with vulnerability to homesickness. It is expected that
29 homesickness will be especially likely among students who (a) are high in trait
30 separation anxiety; (b) suffer an actual separation; and (c) perceive the school
31 setting in general as an uncontrollable, stressful situation. Our emphasis on
32 controllability follows from the results of studies testing the multidimen-
33 sional interaction model of anxiety, stress, and coping (Endler, 1997, 2002).
34 An important aspect of this model is the investigation of anxiety, stress, and
35 coping in specific situations with specific properties (e.g., Endler, Crooks, &
36 Parker, 1992; Flett, Endler, & Fairlie, 1999).

37 The importance of perceived control in coping with challenging situations
38 has been documented extensively in research on cognitive appraisal and
39 stress (Fleming, Baum, & Singer, 1984; Litt, 1988; Zakowski, Hall, Klein, &
40 Baum, 2001). A series of investigations has confirmed the role of perceived
41 control in stress, anxiety, and coping (Endler, Speer, Johnson, & Flett, 2000,
42 2001; Macrodimitris & Endler, 2001), including situations that varied in

1 levels of controllability (Endler, Macrodimitris, & Kocovski, 2000; Endler,
2 Speer et al., 2000). This focus on perceived controllability stems from trans-
3 actional, process-oriented theories and the premise that adaptation to stress
4 cannot be defined as effective, independent of its context (Folkman, 1984;
5 Forsythe & Compas, 1987).

6 Three main hypotheses are tested in the present research:

7
8 *Hypothesis 1.* Trait separation anxiety and state anxiety will
9 both be associated with homesickness in university students
10 living away from home. This is in keeping with interpretations
11 of homesickness that afford a central role to separation anxiety.

12 *Hypothesis 2.* Low perceived control of the university situation
13 will be associated with homesickness.

14 *Hypothesis 3.* Perceived controllability and associated feelings
15 of state anxiety will mediate the association between trait sepa-
16 ration anxiety and homesickness.

17
18 That is, trait separation anxiety will have an impact on homesickness to the
19 extent that the person characterized by high separation anxiety is experienc-
20 ing a situation that is deemed to be beyond his or her control and is experi-
21 encing state anxiety. The mediational role of state anxiety reflects how
22 current affective state contributes to the experience of homesickness.

23 24 Method

25 26 *Participants*

27
28 The sample consisted of 152 students (95 male, 57 female) living away
29 from home. Their mean age was 22.6 years ($SD = 4.8$). Students were enrolled
30 in a first-year psychology course and volunteered to take part in the study on
31 "college student adjustment." Students received one course credit for their
32 participation.

33 34 *Measures and Procedure*

35
36 Study participants completed a questionnaire package that included the
37 following measures:

38 *EMAS-SAS Trait Separation Anxiety Scale.* The EMAS-SAS Trait
39 Separation Anxiety Scale is a 15-item measure that assesses typical symptoms
40 of anxiety when a person is in a situation that involves a loss of contact with

1 significant others. Initial evidence (Endler & Flett, 2002) suggested that this
2 subscale has a high level of internal consistency, with a Cronbach's alpha of
3 .91 or greater. Note that other EMAS-SAS Trait scales were also adminis-
4 tered in this study, but the results are specific to this subscale, so this is our
5 primary focus.

6 The measure of trait separation anxiety was developed by adapting the
7 original subscales of the EMAS-T (Endler, Edwards, & Vitelli, 1991). The
8 EMAS-T consists of four subscales measuring trait anxiety for social evalua-
9 tion, physical danger, ambiguous, and daily routines. Each subscale is
10 made up of the same 15 items, but participants are instructed to respond
11 based on their experience with the specific situation. Sample items are "Seek
12 experiences like this," "Feel comfortable," and "Feel nervous." Participants
13 indicated their responses on a 5-point scale ranging from 1 (*not at all*) to 5
14 (*very much*). Thus, in the current study, participants indicated their usual
15 levels of anxiety in a situation involving separation from significant others.

16 *Perceived Control Scale.* The Perceived Control Scale is a six-item
17 measure developed by Jimmieson and Terry (1997). We have used this
18 measure previously to assess perceived control in a task situation (Endler,
19 Speer et al., 2000). The scale was used in the current study to assess perceived
20 control associated with being exposed to the university environment.
21 Respondents rated their responses on a 5-point scale, with higher scores
22 reflecting greater perceived control. The scale has adequate internal consis-
23 tency, with a Cronbach's alpha of .79 (Endler, Speer et al., 2000).

24 *Endler Multidimensional Anxiety Scales–State Anxiety (EMAS-S).* The
25 EMAS-S (Endler, Edwards et al., 1991) is a 20-item measure that asks par-
26 ticipants to indicate on a 5-point scale ranging from 1 (*not at all*) to 5 (*very*
27 *much*) how they feel "at this particular moment." Items are summed to
28 produce an overall measure of state anxiety, and factor analysis has also
29 yielded two independent factors measured by this scale: Autonomic–
30 Emotional (10 items) and Cognitive–Worry (10 items; Endler, Edwards et al.,
31 1991). Only the total scale was used in analysis for the present study. Internal
32 consistency was high for the total scale ($\alpha = .89-.94$) and for each of the two
33 subscales ($\alpha = .82-.91$; Endler, Edwards, Vitelli, & Parker, 1989).

34 *Homesickness Questionnaire.* The Homesickness Questionnaire is a
35 33-item measure that was developed for use with university and college
36 students. This questionnaire assesses a variety of themes derived from models
37 of grief reactions, including cognitive preoccupation (e.g., "I can't help think-
38 ing about my new home"), distress related to missed attachment (e.g., "I get
39 really upset when I think about home"), seeking to maintain attachment (e.g.,
40 "I visit home as often as I can"), dreams related to home (e.g., "I dream about
41 my friends at home"), restlessness (e.g., "I can't seem to settle here at the
42 university"), anger/blame (e.g., "I hate this place"), guilt (e.g., "I wish I had

1 never come to the university”), loss of self (e.g., “I feel as if I’ve left part of me
2 at home”), identification (e.g., “I am drawn toward people who come from
3 my hometown”), and avoidance (e.g., “I avoid going home because it would
4 be too upsetting”).

5 Factor analyses determined that the Homesickness Questionnaire (HQ)
6 consists of two subscales that assess attachment to the home and disliking
7 the university (Archer, Ireland, Amos, Broad, & Currid, 1998). A study by
8 Beck, Taylor, and Robbins (2003) found that the two subscales were highly
9 correlated ($r = .57$). The respective internal consistency alphas were .88 and
10 .89 for the subscales of attachment to home and disliking the university.
11 Because it is possible for students to dislike the university for reasons
12 that reflect the transition to university in general, without necessarily being
13 homesick, certain analyses described later are based on a construct
14 that includes both components of attachment to home and disliking the
15 university.

16 Results

17
18
19 Initially, a MANOVA was conducted to explore possible gender differ-
20 ences in levels of trait separation anxiety, state anxiety, controllability, and
21 measures of homesickness (HQ–Attach and HQ–Dislike). Table 1 presents
22 the means and standard deviations for the variables. No significant gender
23 differences were obtained.

24
25 Table 1

26 *Means of Study Variables by Gender*

| 27 Variable | 28 Women ($N = 57$) | | 29 Men ($N = 95$) | |
|--------------------------------|-----------------------|---------|---------------------|---------|
| | 30 M | 31 SD | 32 M | 33 SD |
| 34 1. Trait separation anxiety | 49.65 | 10.96 | 48.60 | 10.99 |
| 35 2. Controllability | 21.28 | 4.60 | 21.40 | 4.29 |
| 36 3. State anxiety | 33.17 | 14.02 | 33.83 | 14.27 |
| 37 4. HQ–Attach | 28.53 | 9.51 | 27.72 | 9.61 |
| 38 5. HQ–Dislike | 24.77 | 6.57 | 26.81 | 9.54 |

39 *Note.* HQ = Homesickness Questionnaire; Attach = attachment to home; Dislike =
40 disliking the university.

1 *Mediational Analyses*

2
3 We used structural equation modeling (SEM; Hoyle & Smith, 1994) to
4 test the role of controllability and state anxiety in the association between
5 separation anxiety and homesickness. We evaluated the variance–covariance
6 matrix using AMOS 4.0 (Arbuckle, 1999). We tested the fit of the direct and
7 mediational models, using maximum likelihood estimations.

8 In evaluating the overall goodness of fit for the SEM models, the follow-
9 ing criteria were used: (a) chi square p value, when statistically nonsignificant,
10 traditionally indicates that there are no statistically significant discrepancies
11 between the observed data and the hypothesized model; (b) normed fit index
12 (NFI; Bentler & Bonett, 1980), which specifies the amount of covariation in
13 the data that is accounted for by the hypothesized model, relative to a null
14 model that assumes independence among factors; (c) robust comparative fit
15 index (CFI; Bentler, 1990), goodness-of-fit index (GFI), and adjusted GFI
16 (AGFI; Jöreskog & Sörbom, 1984)—indexes similar to the NFI that adjust 1
17 for the sample size (for the NFI, CFI, GFI, and AGFI, a cutoff of .90 is
18 generally accepted as indicating a good fit, where 1.00 indicates a perfect fit);
19 and (d) root mean square error of approximation (RMSEA; Browne &
20 Cudeck, 1993), which should be less than .05. Although a nonsignificant p
21 value has traditionally been used as a criterion for not rejecting on SEM, this
22 criterion is overly strict and sensitive for models. Therefore, we also used
23 alternate criteria that reflect the real-world conditions of clinical research. We
24 have chosen to accept a model in which the chi square divided by the degrees
25 of freedom ratio is greater than or equal to 2 or in which the CFI, GFI,
26 AGFI, and NFI are greater than .90. These moderately stringent acceptance
27 criteria will clearly reject inadequate or poorly specified models, while accept-
28 ing consideration models that meet real-world criteria for reasonable fit
29 and representation of the data (Kelloway, 1998).

30
31 *Correlational Analyses*

32
33 The correlation matrix of the observed variables used in the SEM analysis
34 is presented in Table 2. These data were provided to depict the first-order
35 correlations among the separate observed indicator variables of homesick-
36 ness and trait separation anxiety, state anxiety, and controllability that are
37 not available through the assessment of relations among the variables exam-
38 ined in the direct and mediational models.

39 It can be seen in Table 2 that trait separation anxiety was associated
40 significantly with lower levels of controllability and higher levels of home-
41 sickness in terms of both homesickness factors. Similarly, lower levels of

Table 2

Correlations Among Study Variables

| Variable | 1 | 2 | 3 | 4 |
|-----------------------------|--------|--------|-------|-------|
| 1. Trait separation anxiety | — | | | |
| 2. Controllability | -.29** | — | | |
| 3. State anxiety | .21* | -.34** | — | |
| 4. HQ-Attach | .22* | -.45** | .38** | — |
| 5. HQ-Dislike | .22* | -.64** | .50** | .64** |

Note. *N* = 152. HQ = Homesickness Questionnaire; Attach = attachment to home; Dislike = disliking the university.

p* < .01. *p* < .001 (two-tailed test).

controllability were associated with higher levels of state anxiety and homesickness. Finally, state anxiety was correlated significantly with greater homesickness.

Structural Model Specification

We followed Baron and Kenny's (1986) criteria for mediation. First, there must be a significant association between the observed predictor separation anxiety and criterion homesickness latent variables. Second, in an equation including both controllability and state anxiety mediator factors and the composite homesickness factor, there must be a significant association between separation anxiety and both controllability and state anxiety. Also, controllability and state anxiety must be significant predictors of the homesickness latent variable. Next, if there is a decline in the significant direct association between the separation anxiety predictor and the homesickness criterion latent variable in the equation (including both the controllability, state anxiety mediators and the separation anxiety predictor variable), then the obtained pattern is consistent with the mediation hypothesis. If the direct effect approaches zero, the controllability and state anxiety mediators can be said to account fully (though not necessarily exclusively) for the relation between separation anxiety (predictor) and homesickness (outcome; Baron & Kenny, 1986).

Analysis of the direct-effect model. In the first model, we estimated the direct effects of the separation anxiety observed variable on the composite homesickness factor. The homesickness latent criterion was defined by two indicators (i.e., HQ-Attach and HQ-Dislike). Because the specified direct-

SEPARATION ANXIETY AND HOMESICKNESS 273

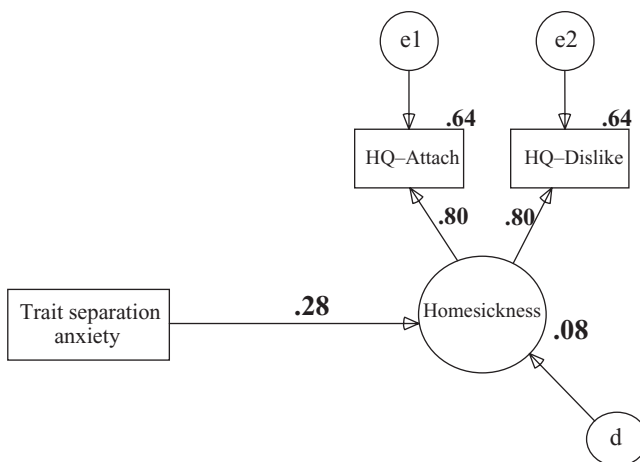
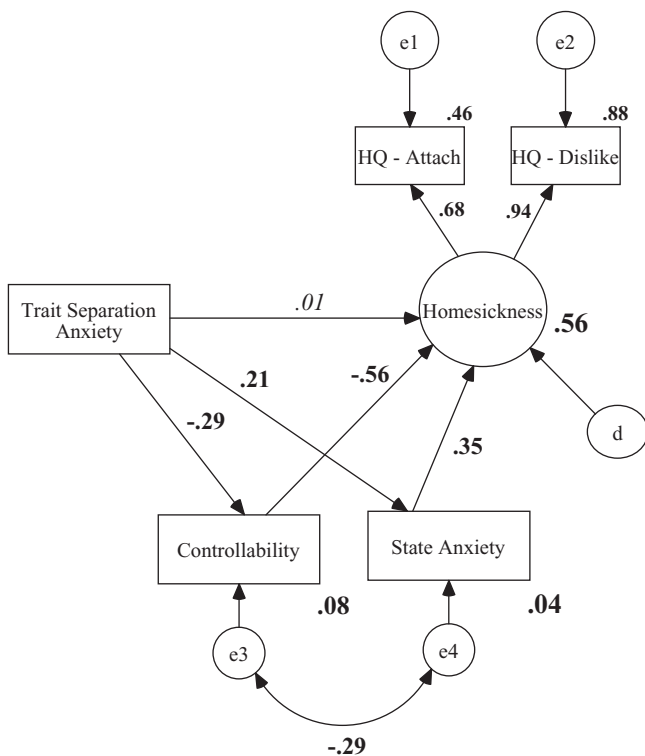


Figure 1. Direct effect models: Trait separation anxiety effects on homesickness. Rectangles indicate measured variables, large circles represent the latent construct, and small circles reflect residual (e) or disturbance (d) variances. Numbers on paths from the latent construct to its indicators represent factors loading coefficients, while numbers above the indicators and exogenous variables represent the amount of variance explained (R^2). Unidirectional arrows depict hypothesized directional (or “causal”) links. Standardized maximum likelihood parameters are used. Estimates in boldface are statistically significant, as determined by critical ratios.

effect model (see Figure 1) had zero degrees of freedom, fit indexes could not be estimated and reported. As can be seen in Figure 1, separation anxiety was found to be associated with high levels of homesickness (path coefficient = .28), $t(151) = 2.77, p = .006$; and this model explained 8% of the variance in homesickness levels.

Analysis of the mediation model. We assumed that the observed variables representing controllability and state anxiety would mediate the effect of separation anxiety on homesickness. In order to estimate the effect of separation anxiety on controllability (which is free of state anxiety) and on state anxiety (which is free of controllability), we controlled for the association between controllability and state anxiety. This correlation also allowed estimating the effect of controllability and state anxiety on homesickness, while controlling for their shared variance. The specified mediational model (see Figure 2) fit the observed data very well: RMSEA = .000; $\chi^2(2, N = 152) = 1.33, \chi^2/df = 0.71, p = .51$ (GFI = 1.00; AGFI = .97; CFI = 1.00; NFI = .99).

As can be seen in Figure 2, trait separation anxiety was found to be associated with low levels of controllability (path coefficient = $-.29$), $t(151) = -3.71, p = .0001$; and high levels of state anxiety (path



1 *Figure 2.* Mediation effect model: Trait separation anxiety effects on homesickness. Figure
 2 depicts the mediating roles of uncontrollability over the situation and state anxiety. Rectangles
 3 indicate measured variables, large circles represent the latent construct, and small circles reflect
 4 residual (e) or disturbance (d) variances. Numbers on paths from the latent construct to its
 5 indicators represent factors loading coefficients, while numbers above the indicators and exogenous
 6 variables represent the amount of variance explained (R^2). Unidirectional arrows depict
 7 hypothesized directional (or “causal”) links. Standardized maximum likelihood parameters are
 8 used. Estimates in boldface are statistically significant, as determined by critical ratios.

9
 10 coefficient = $.21$), $t(151) = 2.57$, $p = .01$, which, in turn, were found to be
 11 associated with high levels of homesickness: controllability (path coefficient = $-.56$),
 12 $t(151) = -8.30$, $p = .0001$; and state anxiety (path coefficient = $.35$), $t(151) = 5.33$,
 13 $p = .0001$. This model explained 8% of the variance in controllability, 4% of the variance
 14 in state anxiety, and 56% of the variance in homesickness.

15
 16 Mediation has occurred when the indirect effect of a predictor through a
 17 mediator significantly reduces the predictor’s direct effect (Baron & Kenny,
 18 1986). As can be seen in Figure 1, the direct path from trait separation

1 anxiety to homesickness was significant (path coefficient = .28), $t(151) = 2.77$,
2 $p = .006$. In Figure 2, however, this path approached 0 (path coeffi-
3 cient = .01), $t(151) = 0.17$, $p = .89$. The drop in the coefficients of the direct
4 paths from trait separation anxiety to homesickness, once the controllability
5 and state anxiety mediators were taken into account, was significant, accord-
6 ing to Sobel's test (Baron & Kenny, 1986): controllability, $Z = 3.19$, $p < .001$;
7 state anxiety, $Z = 2.24$, $p < .02$.

8 Thus, low controllability scores and high state anxiety scores were almost
9 full (though not necessarily exclusive) mediators of the association between
10 trait separation anxiety of students living away from home and their high
11 homesickness scores. Statistical comparisons of the effect of trait separation
12 on controllability confirm that it was significantly stronger than the effect of
13 trait separation anxiety on state anxiety, $t(151) = -3.28$, $p < .01$. In addition,
14 the effect of controllability on homesickness was significantly stronger than
15 the effect of state anxiety on homesickness, $t(151) = -10.33$, $p < .001$. Thus
16 both mediators accounted, in part, for the association between trait separa-
17 tion anxiety and homesickness, but the effects of trait separation anxiety on
18 homesickness through controllability was significantly stronger.

19 Discussion

20
21
22 The current study examined the associations among trait separation
23 anxiety, state anxiety, perceived controllability of the situation, and home-
24 sickness in a sample of university students. As expected, the results confirm
25 that trait separation anxiety was positively associated with homesickness.
26 Thus, our findings are in keeping with models of homesickness that focus on
27 insecure attachment and the need to stay in close proximity to attachment
28 figures. These models focus on a homesickness disposition that sets the stage
29 for subsequent homesickness (for an overview, see Thurber & Sigman, 1998),
30 and trait separation anxiety may be a central aspect of this disposition.

31 In the current study, trait separation anxiety was associated with a dislike
32 of the university and with expressed attachment to the home, as well as with
33 the overall homesickness construct. We felt that it was important to focus
34 subsequent mediational tests on the overall homesickness construct (which
35 combines disliking the university with the factor of attachment to home)
36 because students can develop a dislike of the school environment without
37 necessarily being homesick and overly attached to their home environments.
38 Various authors (e.g., Fisher, 1989; Vingerhoets, 2005) have discussed the
39 need to distinguish homesickness per se from stress reactions to the transition
40 to a challenging environment.

41 At this point, it is important to reiterate that we focused on trait separa-
42 tion anxiety in the current study. Thus, our findings indicate that people are

1 prone to experience homesickness if they typically have elevated levels of
2 separation anxiety. Although we did not assess the duration and persistence
3 of homesickness, it is entirely plausible that individuals with high levels of
4 trait separation anxiety are likely to experience chronic problems with home-
5 sickness. This could be exacerbated if they are in circumstances that involve
6 prolonged lack of contact with significant others.

7 At the same time, although the expected link between trait separation
8 anxiety and homesickness was detected, it should be noted that the magni-
9 tude of the association between trait separation anxiety and homesickness
10 was only modest in the current study. This result confirms past observations
11 about the importance of not equating separation anxiety and homesickness
12 (Baier & Welch, 1992; Thurber, 1999). Vingerhoets, Van Tilburg, and Van
13 Heck (1995) found that there are four different types of homesickness, only
14 one of which involves homesickness for other people; so this is but one reason
15 why separation anxiety and homesickness are constructs that overlap but are
16 not redundant with each other.

17 Although our main focus was on trait separation anxiety and homesick-
18 ness as theoretical constructs of substantive importance, it is clear that the
19 current findings have implications in terms of the psychometric properties
20 of our new measure of separation anxiety. That is, one interpretation of the
21 current findings is that they attest to the validity of the EMAS-T-S measure
22 of trait separation anxiety that is related in a meaningful way with indexes of
23 homesickness in students living away from home.

24 Perhaps the most noteworthy results of the current investigation involve
25 the measure of perceived controllability. Consistent with expectations, situ-
26 ational perceptions of reduced controllability were associated with greater
27 dislike of the university and greater attachment to the home. This finding
28 provides additional support for explanations of homesickness that focus
29 on a diminished sense of personal control (Fisher, 1984, 1986, 1989). Past
30 research on perceived controllability and homesickness has focused primarily
31 on the link between perceived control and homesickness in children (Thurber
32 & Weisz, 1997a, 1997b). The current findings extend this research by dem-
33 onstrating the relevance of low perceived control in the homesickness expe-
34 rience of university students living away from home.

35 The structural equation analyses were particularly revealing in terms of
36 linking the variables of anxiety, control, and homesickness. Our analyses
37 provide strong support for a mediational model whereby the association
38 between trait separation anxiety and homesickness is mediated by perceived
39 control and by state anxiety. This result is in keeping with research demon-
40 strating the need to include perceived controllability as part of Endler's (e.g.,
41 Endler et al., 2000; Endler, Speer, Johnson, & Flett, 2001) interactionism
42 model of anxiety, stress, and coping.

1 The mediational role of state anxiety highlights the importance of current
2 negative affect as a contributor to homesickness. Past research on moods
3 experienced during holiday trips has illustrated the potential significance of a
4 temporal focus on negative affect that includes the moods of the homesick
5 individual as the absence is being experienced (see Van Tilburg, Vingerhoets,
6 Van Heck, & Kirschbaum, 1996). Future investigations should examine
7 other negative emotional states in addition to state anxiety that arise from the
8 stressful experiences of individuals who are prone to homesickness.

9 Although our main focus has been on the theoretical implications of these
10 data, it is evident that some practical theoretical considerations follow from
11 our findings. Students living away from home with elevated levels of trait
12 separation anxiety are at risk for experiencing homesickness and would
13 benefit from preventive efforts, as well as therapeutic and counseling inter-
14 ventions. Given that trait separation anxiety is involved, the distress experi-
15 enced by these students may persist and may not be simply an initial response
16 to the transition to university or college. Accordingly, exposure to the stress-
17 ful situation (i.e., separation) in and of itself is not likely to be an effective
18 means of alleviating the distress experienced by these students. Intervention
19 efforts should include cognitive-behavioral techniques that focus on enhanc-
20 ing vulnerable students' sense of perceived controllability of the situation that
21 might decrease their levels of anxiety.

22 Recent results reported by Thurber (2005) point to the usefulness of a
23 multimodal intervention and prevention approach that includes a psycho-
24 educational component and attempts to increase levels of social support. The
25 social support component may be especially critical because students living
26 away from home who are suffering from homesickness may lack extensive
27 social networks, especially if they are in a relatively new environment.

28 The current findings should be interpreted within the context of some
29 limitations. First, the current research is cross-sectional in nature, so causal
30 statements are not warranted. Clearly, longitudinal research is needed to
31 evaluate the associations among trait separation anxiety, state anxiety, per-
32 ceived control, and homesickness. Second, it is evident that the generalizabil-
33 ity of these findings has yet to be established. Future research should explore
34 this issue in other samples of university students drawn from a variety of
35 cultures, and in both younger and older respondents. In addition, longitu-
36 dinal investigation would allow for the examination of possible changes in
37 controllability and the role of increased controllability over the stressful
38 situation in reducing anxiety levels and homesickness. Such information
39 would be beneficial for the development of prevention programs and in
40 determining whether the focus of treatment should be directed to deal
41 with students' levels of anxiety, controllability, or homesickness and their
42 sequence of effects.

1 Third, it is important to examine the comparative ability of perceived
2 controllability as well as state and trait anxiety to predict homesickness
3 versus other known predictors of homesickness. The need to examine this
4 issue is underscored by research linking homesickness with neuroticism (Van
5 Tilburg, Vingerhoets, & Van Heck, 1999), and with a temperament charac-
6 terized by high levels of harm avoidance (Verschuur, Eurelings-Bontekoe,
7 Spinhoven, & Duijsens, 2003).

8 Finally, in keeping with the multidimensional interactionism model out-
9 lined by Endler (1997, 2002), it will be important in future research to explore
10 the role of dispositional and situation-specific coping factors, as well as
11 coping resources (i.e., sources of social support). Given that research on the
12 goodness-of-fit model has linked low perceived control with emotion-focused
13 coping (Endler et al., 2000), it follows that coping variables should be
14 explored in future investigations that assess trait anxiety, state anxiety,
15 perceived control, and homesickness. As alluded to earlier, examination of
16 coping variables should include an explicit focus on related individual differ-
17 ences in social support, in light of evidence linking low social support and
18 high psychological distress with homesickness (Newland & Furnham, 1999).

19 In summary, our findings confirm that homesickness for students away
20 from home was elevated among individuals high in trait separation anxiety
21 and who appraised their university situation as relatively uncontrollable. The
22 current results illustrate the need to focus on specific facets of trait anxiety,
23 and they support previous attempts to focus on the perceived controllability
24 of the situation when testing the interaction model of anxiety, stress, and
25 coping. Thus, these findings further illustrate the need to consider personality
26 effects within their situational context.

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