

# Meta-Analytic Studies of Identity Status and the Relational Issues of Attachment and Intimacy

Annie K. Årseth, Jane Kroger, and Monica Martinussen  
*University of Tromsø, Norway*

James E. Marcia  
*Simon Fraser University, Vancouver, British Columbia, Canada*

Marcia's ego identity status model has been a popular means of examining various dimensions of the adolescent identity formation process over the past 40 years. The purpose of this investigation was to undertake a meta-analysis of studies addressing the relationship between Marcia's identity statuses and attachment (Study 1) and intimacy (Study 2). The following databases were used to identify relevant studies reported between 1966 and 2005: PsycINFO, ERIC, Sociological Abstracts, and Dissertation Abstracts International. Some 14 investigations served as the data for Study 1 and 21 investigations for Study 2. Results from Study 1 found weak to moderate correlations between attachment styles and the identity statuses; however, certain predicted patterns in the relationships were found. Furthermore, the mean proportion of secure attachment was far higher among the identity achieved compared to foreclosures and diffusions. Study 2 showed a positive association between identity and intimacy status, although the relationship was stronger for men than women.

Four decades ago, Marcia (1966) proposed a model of identity development, suggesting four qualitatively different statuses of identity resolution. Marcia's identity status paradigm has since been widely used, and approximately 550 empirical investigations of the relationship between identity status and a variety of other vari-

ables have been conducted (Kroger & Martinussen, 2005). Efforts to review the relationship between identity status and other variables have been undertaken mainly via narrative methods (e.g., Kroger, 1997; van Hoof, 1999). Narrative reviews commonly involve simple frequency counts of significant and nonsignificant findings. This method, called "vote counting," can be highly inaccurate and very misleading in efforts to identify certain patterns over a large number of studies, especially if the individual sample sizes are small (Hunt, 1997; Hunter & Schmidt, 2004). This investigation is part of a larger study undertaking a series of meta-analyses of publications and dissertations that have explored how cognitive, relational, personality, behavioral, developmental, and demographic variables are associated with Marcia's four identity statuses.

The objectives of this investigation are twofold: to undertake meta-analyses of studies addressing links between identity status and the relational issues of attachment (Study 1) and intimacy (Study 2). Identity status, attachment, and intimacy are closely related constructs, although they come from different theoretical streams. Attachment derives from object relations/attachment theory in which personality structures are based on relationships. Intimacy is located within psychosocial developmental theory—basically, an ego psychoanalytic theory in which personality structure is based on drive and processes of delay. For more classical psychoanalytic theorists, relationships are secondary to drive; for attachment theorists, drives are secondary to relationships (Greenberg & Mitchell, 1983). Both attachment and intimacy have in common "styles of relating" to others. Attachment theory deals with representations of relationships; intimacy deals with the (ego) capacity for relatedness. Attachment springs directly from relational experiences and their representations; intimacy originates in ego capacities that develop in the context of relationships. Attachment relates to emotional security; intimacy relates to ego development. However, what is necessary to both constructs are underlying ego processes. Put briefly, object relations/attachment styles and intimacy styles (based on ego development) are mutually determined and reciprocally enhancing (Marcia, 2006). Thus, investigations of the relationship between identity status and attachment as well as identity status and intimacy have both been included in this article.

Marcia's (1966) identity status model is based on Erikson's (1963, 1968) theoretical writings on identity. Erikson (1968) noted that the ability to make commitments was a central feature of optimal identity formation, and that an identity crisis or exploration phase was an important element in the process of undertaking identity commitments. These exploration and commitment dimensions of identity are central to Marcia's model of identity development. In attempting to elaborate Erikson's (1968) fifth psychosocial task of identity versus role confusion, Marcia (1966) described four qualitatively different statuses by which individuals undertake identity-defining commitments. *Identity achieved* individuals have experienced a phase of exploring several possibilities before committing to various iden-

tity defining domains. *Moratorium* individuals are in the process of exploration, but their commitments are vague. *Foreclosed* individuals are committed, but have not gone through a period of active exploration on their own terms. *Diffused* individuals are neither exploring nor committed to any identity defining roles or values. Several instruments have been developed to assess identity status, including the Identity Status Interview ([ISI], Marcia, 1966; Marcia, Waterman, Matteson, Archer, & Orlofsky, 1993) and the Extended Objective Measure of Ego Identity Status II ([EOM-EIS-II], Adams, Bennion & Huh, 1989). The ISI generally enables a categorical rating of overall identity status based on ratings for individual identity domains. The EOM-EIS-II is a self-report instrument where participants are assigned a continuous score for each identity status in each of eight domains or for ideological and interpersonal domains more generally. A categorical rating of overall identity status can also be derived from this instrument. Both of these tools assess degrees of exploration and commitment in the areas of vocational preferences and attitudes toward political, religious, and sexual and interpersonal values, which Erikson found to be important dimensions of one's psychosocial identity (Erikson, 1968).

One important focus of the identity status literature has been on how individuals in each of Marcia's (1966) four identity statuses might demonstrate different attachment styles in their relationships with significant others. It has been suggested that secure attachment will promote the development of an achieved identity status because securely attached adolescents will feel free to explore the environment from the secure base that their families provide (Marcia, 1989). Some relationships between specific identity statuses and attachment styles have been found, although the strength of this relationship has varied across studies (e.g., Faber, Edwards, Bauer, & Wetchler, 2003; Hoegh & Bourgeois, 2002; MacKinnon & Marcia, 2002).

A related focus for a number of empirical investigations in the identity status literature has been on the relationship between identity status and intimacy. Erikson's (1968) psychosocial stage model implies that successful identity resolution is a precursor to successful intimacy resolution. It has been suggested, however, that men and women follow different pathways in identity development, and that Erikson's descriptions of identity and intimacy development might be normative for men, but not for women (e.g., Franz & White, 1985; Gilligan, 1982; Hodgson & Fischer, 1979). Research investigating the relationship between identity status and intimacy has also produced conflicting results, particularly for women (Marcia et al., 1993). While men scoring in more mature identity statuses have commonly demonstrated more mature forms of intimacy, this same relationship has not consistently been found among women (e.g., Heyduk, 1982; Tesch & Whitbourne, 1982). The majority of research investigating the relationship between identity status and intimacy was conducted between 1973 and 1986; following this time, the area has been left with no clear resolution regarding possible gender differences in the relationship between identity and intimacy.

A meta-analysis of existing research involving identity status in association with issues of attachment and intimacy status will help to clarify how identity is related to each of these two constructs; such an analysis should, in turn, provide some potential directions for future research. More detailed reviews of relevant theory and research follow in Studies 1 and 2.

## STUDY 1: IDENTITY STATUS AND ATTACHMENT

One important focus of the identity status literature has been on how individuals in each of Marcia's (1966) four identity statuses might demonstrate different attachment styles in their relationships with significant others. *Attachment* is defined as a deep, emotional tie that one individual forms with another while *attachment figures* are the objects of one's attachment (Bowlby, 1982, 1979). The ideal attachment figure provides physical proximity, a safe haven, and a secure base from which one can explore the world (Bowlby, 1982). *Attachment behavior* refers to the external expression of affectional bonds, such as seeking proximity to and security from an attachment figure in times of stress.

Bowlby (1982) postulated that forming attachment bonds to particular people and displaying attachment behaviors are innate. However, these innate behaviors are influenced by interpersonal experiences. Optimally, attachment figures provide comfort and support in stressful or fear-arousing situations (Mikulincer & Shaver, 2005), thus instilling a feeling of security in another (Collins, Guihard, Ford, & Feeney, 2004). Some attachment figures, however, are inconsistent in their behaviors, or even ignorant and abusive and will not be experienced as a safe haven by another during times of stress. As a result, secondary attachment strategies must be used to cope with the distress such situations engender (Main, 1990). The unique attachment history of each individual will create "internal working models," or an internal structure of what can be expected to occur in various kinds of interactions with attachment figures (Bowlby, 1973; Rholes & Simpson, 2004).

Although Bowlby's (1979) particular emphasis was on the attachment bond that a young child forms with his or her primary caregivers and the role that this bond plays in the child's personal and social development, he stressed that attachment behavior characterizes human beings from "the cradle to the grave." During the late 1980s, attachment behavior began to be examined in adult development (Hazan & Shaver, 1987). One of the core propositions of adult attachment theory is that the way individuals learn to manage stress in earlier relationships systematically affects their interactions in new relationships (Rholes & Simpson, 2004), although internal working models continue to evolve with new relationships throughout life (Collins et al., 2004). Empirical evidence has been accumulating of considerable continuity between attachment styles of early childhood and young adulthood (e.g., Carlson, Sroufe, & Egeland, 2004; Sroufe, 2005). Adult attach-

ment theory has proved useful and has led to significant theoretical advantages in understanding attachment links across the life span (see Feeney, 1999, for a review).

Bartholomew and Horowitz (1991) suggested that a person's unique attachment history and working models lead him or her to assume one of four different attachment styles, or systematic patterns of relating to attachment figures in times of stress during adolescent and adult development. *Securely attached* individuals find it relatively easy to get close to others; they are comfortable depending on others and having others depend on them. They do not worry about being abandoned or about someone coming too emotionally close to them. People with an *avoidant attachment* style are uncomfortable being emotionally close to others and find it difficult to trust and depend on others. They are nervous when they feel others come too close and resist being close to others. *Preoccupied (anxious/ambivalently) attached* individuals wish to be close to others, but often worry that others will not reciprocate this desire. They also fear abandonment. The *fearful attachment* style describes individuals who want emotionally close relationships, but are too afraid of being hurt to actualize this desire. These varied attachment styles may, in turn, underlie different capacities for exploration and commitment during the adolescent identity formation process.

## Exploration

In attachment theory, the urge to explore the environment is regarded as a further basic component of human nature throughout life (Bowlby, 1988). For children, exploration involves perceptual-motor inspection of situations, events, objects, and individuals (Aspelmeier & Kerns, 2003; Bowlby, 1982). Empirical research on adult exploration has been linked to social, intellectual, and environmental exploration such as developing hobbies, working toward important personal goals, work, and traveling (Green & Campbell, 2000; Hazan & Shaver, 1990). Bowlby (1979) claimed that secure attachment, that knowing one or more trusted people will come to one's aid if difficulties should arise, is important for exploration at any age. It may be that the process of exploration involved in identity development during late adolescence and young adulthood has links with the secure attachment style. In general, Marcia (1988, 1993) suggested that secure attachment will promote the development of an achieved identity status because securely attached adolescents will feel free to explore the environment from the secure base provided by their families. A secure attachment style should also be linked to the moratorium identity status for similar reasons. Support for these propositions has come through the empirical work of Campbell, Adams, and Dobson (1984). In their research on family styles of interaction, these researchers found parental support for identity exploration as well as ado-

lescent connectedness (attachment) to parents to be associated with adolescent moratorium and achievement identity statuses.

## Commitment

In attachment theory, commitment is an important dimension of a satisfactory relationship (Rusbult, Verette, & Drigotus, as cited in Baumeister & Leary, 1995). Some studies indicate that people with a secure attachment style have more stable relationships (Duemmler & Kobak, 2001; Simpson, 1990). Individuals with a dismissing attachment style avoid commitment in relationships (Mikulincer & Shaver, 2005). Two forms of identity commitment during late adolescence and adulthood have been identified in Marcia's (1966, 1980) work: the ability to make commitments following identity exploration (identity achievement) and the ability to make commitments without exploration (foreclosure). It is likely that different adolescent attachment patterns are associated with each identity commitment type. As described in the previous section, commitment preceded by identity exploration (identity achievement) as well as identity exploration itself (moratorium status) have been linked with secure attachment patterns during late adolescent and adult development (Campbell et al., 1984; Grotevant & Cooper, 1986; Marcia, 1988, 1993). By contrast, commitment without identity exploration (foreclosure) has been associated with the combination of emotional attachment to parents and parental discouragement of exploration, independence strivings, and expression of differences (Campbell et al., 1984; Grotevant & Cooper, 1986). Strong fear of abandonment and high nurturance needs on the part of the adolescent (insecure attachment patterns) have also been associated with this foreclosed identity commitment position (Kroger, 1985, 1995). The inability to commit (in identity terms identity diffusion), has been linked with failure to form strong attachment bonds with parents through parental neglect or unavailability (Marcia, 1988, 1993) as well as parental inability to support adolescent individuality (Campbell et al., 1984).

## Attachment Style and Identity Status

Several studies have empirically examined the relationship between attachment and identity status with the use of different attachment measures and have found associations between a young adult's reported style of attachment and his or her identity formation. Two studies have found a negative correlation between reported attachment to mother and the diffused identity status as well as a positive correlation between reported attachment to father and the identity achieved status (Faber et al., 2003; Hoegh & Bourgeois, 2002). Others, however, have found that both identity achieved and foreclosed individuals are high in secure attachment, and that fearful attachment predominates among moratorium and identity diffused individuals (MacKinnon & Marcia, 2002). One study found a positive correlation

between dismissing attachment and identity diffusion (Zimmermann & Becker-Stroll, 2002) while another found fearful attachment to be negatively correlated with identity achievement and positively correlated with identity diffusion (Hoegh & Bourgeois, 2002). Still other researches have found no correlations higher than .16 for the relationship between each of the four identity statuses and the four attachment styles (e.g., Evans & Bloom, 1996).

In sum, the strengths and types of associations between different attachment styles and identity statuses have varied across studies. A meta-analysis of investigations examining the relationship between attachment style and identity status may clarify patterns of association between these two variables during late adolescence and young adult development. Theoretically, secure attachment is expected to be associated both with identity exploration and also the ability to make identity commitments following exploration. Thus, identity achieved and moratorium individuals are expected to be secure in their attachment styles. Similarly, attachment theory would predict that those in foreclosure and diffusion identity statuses would have insecure attachment styles.

- H1: For continuous measures of both identity status and attachment style, there will be positive correlations between scores on achieved and moratorium identity statuses and secure attachment style.
- H2: For continuous measures of both identity status and attachment style, there will be negative correlations between scores on foreclosed and diffused identity statuses and secure attachment style.
- H3: For categorical measures of identity status and attachment style, it is expected that the mean proportion of securely attached individuals will be higher among identity achieved and moratorium individuals compared to the foreclosed and diffused.

## METHOD

### Selection of Studies

The following databases for the time period January 1966 through July 2005 were used to identify relevant studies for the present series of meta-analyses: PsycINFO, ERIC, Sociological Abstracts, and Dissertation Abstracts International. Combinations of the following search terms were used: identity status, identity and Marcia, identity and Marcia's, and ego identity. Only empirical studies using Marcia's (1966) identity status paradigm were included in this study. Studies that did not examine the identity statuses in relation to at least one other variable were excluded from further analysis. Dissertations that later appeared as publications were also eliminated from further study. However, where the dissertation held relevant information not reported in the publication, supplementary information from the disser-

tation was used in subsequent meta-analyses. All empirical publications and dissertations in the English language meeting the above criteria formed the original database from which data for this study was drawn.

### Sample for Study 1

A total of 273 published articles and 277 doctoral dissertations comprised the larger database from which studies were drawn. Thirty studies from the larger database dealt with the relationship between identity status and attachment. Of these, seven were excluded because they did not provide enough statistical information to calculate an effect size, three were excluded because the statistical information was not comparable to that presented in the remaining studies, and three were excluded because identity statuses were combined. One study was excluded because it was a follow-up study using the same sample as one of the previous investigations, one was excluded because 90% of the sample had experienced some kind of trauma, and finally one was excluded because it reported parents' attachment patterns in relation to the adolescent's identity status rather than the adolescent's attachment style.<sup>1</sup> Thus, a subsample of 14 studies was examined in these meta-analyses.

### Coding Procedure

The following variables were coded for each study in the larger database: year of publication, type of article (dissertation, publication), primary theme of study, sample size and gender distribution, mean age and age range, sample characteristics (students [and level of study], working, homemaking, unemployed), primary Socioeconomic Status (SES) level and ethnicity of sample, geographic region, identity status measure and way of assessment, and reliability of the measure as reported in the study.

Six graduate students, trained by the second author, coded the variables. Disagreements were solved by discussion among the coders. Intercoder agreement was established by computing Cohen's kappa and percentage of agreement for categorical variables and correlations for continuous variables in a sample of 50% of the studies included in relational meta-analyses. For categorical variables, kappa values ranged from .44 to 1.0, and percentage of agreement from 78 to 83. Pearson's correlations for the remaining continuous variables ranged from .83 to 1.0.

### Procedure

The 14 studies of this sample used several measures of attachment, which differed in a number of ways. The Relationship Questionnaire ([RQ], Bartholomew &

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<sup>1</sup>For a list of excluded studies, contact Jane Kroger at jane.kroger@psyk.uit.no.

Horowitz, 1991), its revised scale, the Adolescent Relationship Questionnaire (A-RSQ), and the Relationship Scale Questionnaire ([RSQ], Griffin & Bartholomew, 1994) are self-report measures of current attachment orientations to specific people or close relationships in general. These measures use four attachment categories: secure, dismissing, preoccupied, and fearful attachment. The Inventory of Parent and Peer Attachment ([IPPA], Armsden & Greenberg, 1987) is a self-report measure of current attachment to parents and close friends. The IPPA measures important dimensions of attachment: trust, communication, and alienation. Levels of current attachment security are determined by subtracting the alienation scores from the combined trust and communication scores. The IPPA does not suggest any attachment style, but measures level of secure attachment, assessed on a continuous scale. Only the correlation between secure attachment and identity status was coded from studies using the IPPA. The Adult Attachment Interview ([AAI], George et al., 1985; Main & Goldwyn, 1985/1994) assesses state of mind with regard to attachment based on an adult's memories of childhood attachment experiences (Main, as cited in Main & Goldwyn, 1985/1994). The following attachment categories are assessed by this instrument: secure, insecure dismissing, and insecure preoccupied. The Separation Anxiety Test ([SAT], Hansburg, 1980) measures response to separation and loss through a series of pictures in which the participant is asked to describe how the central figure is feeling. General attachment styles that can be assessed by this measure are secure attachment, anxious attachment, and detachment (Kroger, 1985).

The most important differences among these measures are that the attachment style classifications differ somewhat (Crowell, Treboux, & Waters, 1999). Additionally, the focus of domains differs (attachment history versus current orientation to close relationships), and the use of interview versus self-report measures to assess attachment style is an important difference (Bartholomew & Shaver, 1998). A moderate degree of convergence between interview and self-report measures have been found across the family and peer domains when parallel conceptualizations of attachment styles are used (Bartholomew & Shaver, 1998; O'Hearn & Davis, 1997). Because the number of studies in this meta-analysis was small, studies using different attachment measures, but which focused on similar constructs, were analyzed together.

### Meta-analytic Procedure

Separate analyses were conducted for studies reporting correlations between identity status and attachment styles, and studies reporting frequencies of people with a particular attachment style and identity status. Correlations and percentages were used as effect size measures. Due to the small number of relevant studies, no moderating variables were investigated.

All calculations were performed using the software program Comprehensive Meta-Analysis (Borenstein & Rothstein, 1999). The program is based on the

Hedges and Olkin (1985) method that offers the opportunity to analyze a large number of different effect sizes. The mean weighted effect sizes are computed using the inverse variance of the effect size, giving more weight to more reliable studies. The  $Q$  statistic, reported in all tables, is a significance test of variation between studies included in a particular analysis. A significant  $Q$  value indicates that studies included within the analysis are heterogeneous in their findings.

Within meta-analyses, there is a distinction between fixed effects models and random effects models (see e.g., Hedges & Olkin, 1985; Hedges & Vevea, 1998). Fixed effects models make the assumption that the population effect size is constant and, unless this assumption is met, the analyses will have inflated the Type I error and will report overly narrow confidence intervals (Hunter & Schmidt, 2000). The random effects model was used in this investigation, as it is more likely that there is true variation in the population parameters, and the random effects model is more appropriate under these assumptions. (Although most investigations involved university student samples, these samples varied in terms of ethnic composition, geographic region, and historical context.) Another argument supporting the use of a random effects model was the relatively small number of studies in this area, which will result in low statistical power for the chi-square test used to test variation between studies (Lipsey & Wilson, 2000). The test may, under these circumstances, fail to reject the homogeneity hypothesis even with substantial differences between studies.

## RESULTS

### Sample Characteristics

There were equal numbers of publications and dissertations in the sample of 14 studies. Total sample size was 2,329 (56% females, 44% males). The mean publication year was 1997 ( $SD = 6.16$ ), and the mean age for the eight studies reporting age was 20.23 ( $SD = 5.15$ ) years. Sample characteristics for the individual studies included in the meta-analyses are shown in Table 1.

### Identity Status and Attachment Styles as Scale Measures

Eight studies reported correlations between identity status and attachment style. Table 2 shows the mean correlations between each of the four identity statuses and the following four attachment styles: secure attachment, dismissing/avoidant attachment, preoccupied attachment, and fearful attachment. The correlations were transformed to Fisher's  $Z$  by the meta-analysis program, and the computations were performed on the transformed correlations.

The results from this meta-analysis showed that the mean correlations between the various identity statuses and attachment styles were weak to moderate in terms of Cohen's (1988) criteria. (Cohen regarded a correlation of .30 as moderate and

TABLE 1  
Studies Included in the Meta-Analyses of Identity Status and Attachment

<i>Authors</i>	<i>Year</i>	<i>Mean age</i>	<i>N</i>	<i>Males</i>	<i>Females</i>	<i>Identity measure</i>	<i>Reliability</i>	<i>Attachment measure</i>	<i>Dissertation/ publication</i>	<i>Sample characteristics</i>	<i>Region</i>	<i>Effect measure</i>
Currie	1983	16.9	76	29	47	1	—	SAT	Dis	Students	US	%
Kroger	1985	19.3	140	60	80	1	.79	SAT	Publ	Students	New Zealand	%
Hamer & Bruch	1994	18.3	171	66	105	2	.74	IPPA	Publ	Students	US	%
Evans & Bloom	1996	19.3	287	135	152	2	—	RQ	Publ	Students	US	<i>r</i>
Hossack	1990	516	258	262	2	2	.71	IPPA	Dis	Students	US	<i>r</i>
Bankier	1997	21.9	98	17	81	2	—	RSQ	Dis	Students	US	<i>r</i>
Erlanger	1998	177	53	124	5	5	.86	AAQ	Publ	Students	US	<i>r</i>
Just	1999	202	80	122	2	2	—	IPPA	Dis	Students	US	<i>r</i>
Markway	1999	123			2	2	—	SAT	Dis	Students	US	%
Hoegh & Bourgeois	2002	79	45	20	5	5	—	RQ	Publ	Students	US	<i>r</i>
MacKinnon & Marcia	2002	32.0	96	0	96	1	.77	FAI	Publ	Working	Canada	%
Schwartz	2002	15.1	232	102	130	4	—	A-RSQ	Dis	Students	Canada	<i>r</i>
Zimmerman & Becker-Stoll	2002	41	15	26	3	3	—	AAI	Publ	—	Western Europe	<i>r</i>
Vogensen	2003	19.0	91	37	54	2	—	RQ	Dis	Students	US	%

*Note.* Identity measure: 1 = Identity Status Interview; 2 = Extended Objective Measure of Ego Identity Status (EOM-EIS); 3 = Mallory Q-sort of the identity statuses; 4 = De/las Identity Status Inventory; 5 = other. Attachment measure: RQ = Relationship Questionnaire; RSQ = Relationship Scales Questionnaire; IPPA = Inventory of Parent and Peer Attachment; SAT = Separation Anxiety Test; AAQ = Adult Attachment Questionnaire; AAI = Adult Attachment Interview; FAI = Family Attachment Interview; A-RSQ = Adolescence Relationship Scales Questionnaire.

TABLE 2  
 Meta-Analysis Results for the Correlations Between Identity  
 Statuses and Attachment Styles

<i>Identity status</i>	<i>Attachment style</i>	<i>K</i>	<i>n</i>	<i>Mean weighted r</i>	<i>95% CI</i>	<i>Q</i>
Achieved	Secure	8	1,625	.21	.11, .31	25.96**
	Dismissing	4	657	-.07	-.17, .03	4.22
	Preoccupied	4	657	-.02	-.10, .05	2.03
	Fearful	4	693	-.15	-.30, .00	10.43*
Moratorium	Secure	6	1,066	-.14	-.22, .07	8.37
	Dismissing	3	614	.04	-.12, .19	7.18*
	Preoccupied	3	614	.15	.06, .25	2.73
	Fearful	4	693	.09	-.02, .21	6.54
Foreclosed	Secure	6	1,066	.10	.02, .18	7.90
	Dismissing	3	614	-.13	-.32, .07	11.73**
	Preoccupied	3	614	-.08	-.17, .01	2.41
	Fearful	4	693	-.06	-.14, .01	0.59
Diffused	Secure	7	1,109	-.23	-.34, -.13	18.39**
	Dismissing	4	657	.15	.07, .22	2.26
	Preoccupied	4	657	.06	-.10, .21	9.89*
	Fearful	4	693	.19	-.03, .40	25.03***

*Note.* *K* = number of studies; *n* = total number of participants. The analyses are based on a random effects model. *Q* is a test of heterogeneity.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

.10 as weak). The strongest correlations were for achieved and diffused identity statuses with the secure attachment style (.21 and  $-.23$ , respectively). However, the result showed that the achieved and foreclosed identity statuses were positively correlated with the secure attachment style and negatively correlated with the insecure attachment styles, although weakly to moderately. The reversed pattern was found for the moratorium and diffused statuses. As reported in Table 2, the *Q* statistic showed significant variations among results for some of the comparisons between attachment style and identity status, but not for all.

### Identity Status and Attachment Style as Categorical Variables

Six studies reported attachment style and identity status as categorical variables. Because four different attachment measures were used, and the categorization of attachment styles apart from secure attachment varied greatly across investigations, only percentages of the securely attached individuals in each identity status were examined. By default, the remaining individuals in each identity status would evidence some form of insecure attachment. Results are presented in Table 3.

TABLE 3  
 Meta-Analysis Results for the Percentage of Securely Attached  
 Individuals for Each Identity Status

<i>Identity status</i>	<i>K</i>	<i>n</i>	<i>Mean proportion</i>	<i>95% CI</i>	<i>Q</i>
Achieved	6	147	.55	.40, .70	12.08*
Moratorium	5	92	.37	.21, .55	8.73
Foreclosed	5	199	.28	.16, .43	17.50**
Diffused	5	143	.23	.12, .38	9.17

*Note.* The nonoverlapping confidence intervals show that the percentage of securely attached secure individuals was significantly higher than the percentage of securely attached diffused intervals. The analyses are based on a random effects model. *K* = number of studies; *n* = total number of participants; *Q* = test of heterogeneity.

\* $p < .05$ . \*\* $p < .01$ .

The mean proportion of securely attached identity achieved individuals was .55, and then declined to .37 for moratoriums, and to .28 and .23 for the foreclosures and diffusions, respectively. Differences between groups were examined by inspecting overlap between confidence intervals. Only the achieved and diffused identity status groups did not have overlapping confidence intervals (CI) and, thus, can be said to differ significantly from each other. The achieved status and the foreclosed status had marginally overlapping confidence intervals (the CI for the achieved status was .40, .70; and for the foreclosed status .16, .43). Thus, the results suggest that there are real differences between the identity achieved and foreclosure and diffusion identity statuses, with the identity achieved far more likely to be secure in their attachment style than the latter two identity statuses. The moratorium, foreclosed, and diffusion CIs overlapped and, thus, no significant differences between any pair of these three identity statuses can be inferred. The *Q* statistic showed significant variation among individual studies reporting the percentage of achieved and foreclosed participants that were securely attached.

## DISCUSSION

The objective of Study 1 was to undertake meta-analyses of studies investigating the relationship between identity status and attachment style. The construct of attachment, derived from attachment/object relations theory, regards relationships as the foundations of personality structure, and a number of hypothesized links between adolescent/adult attachment styles and the identity statuses have been suggested over the past 30 years. This study tested three hypotheses regarding links between secure and insecure attachment styles and Marcia's (1980) identity statuses.

Hypothesis 1 proposed a positive correlation between the secure attachment style and the achieved and moratorium identity statuses, while Hypothesis 2 proposed a negative correlation between secure attachment and foreclosed and dif-fused identity statuses on continuous measures of these variables. Results from this study showed that the mean correlations between identity status and attachment styles were weak to moderate. The strongest mean correlations were for achieved and diffused identity statuses with secure attachment (.21 and  $-.23$ , respectively). Although the correlations were only weak to moderate, there was a pattern in direction of the effects, suggesting some relationship between attachment style and identity status. The direction of the effects was in the predicted direction for the achieved and diffused identity statuses. The achieved and foreclosed identity statuses were positively correlated with the secure attachment style and negatively correlated with the insecure attachment styles. The moratorium and the diffused identity statuses showed the reversed pattern.

It was hypothesized that secure attachment, which gives rise to the capacity to explore, should be linked to adult identity exploration. However, that hypothesis was not supported because the correlation between the secure attachment dimension and the moratorium identity status was negative. That the correlation between the secure attachment style and the foreclosed identity status was positive suggests that secure attachment also may be associated with the identity status that has made identity commitments without exploration. The results from these analyses suggest a stronger link between secure attachment and commitment than between secure attachment and exploration. However, as emphasized above, the correlations found in this meta-analysis were weak to moderate, and results should be interpreted with caution.

Findings from continuous measures of identity status and attachment style suggest that exploration may have a different meaning in attachment theory compared with identity status (derived from ego psychoanalytic) theory. Exploration in attachment theory generally refers to social, intellectual, and environmental exploration, such as developing hobbies, working toward important personal goals, work, and traveling (Green & Campbell, 2000; Hazan & Shaver, 1990), while exploration in identity theory involves active questioning for the purpose of arriving at individual values, beliefs, and goals (Marcia et al., 1993). A close look at the two concepts suggests that identity exploration is a psychosocial process with the goal of arriving at some resolution (commitment) but, when linked to attachment theory, exploration is the goal in itself. Thus, while there are overlaps in the areas of what is actually explored, a distinction between exploration linked to identity versus attachment theory may relate to whether exploration is considered a means to an end or an ultimate end product in the process of ongoing personality development.

Such a distinction might explain why foreclosed individuals could be secure enough in attachment style to travel, develop hobbies, and work toward goals, but

still not be active in their own identity explorations. In their narrative reports of family relations, moratoriums have sometimes been described as highly anxious and engaged in a push-pull relationship with parents or authority figures (e.g., Donovan, 1975; Josselson, 1987). Although they may be struggling to differentiate themselves from their caretakers in ego psychoanalytic (identity) terms, moratoriums' ability to explore and report feelings of secure attachment might be severely challenged in attachment terms.

Empirical research has given little attention to the relationship between adult attachment and exploration (Aspelmeier & Kerns, 2003; Reis, Collin, & Berscheid, 2000), and research on adult exploration has tended to draw simple parallels between infants' manifestation of exploration and their supposed adult analogues (Elliot & Reis, 2003). It has been noted that a more rigorous conceptualisation of adult exploration and its link to attachment is needed (Hazan & Shaver, 1990). Future research might examine in greater detail the definition and meanings that exploration and commitment hold in both attachment and identity status literatures during young adulthood.

Hypothesis 3, which proposed that the mean proportion of securely attached individuals would be higher among the identity achieved and moratorium individuals than the foreclosed and diffuse was partially supported. The mean proportion of identity achieved individuals with a secure attachment style was .55, the mean proportion for the moratorium status was .37, and for the foreclosed and diffused status .28 and .23 percent, respectively. The mean proportion of securely attached identity achievers was significantly higher than for the diffusions. Additionally, the overlap in CIs for the achieved and foreclosed identity statuses was marginal, suggesting that the mean proportion of secure attachment is higher among the identity achieved individuals compared to the foreclosures. The sample size of this analysis was small, making the power weak to detect significant differences between the groups; therefore, the fact that significant differences were found between the identity achieved and diffusions is noteworthy. The tendencies from this meta-analysis of categorical measures of attachment style and identity status clearly suggest that secure attachment is associated with identity achievement and nonsecure attachment with foreclosure and diffusion statuses. The overlapping confidence intervals for the moratorium, foreclosed, and diffused identity statuses suggests that the mean proportion of securely attached individuals was not significantly higher among the moratoriums compared to the foreclosed and the diffused identity statuses.

The data from this meta-analysis suggests that one's relational experiences, and representations of these relationships, have links to one's identity development. This study provides some evidence that secure attachment is associated with the ability to make identity commitments following exploration, but not with identity exploration itself. Positive relational experiences and a secure attachment style might be a necessary, but not sufficient, conditions for mature identity develop-

ment. Further studies are needed to learn more about the causal relationship between attachment style and identity status. Such research might also extend the study of attachment style and identity status to individuals likely to present a greater range of attachment styles than university student samples.

### Limitations

The analyses in Study 1 were based on 14 studies because 53% of the investigations dealing with the relationship between attachment style and identity status had to be excluded from the meta-analyses for various reasons. Due to the small sample size, no moderating variables were examined. The results from this study should therefore be interpreted with caution. It is important to highlight that the  $Q$  statistics indicated some significant differences in the results from individual studies included in the meta-analysis of both continuous and categorical data. A possible explanation for these differences is that the association between parental attachment versus general attachment and identity might vary, and also the association between attachment history versus current attachment and identity might vary. Unfortunately, the small sample sizes prevented separate analysis of studies measuring current adult attachment versus attachment history, and parental attachment versus attachment to a partner. Thus, the differences in results among studies in these analyses might be due to gender differences, age differences between samples, use of different attachment measures, or some other unknown variables. Despite these limitations, however, results of both correlational and categorical studies of identity status and attachment style do point to some relationships between these variables in the hypothesized directions.

### Conclusion

These meta-analyses found a weak to moderate relationship between attachment style and identity status. The positive correlation ( $r = .21$ ) between identity achievement and secure attachment and the negative correlation ( $r = -.23$ ) between identity diffusion and secure attachment do suggest some associations between these variables. Additionally, the highest mean proportion of secure attachment (.55) was found among identity achieved individuals. Furthermore, the lack of overlapping CIs between the identity achieved and the diffusions coupled with the marginal overlap of confidence intervals for the identity achieved and foreclosures did indicate that the identity achieved were more likely to be secure in their attachment styles than foreclosures and diffusions. Although evidence exists for a relationship between attachment style and identity status, there is a need to examine these two variables with identical measures of attachment and with larger and more diverse samples during young adulthood in order to clarify this relationship. There is also need for clearer operational definitions of exploration in both attach-

ment and identity status literatures in order to understand any linkages between these two theoretical orientations.

## STUDY 2: IDENTITY STATUS AND INTIMACY

The sixth psychosocial task according to Erikson's (1963) theory, the conflict of "intimacy versus isolation," is met during early adulthood. Genuine intimacy means having "the capacity to commit to concrete affiliations and partnerships and to develop the ethical strength to abide by such commitments even though they may call for significant sacrifices and compromises" (Erikson, 1968, p. 263). Study 1 has indicated the importance of commitment to both the formation of attachments and identity formation, and this ability to make commitments is also likely to be central in one's resolution to the intimacy versus isolation conflict of young adulthood.

According to the epigenetic principle of Erikson's (1963) theory, genuine intimacy should not be possible until issues of identity are reasonably well resolved. Erikson highlighted the importance of having a strong sense of identity prior to intimate relationships: ([I]ntimacy is the) ability to fuse your identity with somebody else's without fear that you're going to lose something yourself (Erikson, 1968, p. 135). However, he was unclear about how possible gender differences might impact his theory. Erikson (1968, 1975) proposed that a woman's identity formation was not complete until she had established an intimate relationship, and he also stated that "I think much of a young woman's identity is already defined in her kind of attractiveness and in the selective nature of her search for the man (or men) by whom she wishes to be sought" (Erikson, 1968, p. 283). Indeed, it has been questioned whether his description of identity and intimacy development might be normative for men, but not for women (Franz & White, 1985; Gilligan, 1982; Schiedel & Marcia, 1985). Franz and White (1985), for example, argued that Erikson needed to describe the importance of relational tasks throughout all eight stages of personality development while Gilligan (1982) criticized Erikson and stressed the importance of relational dimensions in the identity formation process for girls.

Researchers who have investigated the relationship between identity and intimacy have often used Orlofsky and colleagues' operationalization of the intimacy versus isolation crisis. Orlofsky, Marcia, and Lesser (1973) expanded Erikson's (1963) original ideas about intimacy to suggest that intimacy may best be understood by examining qualitatively different styles of close relationships rather than by considering intimacy as an entity that can be assessed on a high to low scale. Orlofsky et al. (1973) proposed five different intimacy statuses, or ways of dealing with intimacy issues. *Intimate* individuals have close friendships in which personal matters are shared and discussed with openness and depth, and they are also committed to an exclusive partner. *Preintimate* individuals also enjoy close, mutual re-

relationships, but are not involved in an exclusive relationship with another person. Individuals with *stereotyped* relationships generally have several friends, but these relationships lack depth and commitment and personal matters are rarely discussed. Communication here is based on more superficial issues. *Pseudointimates* have friendships, as well as a more or less committed relationship, that share the same characteristics as stereotyped relationships. *Isolates* do not have enduring personal relationships, and rarely initiate social contacts. The semistructured Intimacy Status Interview (Orlofsky et al., 1973) was developed to assess these intimacy statuses. The interview assesses one's capacity for intimacy in friendships and in romantic relationships based on the extent and depth of relationships with both genders as well as attitudes toward interpersonal issues. Degree of mutual closeness, openness, caring, responsibility, and commitment in relationships are important criteria when intimacy status is assessed.

A review of research examining the relationship between identity and intimacy status has shown conflicting results (Marcia et al., 1993, p. 83). Some researchers have found that identity status and intimacy status are related, such that high status in one area is associated with high status in the other (Kacerguis & Adams, 1980; Orlofsky et al., 1973; Schiedel & Marcia, 1985; Tesch & Whitbourne, 1982). Kacerguis and Adams (1980) found that identity status in the occupational domain was the primary predictive factor in the relationship between identity and intimacy. Other researchers have not found a significant relationship between occupational identity status and intimacy (Frank, Jacobson, & Tuer, 1990; Tesch & Whitbourne, 1982). The relationship between identity and intimacy has produced particularly conflicting results for women. For women, it seems that intimacy often codevelops with identity, and some findings have suggested that women have the ability to form intimate relationships regardless of identity status (Schiedel & Marcia, 1985). Several studies have found no relationship at all between overall identity status and intimacy status among women (see Marcia et al., 1993, p. 86).

Various paper-and-pencil scale measures have been developed to measure intimacy. These scales measure some of the same constructs as Orlofsky et al.'s (1973) Intimacy Status Interview. Studies using scale measures have also shown conflicting results in examining the relationship between identity status and intimacy. Some have found no relationship (e.g., Raskin, 1986; Suminski, 1990) while others have found that high identity status individuals also score high on a scale of intimacy (e.g., Battle, 1998; Heyduk, 1982; Rothman, 1978).

To account for the different findings for men and women in the relationship between identity status and intimacy, it has been questioned whether or not men and women follow different pathways of identity development (Adams & Archer, 1994; Hodgson & Fischer, 1979). One study suggested that men's identity development revolves around the issues of competence and knowledge while women's identity development revolves more around the issues of who one is in relation to others (Hodgson & Fischer, 1979). It has also been suggested that women follow one of two patterns of identity development: Some focus on occupational and ideo-

logical issues from an early age and achieve an identity by late adolescence while others are more concerned about the family and household and do not form a more self-constructed identity until they are around age 30 (Schiedel & Marcia, 1985). Gender is thus an important variable to consider when examining the relationship between identity and intimacy; different developmental pathways may be present for the two genders.

The aim of this meta-analysis is to explore the relationship between identity status and intimacy and to investigate potential gender differences in this association by conducting separate analyses for male and female samples. The primary hypothesis examined is based on Orlofsky et al.'s (1973) proposal that people who are more mature in their identity development (individuals in moratorium and achieved identity statuses) have relationships coming closest to fulfilling the criteria for intimacy (intimate and preintimate statuses). More specifically, the following hypotheses are explored:

- H1: There is a positive relationship between identity and intimacy, where individuals with a high (achievement/moratorium) identity status are more likely to be high in intimacy status (intimate/preintimate) than individuals with a low identity status (foreclosure/diffusion).
- H2: There will be a positive difference between high and low identity status individuals on scale measures of intimacy.
- H3: The relationship between identity status and intimacy status will be stronger for men than for women.

## METHOD

### Selection of Studies

The initial database for Study 2 is the same as for Study 1.

### Sample for Study 2

Thirty-one of the studies from the initial database investigated the relationship between identity status and intimacy. Six of these studies did not provide enough statistical information to calculate an effect size, and four used measures of intimacy not comparable to Erikson's (1963) concept of intimacy. Thus, 21 studies constituted the sample for the following meta-analyses. Eight of these did not differentiate between the genders in their analyses, four used a male sample only, one study had a female sample only, and the remaining nine studies had separate statistical information for both males and females.<sup>2</sup>

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<sup>2</sup>For a list of excluded studies, contact Jane Kroger at jane.kroger@psyk.uit.no.

## Coding Procedure

The coding procedure and reliability data for Study 2 is the same as for Study 1.

## Procedure

Several of the studies relevant for this meta-analysis collapsed identity statuses into high (achievement and moratorium) and low (foreclosure and diffusion) groupings. This investigation also followed that procedure so as to include as many studies as possible in the meta-analyses. Where scale measures of intimacy were used, a sample-size weighted average between the achieved and moratorium individuals' mean intimacy scores, and the foreclosed and diffused individuals' mean intimacy scores, was used as the high identity and low identity groups' intimacy scores.

Intimacy status categories were also combined in this investigation, as several of the studies in this sample had done. Intimate and preintimate individuals were combined into a high intimacy group, and stereotyped and pseudointimate individuals were combined into a low intimacy group. The percentage of isolate individuals was small, so they were included in the low intimacy group following the procedure of several previous investigations (e.g., Schiedel & Marcia, 1985; Whitbourne & Tesch, 1985). Only two studies included the merger status in their analyses, a status described in the Revised Intimacy Status Interview (Levitz-Jones & Orlofsky, 1985), and so the mergers were excluded from this investigation. The scale measures had to incorporate the following intimacy concepts to be included in the analyses: degree of mutual closeness, openness, caring, responsibility, and commitment.

## Meta-analytic Procedure

Studies using categorical assessments of identity and intimacy (the identity status interview and the intimacy status interview) were analyzed separately from those studies using scale measures of intimacy. The effect size estimator calculated for the categorical data was the odds ratio, which is a way of comparing whether the probability of a certain event occurring is the same for two groups. The meta-analysis program performs the calculations based on the log odds ratios. The effect size index calculated for scale measures was Hedges's  $g = (M_1 - M_2)/SD_{\text{pooled}}$ . Because of the small number of usable studies, no moderating variables apart from gender were investigated.

The software program Comprehensive Meta-Analysis (Borenstein & Rothstein, 1999) was again used to conduct the meta-analyses, and the random effects model was used (see *Meta-analytic procedure* subsection for Study 1).

## RESULTS

### Sample Characteristics

The mean publication year for the 21 studies in the sample was 1985 ( $SD = 6.67$ ). Total sample size was 1,982 (58% males and 42% females), and the mean age for the 12 studies that reported this variable was 27.7 ( $SD = 8.34$ ). The mean reliability for the identity status measure was .79 ( $SD = .09$ ) for 13 studies. Forty-three percent of the sample was comprised of published articles, and 57% were dissertations. For sample characteristics of the individual studies, see Table 4.

### Identity Status and Intimacy Status, Assessed Categorically

Ten studies used Orlofsky et al.'s (1973) Intimacy Status Interview and reported identity and intimacy data categorically. The results of the meta-analysis of these studies are presented in Table 5. Combining the male and female samples with the three studies that did not differentiate between the genders in the analyses gave a mean odds ratio of 5.08. The  $Q$  statistic for the total sample was significant, indicating heterogeneity.

Results for the male sample showed that the mean odds ratio of having both a high identity and high intimacy status was 22.09, and the  $Q$  statistic showed no significant differences among the studies included in the analysis. For women, the mean odds ratio was 2.61, and again there were no significant differences across the studies.

### Identity Status and Scale Measures of Identity

Fourteen studies used various scale measures of intimacy. The results from meta-analyses of these studies are presented in Table 6. Table 6 shows that the mean Hedges's  $g$  between high and low identity status individuals' intimacy scores was .34 for men and .30 for women, which reflects a low to moderate difference (Cohen, 1998). The test of homogeneity showed no differences among the studies.

### Identity and Gender

The mean odds ratio for having both high identity and high intimacy status was significantly higher for men than for women ( $p < .001$ ). There were no significant gender differences between the male sample and female sample in studies that used a scale measure of intimacy.

TABLE 4  
Studies Included in the Meta-Analyses of Identity Status and Intimacy

Authors	Year	Mean age	N	Males	Females	Identity measure	Reliability	Intimacy measure	Intimacy Results by gender	Dissertation/publication	Sample characteristics	Region	Effect measure
Orlowsky, Marcia, & Lesser	1973	—	53	53	0	1	0.83	ISI, IIS	Yes	Publ	Students	US	OR, Hedges's g
Marcia	1976	—	30	30	0	1	0.92	ISI	Yes	Publ	—	US	OR
Rothman	1978	20.6	88	—	—	1	0.83	REIS	Yes	Publ	Students	US	Hedges's g
Kacerguis & Adams	1980	—	88	44	44	1	0.82	IS	No	Publ	Students	US	Hedges's g
Heyduk	1982	19.7	71	22	49	1	0.58	ISI, IIS	Yes	Dis	Students	US	OR, Hedges's g
Zampich	1980	45.1	57	30	30	1	—	ISI	No	Dis	Working	US	OR
Schuster	1982	27.5	54	27	27	1	0.80	MAT	Yes	Dis	Students	US	Hedges's g
Tesch & Whitbourne	1982	25.0	92	48	44	1	0.69	ISI	Yes	Publ	—	US	OR
Imberman	1983	—	46	20	26	3	0.82	ISI, DAS	No	Dis	Students	US	OR, Hedges's g
Buchsbaum	1983	27.4	65	30	34	1	—	ISI	No	Dis	—	US	OR
Shanken	1984	—	58	28	30	3	0.76	ISI	Yes	Dis	Working	US	OR
Kopp	1984	20.0	98	42	56	1	—	TADF	Yes	Dis	Students	US	Hedges's g
Schiedel & Marcia	1985	19.6	80	40	40	1	—	ISI	Yes	Publ	Students	Canada	OR
Bellew-Smith & Korn	1986	28.5	40	0	40	2	—	ISI	Yes	Publ	Working	US	OR
Raskin	1986	29.7	50	24	26	1	0.73	IIS	No	Publ	—	US	Hedges's g
McConnell	1986	23.5	341	341	0	3	0.85	IPD	Yes	Dis	Students/ working	US	Hedges's g
Engelstein	1988	—	113	51	62	2	—	IS	No	Dis	Students/ working	US	Hedges's g
Frank, Jacobson, & Tuer	1990	26.5	150	72	78	1	0.86	ISI	Yes	Publ	Students	US	Hedges's g
Suminski	1990	42.2	83	83	0	1	0.87	PAIR	Yes	Dis	Working	US	Hedges's g
Battle	1998	—	120	61	59	1	0.72	MPD	Yes	Dis	Students	Canada	Hedges's g
Andrews	2002	—	206	50	156	2	—	STLS	No	Disc	Students	US	Hedges's g

Note. Identity measure: 1 = Identity Status Interview; 2 = Extended Objective Measure of Ego Identity Status (EOM-EIS); 3 = other. Intimacy measure: ISI = Intimacy Status Interview; IIS = Intimacy-Isolation Scale; REIS = Rasmussen's Ego Identity Scale; MAT = Marital Adjustment Test; DAS = Dyadic Adjustment Scale; TADF = Total Acquaintance Description Form; IDP = Inventory of Psychosocial Development; IS = Intimacy Scale; PAIR = Personal Assessment of Intimacy in Relationships; MPD = Measure of Psychosocial Development; STLS = Sternberg Triangular Love Scale.

TABLE 5  
 Meta-Analysis Results for the Odds Ratio for Identity Status (High/Low)  
 Versus Intimacy Status (High/Low)

	<i>K</i>	<i>n</i>	<i>Mean OR</i>	<i>95% CI</i>	<i>Q</i>
Males	6	197	22.09	8.74, 55.81	2.40
Females	5	163	2.61	1.22, 5.59	2.08
Total	10	525	5.08	2.21, 11.65	29.32*

*Note.* The analyses are based on a random effects model. *K* = number of studies; *n* = total number of participants; *Q* = test of heterogeneity.

\**p* < .01.

TABLE 6  
 Meta-Analysis Results for Differences for High Versus Low Identity  
 Statuses on Scale Measures of Intimacy

	<i>K</i>	<i>n</i>	<i>Mean g</i>	<i>95% CI</i>	<i>Q</i>
Males	9	670	0.34	.13, .56	12.30
Females	6	350	0.30	.04, .55	4.86
Total	14	1,472	0.41	.14, .67	64.14*

*Note.* The analyses are based on a random effects model. *K* = number of studies; *n* = total number of participants; *g* = Hedges's *g*; *Q* = test of heterogeneity.

\**p* < .001.

## DISCUSSION

The aim of Study 2 was to use meta-analysis to investigate the relationship between identity status and intimacy. Erikson's (1968) construct of intimacy has its origins in psychosocial and ego psychoanalytic psychology. This orientation suggests that drive satisfaction and the ability of the ego to delay gratification are the foundations of personality structure. A number of hypothesized links between Eriksonian constructs of identity and intimacy for adolescent and adult men and women have been proposed, particularly through the 1970s and 1980s. This study examined three hypotheses regarding links between identity and intimacy statuses for men and women.

Hypothesis 1 proposed a positive relationship between identity and intimacy, such that those high in identity status would likely be high in intimacy status for both men and women. Strong support for Hypothesis 1 was found for men—there was a positive relationship between high identity status and high intimacy status; there was a corresponding positive relationship between low identity status and low intimacy status. The mean odds ratio for identity status and intimacy status for

men was 22.09. Expressed in percentages, 69% of high identity status men were also high in intimacy, whereas only 23% of low identity status men were high in intimacy.

For women, the mean odds ratio for the relationship between identity status and intimacy status was 2.61. Expressed in terms of percentages, 65% of high identity status women also were high in intimacy, while 46% of low identity status women were also high in intimacy. The results do give some support to Hypothesis 1 also for women, in that about two thirds of high identity status women were in a high intimacy status. However, low identity status women were almost equally distributed between the high and low intimacy statuses.

Hypothesis 2 proposed a positive difference between high and low identity status individuals on scale measures of identity, and this hypothesis was supported. The results from studies using scales measures of intimacy showed that the mean Hedges's  $g$  for men, women, and the combined group ranged from 0.30 to 0.41. The result indicates that the high identity status individuals scored higher than low identity status individuals on scale measures of intimacy; the difference was low to moderate for all analyses (Cohen, 1988).

Hypothesis 3, which proposed that the relationship between identity status and intimacy statuses would be stronger for men than women was partially supported. Analysis of studies using a scale measure of intimacy did not show gender differences in the relationship between identity and intimacy; however, results from studies using the identity and intimacy status categories showed a significantly stronger relationship between identity status and intimacy status for men than for women ( $p < .001$ ). According to Erikson (1968), successful resolution of the identity crisis is a necessary prerequisite for the establishment of mature intimacy, at least for men. The current meta-analysis did find a strong relationship between identity and intimacy for men. However, as 23% of the male sample low in identity status still were rated as intimate in their relationship style, an epigenetic necessity for identity preceding intimacy was not confirmed. Having a high identity status was obviously not a necessary prerequisite to intimacy for a large minority of the women sampled in this meta-analysis. Schiedel and Marcia (1985) have suggested that identity and intimacy may codevelop among women, and the results of this study do provide some support for this notion. Marcia and colleagues (1993) concluded that overall identity is not a prerequisite for the development of intimacy, but that identity and intimacy seem to interact and amplify each other. Results from this analysis support that conclusion.

This meta-analysis confirmed that the relationship between identity and intimacy was stronger for men than for women when categorical measures of identity and intimacy were considered. Reasons for this gender difference require further investigation. It has been suggested that men and women follow different routes to identity development, with men's identity development evolving more around the issues of competence and knowledge, and women's more around interpersonal re-

relationships (Hodgson & Fischer, 1979). It has also been suggested that female development relies on connectedness with others while male development is related to separateness (Gilligan, 1982). The majority of studies included in this meta-analysis used a global assessment of identity status and did not measure one's status in individual identity domains and their associations with intimacy; thus, the issue of whether there are certain identity domains more strongly related to intimacy development for men versus women could not be investigated.

In future research, moderating variables such as sex role orientation in relation to patterns of identity and intimacy development for men and women would be a useful avenue to explore. It has been demonstrated that sex role orientation may play a key role in the development of both identity and intimacy during late adolescence and young adulthood (Dyk & Adams, 1990). Adams and Archer (1994) reviewed Dyk and Adams' (1990) longitudinal work to comment on three models that were examined in order to understand the relationship between gender role orientation, identity, and intimacy development during late adolescence. Feminine-oriented men and masculine-oriented women demonstrated a significant directional dominance of identity preceding intimacy, while feminine-oriented women showed no directional dominance. This latter result may reflect a fusing of the two issues for feminine-oriented women or the development of parallel processes. Future research on gender, identity, and intimacy development during late adolescence and young adulthood could well include a measure of sex role orientation to understand, more clearly, the relationship between these variables.

All studies included in this meta-analysis of identity status and intimacy status were conducted between 1973 and 1986; no studies assessing identity status in relation to intimacy status beyond 1986 appeared in any of the databases used in this investigation. The relationship between identity status and intimacy status for the two genders may be very different today than it was 20 years ago. In recent years, few gender differences have been found in identity status distributions or in the process of identity development itself (Kroger, 1997; Marcia, 1999). Today, in many Western contexts, more women have entered the workforce and they receive greater support for such lifestyle choices than would have been the case 20 years ago. Future research should replicate these earlier studies of identity and intimacy status to understand how the two variables are related to gender today.

### Limitations

Twenty-one studies constituted the basis for the analyses of Study 2. Because the sample size was small, no moderating variables, apart from gender, were investigated. A larger database would have permitted a more extensive examination of variation between studies. Age and identity status ratings in various identity domains are variables that would have been meaningful to examine in relation to intimacy status because age differences (Whitbourne & Tesch, 1985) and domain-spe-

cific differences (Fitch & Adams, 1983; Kacerguis & Adams, 1980; Whitbourne & Tesch, 1985) in the relationship between identity status and intimacy status have been found. Another limitation of this study is that identity statuses and intimacy statuses were combined into high and low groupings in order to maximize the number of studies that could be used; however, this consolidation led to loss of information about how each particular intimacy status is related to each of the four identity statuses.

## Conclusion

Results from this meta-analysis showed that there was a positive relationship between identity and intimacy for both men and women. The relationship between identity status and intimacy status was significantly stronger for men than for women among categorical measures, whereas no gender differences were found for continuous measures of intimacy. Approximately two thirds of both men and women in high identity statuses were also high in intimacy development. However, low identity men were most likely to be low in intimacy while low identity women were about evenly divided between high and low intimacy groupings. It must be noted that findings from the 1970s and 1980s formed the basis for this meta-analysis, and more contemporary studies might have produced different results. Further research is clearly needed to understand more about the relationship between identity status and intimacy, especially for contemporary women.

## GENERAL CONCLUSIONS

This investigation was part of a larger study examining Marcia's (1966) identity statuses in relation to a number of different personality, cognitive, relational, behavioral, and developmental variables. This particular investigation concerned relational issues, and the foci of Studies 1 and 2 were on identity status and the relational issues of attachment and intimacy. Both attachment and intimacy have in common "styles of relating" to others, though these constructs come from different theoretical orientations. While Bowlby's (1973) attachment construct had its origins in attachment/object relations theory that emphasizes the primacy of relationships in the development of personality, Erikson's (1968) intimacy construct had its origins in psychosocial and ego psychoanalytic psychology in which drives and the delay of gratification are regarded as the foundations of personality (Greenberg & Mitchell, 1983). Despite these differing theoretical orientations of the constructs under examination in Studies 1 and 2, attachment and intimacy are mutually determined and reciprocally enhancing entities, both based on processes of ego development (Marcia, 2006). Thus, identity status was examined in relation to both at-

tachment and intimacy research in this article. And, findings from both Studies 1 and 2 showed patterns of relationships between identity status and attachment and identity status and intimacy.

The correlations between identity status and attachment style were weak to moderate; however, the patterns in the relationships between scale measures of the two suggested that secure attachment was related to identity commitment. For categorical measures of attachment and identity, the mean proportion of securely attached individuals was higher among the identity achieved compared to the diffused and foreclosed individuals. The relationship between identity status and intimacy status was strong, although the relationship was stronger for men than women on categorical measures. About two thirds of both men and women rated high in identity status (achievement and moratorium) were also rated high in intimacy status (intimate and preintimate). Low identity status (foreclosure and diffusion) men were also likely to be low in intimacy status (pseudointimate and stereotypic; about 75% of low identity status men showed this pattern). Low identity status women, however, were almost evenly divided between the high (intimate and preintimate) and low (pseudointimate and stereotypic) intimacy statuses. These findings suggest that identity and intimacy follow an epigenetic line of development for most men in the samples, but that identity and intimacy are more likely to codevelop among at least one half of the low identity status women sampled.

It is worth noting that the identity status measures most frequently used in examining the relationship between identity status and attachment style were paper-and-pencil rather than interview assessments (the Identity Status Interview was used in only 3 of these 14 studies). By contrast, the Identity Status Interview was the instrument most frequently used to examine the relationship between identity status and intimacy (used in 15 of 21 studies). Paper-and-pencil measures may simply not provide adequate means of assessing identity exploration because there are no opportunities to probe the participant's self-reported breadth and depth on this variable. Identity status assessments that allow for greater probing of identity exploration may provide greater clarity on the relationship between identity status and attachment style in future studies.

Despite the limitations of these studies, the meta-analyses do offer the first systematic, quantitative means of examining Marcia's (1966) identity statuses in relation to both attachment style and intimacy status. Future research needs to examine in greater detail the definition and meanings that exploration holds in both attachment and identity status literatures during young adulthood. Future research might also benefit from use of nonuniversity student samples. And, future research is needed to clarify whether the relationship between identity and intimacy status is similar to results found in the 1970s and 1980s. Meta-analytic procedures are a useful means both for assessing past research findings and for providing a means of pointing toward future research directions.

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## REFERENCES

References marked with an asterisk indicate studies included the meta-analysis of Study 1 and those marked with a double asterisk indicate studies included the meta-analysis of Study 2.

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