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Interest Fit and Job Satisfaction: A Systematic Review and Meta-Analysis

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Abstract

Interest inventories are widely used for career and organizational decision-making. Though it is widely assumed that interest fit predicts job satisfaction, previous meta-analyses reported non-significant relations between interest fit and job satisfaction. However, past meta-analyses were limited by several critical issues, including low statistical power and inconsistent inclusion criteria. In this updated meta-analysis, we systematically reviewed the link between interest fit and job satisfaction across 105 studies (k = 194, N = 39,602). Results revealed a statistically significant, positive relation between interest fit and overall job satisfaction that was slightly lower than expected (ρ = .19, [95% *CI*: .16, .21]). Yet moderation analyses revealed the strength of the relation was notably stronger for satisfaction facets capturing how people evaluate their career choice in general. Overall, these results suggest a need to reconceptualize the applied importance of vocational interests. Although we report clear evidence that interest fit predicts job satisfaction, interest fit is more strongly related to performance outcomes and satisfaction with one's overall career path. We conclude by presenting a series of recommendations for improving the use of interest assessments in career and organizational settings.

Keywords: vocational interests; job satisfaction; person-environment fit; careers; selection

Interest Fit and Job Satisfaction: A Systematic Review and Meta-Analysis

Vocational interests are one of the most widely assessed individual difference constructs in applied settings. Millions of people take interest inventories each year to help determine how their interests relate to different jobs and work environments. For example, the Occupational Information Network's (O*NET) *My Next Move* website, which hosts the Interest Profiler, averages over 1 million site visits per month (U.S. Department of Labor, 2018). Other popular interest inventories, such as the Strong and ACT, are also used by millions of career-seekers each year (American College Testing Program, 2009; Morris, 2016). In addition to their use for career guidance, organizations such as the U.S. military are increasingly using vocational interests to inform personnel selection and placement decisions (Hansen, 2019; Kirkendall et al., 2020; Oswald, Hough, & Zuo, 2019; Van Iddekinge, Putka, & Campbell, 2011a).

The use of vocational interests to predict job satisfaction dates back to the 1940's when interest assessments were first described as a tool to help people discover satisfying work (Bingham, 1937; Strong, 1943). In popular career guidance literature, it is widely assumed that interest fit is important for job satisfaction (e.g., Bolles, 2017; Shatkin, 2012). Yet contrary to this assumption, the available evidence does not support the idea that interest fit predicts job satisfaction "at a better than chance level" (Tinsley, 2000, p. 155). Three published meta-analyses did not find a statistically significant relation between interest fit and job satisfaction (Assouline & Meir, 1987; Tranberg, Slane & Ekeberg, 1993; Tsabari, Tziner & Meir, 2005). These null findings have led to criticisms about the usefulness of interest assessments and the core ideas of Holland's (1973, 1997) theory of vocational personalities and work environments. However, past meta-analyses were limited by several methodological issues (Spokane, Meir, & Catalano, 2000). Most notably, large portions of the interest fit-job satisfaction literature were

never included in past meta-analyses, resulting in low statistical power and inconclusive tests for moderators. We believe it is important to revisit this topic to address critical questions that remain concerning the predictive utility of interest assessments.

In this article, we examine differing viewpoints on the importance of interest fit for predicting job satisfaction and present the results of an updated meta-analysis. We offer four major contributions. First, we provide the best evidence to-date on the overall strength of the interest fit-job satisfaction relation. Our meta-analytic dataset includes 105 primary studies and a combined sample size of 39,602. Second, with this larger dataset, we provide a more detailed and comprehensive analysis of moderator variables. We address novel questions about whether interest fit predicts job satisfaction differently depending on how interest fit is measured, and which job satisfaction facets are considered. Third, we compare our results with other meta-analyses on predictors of job satisfaction to contrast the utility of interest fit with other individual differences (e.g., Judge, Heller, & Mount, 2002; Kristof-Brown, Zimmerman, & Johnson, 2005). Fourth, we present a series of recommendations for using interest assessments to inform career and organizational decision-making. These recommendations are based on integrated findings from our meta-analysis and other recent studies linking interest fit to applied outcomes (e.g., Nye, Su, Rounds, & Drasgow, 2012; 2017; Van Iddekinge, Roth, Putka, & Lanivich, 2011b).

Interest Fit and Job Satisfaction: Conceptual Background

Person-environment (P-E) fit refers to the match between a person's attributes and their environment (Barrick & Parks-Leduc, 2019). P-E fit can be examined in a variety of ways depending on which attributes are considered (e.g., interests, skills, or values) and how the environment is defined (e.g., fit with one's vocation, organization, or coworkers). The current meta-analysis focuses on *interest fit*, a type of person-vocation (P-V) fit. Vocational interests are

trait-like preferences for work activities and environments (Rounds & Su, 2014; Su, 2020). Interest fit is typically assessed objectively, meaning that person and environment interest scores are obtained from separate sources. This is distinct from subjective or perceived fit, in which an individual directly rates their environment or fit levels (Kristof-Brown et al., 2005). For this paper, we define interest fit as *the objective match between an individual's interests and their vocational environment.*

There are three main ways of measuring interest fit: matching interest scales, congruence indices, and occupational scales (Hansen, 2019; Nye et al., 2012; Van Iddekinge et al., 2011b). Matching interest scales reflect respondents' interest intensity levels in the scale that best describes their occupation. Matching interests are typically assigned for specific occupations using Holland's (1997) RIASEC model, which is the most widely used interest framework for describing people and environments. Holland's model organizes vocational interests into six broad categories: Realistic (R), Investigative (I), Artistic (A), Social (S), Enterprising (E), and Conventional (C)[1]. Figure 1 shows Holland's model for a job in which *investigative* is the matching interest category (e.g., 'scientists'). If a sample of scientists took an interest inventory, those with higher investigative scores would show better fit using the matching scale method.

The second method of measuring interest fit—congruence indices—use formulas to compare the rank-ordering of respondents' RIASEC interests to those of their job. As shown in Figure 1, RIASEC interests that are *adjacent* to each other on the perimeter of the hexagon are more closely related than those further away (i.e., *alternate* or *opposite*). Congruence indices

[1] *Realistic* interests involve working with hands, tools, and machines. *Investigative* interests involve the sciences, including physical, social, biological, and medical sciences. *Artistic* interests involve creative expression, including written, visual, and performing arts. *Social* interests are focused around helping and teaching people. *Enterprising* interests involve working in persuasive roles directed toward achieving economic objectives (e.g., management, sales). *Conventional* interests involve working in well-structured environments, especially business settings.

differ in complexity, ranging from those that only compare matching interest codes of a person's interests to their vocation (e.g., first letter agreement, Holland, 1973) to those that compare multiple interest types (e.g., C-Index, Brown & Gore, 1994). Nonetheless, most congruence indices place a greater emphasis on whether a person's highest interest score matches their occupation's highest interest score, followed by the second- and third-highest scores from each source. Thus, if a scientist's three strongest interests were investigative (matching), realistic (adjacent), and artistic (adjacent), a congruence index would indicate a high level of fit for this individual. Conversely, a scientist whose three strongest interests were enterprising (opposite), social (alternate), and conventional (alternate) would show poor fit with their vocation.

Occupational scales are the third method of assessing fit. Occupational scales assess the degree of similarity between a respondent's item-level interest profile and the mean item profile of satisfied employees within a target occupation (e.g., Strong, 1943; Kuder, 1970). Occupational scales are empirically derived and therefore do not require the use of any specific interest model (e.g., Holland, 1997). For example, a 'scientist' occupational scale would be created using the interest items that satisfied scientists tend to endorse. Respondents that endorse similar items to the mean profile for satisfied scientists would score high on the scientist scale (indicating good fit), whereas respondents who endorse different items would score low (indicating poor fit).

Just as there are different ways to measure interest fit, there are also multiple facets of job satisfaction (Judge, Weiss, Kammeyer-Mueller, & Hulin, 2017). At the most general level, global job satisfaction refers to one's overall evaluative judgment of their job. Individuals may also have different levels of satisfaction for specific aspects of their job, such as their pay, promotion opportunities, supervisors, and the actual work they perform (Smith, Kendall & Hulin, 1969). More broadly, people differ in the extent to which they are satisfied with their overall

choice of a career and organization. In the next section, we discuss theories linking interest fit to global and specific job satisfaction facets.

Theories on the Importance of Interest Fit for Job Satisfaction

John Holland's (1959; 1973; 1997) theory of vocational personalities and work environments proposes broad ideas about the applied importance of interest fit. One of Holland's core ideas is that the match between an individual's interests and their work environment predicts job satisfaction. According to Holland (1997), "vocational satisfaction, stability and achievement depend on congruence" (p. 11). This helps explain why interests are often used for career decision-making. For example, an individual with strong social interests should be more satisfied in a job that involves high levels of social interaction, such as teaching or counseling. Holland's linkage of people and work environments provides a basic framework to support a strong relation between interest fit and global job satisfaction.

Another relevant theoretical perspective is Schneider's (1987) Attraction-Selection-Attrition (ASA) model. Similar to Holland, the ASA model proposes that individuals are attracted to work environments composed of people with similar interests (attraction). Organizations also tend to select people who fit with existing employees (selection), and incongruent individuals are more likely to leave over time (attrition). These ASA processes suggest that interests play a key role in shaping people's career paths. Thus, interest fit should not only predict global job satisfaction, it should also predict how people evaluate their job choice and organization.

However, there are also reasons why interest fit may not be a particularly strong predictor of job satisfaction and its facets. Apart from interest fit, a variety of other factors can influence people's satisfaction with their job. For example, certain job characteristics, such as autonomy

and task identity, predict job satisfaction independent of fit (Loher, Noe, Moeller, & Fitzgerald, 1985). In addition, some people may value their salary, status, or supervisor relationship more than whether they are interested in their work (Kristof-Brown et al., 2005; Verquer, Beehr, & Wagner, 2003). From this perspective, interest fit can be viewed as a value, among several others, that promotes job satisfaction (Locke, 1976). As a result, interest fit may not explain as much variance in job satisfaction scores as would be expected from Holland's (1997) theory.

Prior Empirical Evidence

Three published meta-analyses have found nonsignificant true score correlations between interest fit and job satisfaction (Assouline & Meir, 1987; Tranberg et al., 1993; Tsabari et al., 2005). These findings led to criticisms of Holland's congruence hypothesis and raise questions about the utility of interest assessments (Gottfredson & Holland, 1990; Osipow & Fitzgerald, 1996). For example, Tinsley (2000) asserted, "the evidence supports the conclusion that person–environment congruence [based] on Holland's RIASEC dimensions is not a useful predictor of important vocational outcomes such as satisfaction" (p. 155). Nonetheless, a closer examination of previous meta-analyses reveals several key issues that limited their findings.

Assouline and Meir (1987) conducted the first meta-analysis based on 16 studies (N = 4,661) published from 1970-1987. The authors found a positive, but non-significant correlation between interest fit (congruence) and job satisfaction (ρ = .21, 95% *CI* [-.09, .51]). Assouline and Meir's meta-analysis had several limitations. First, it is unclear how they calculated and reported overall effect sizes for job satisfaction. In most tables, they report the number of correlations rather than the number of studies. Second, they did not apply psychometric corrections for range restriction or unreliability when estimating meta-analytic correlations. Third, and most importantly, they did not include studies that used occupational interest scales to measure fit.

Occupational scales are commonly used in career guidance and organizations, so understanding their predictive utility has important practical implications (Donnay, Morris, Schaubhut, & Thompson, 2005; Hansen & Wiernik, 2017).

The next two meta-analyses replicated the nonsignificant results of Assouline and Meir (1987). Tranberg et al. (1993) found a true score correlation of .20 (95% *CI* [-.06, .45]) between interest fit and job satisfaction. Not surprisingly, this effect size was almost identical to that reported by Assouline and Meir since Tranberg et al.'s meta-analysis was based on 11 overlapping studies and only 6 new studies. Finally, Tsabari et al. (2005) updated Assouline and Meir (1987) by including studies from 1988-2003. They reported a smaller correlation (ρ = .17, 95% *CI* [-.09, .42]) based on 26 studies (N = 6,557). Both of these meta-analyses were limited in that they did not include a number of unpublished studies, suggesting the possibility of publication bias. In addition, both meta-analyses combined global measures of job satisfaction with multi-faceted scales. This prevented an analysis of how interest fit relates to specific satisfaction facets. Finally, the most recent meta-analysis (Tsabari et al., 2005) used a nonstandard approach to selecting effect sizes. When a study reported multiple correlations between interest fit and job satisfaction, only one representative correlation was recorded. This limits the inferences that can be drawn from their results (Nye, Bhatia, & Prasad, 2019).

Overall, prior meta-analytic research raises three important points. First, the estimated effect sizes were based on small subsets of studies, suggesting that with sufficient power there is likely a relation between interest fit and job satisfaction. Second, the piecemeal approaches of past meta-analyses need to be updated in a comprehensive manner. Third, all three meta-analyses were hindered by limited tests for potential moderators, incomplete effect size coding, exclusion of unpublished studies, and a lack of psychometric corrections (Rounds, McKenna, Hubert, &

Day, 2000). Together, these issues make it difficult to evaluate criticisms about the usefulness of interest assessments for predicting job satisfaction (e.g., Spokane et al., 2000; Tinsley, 2000).

The current meta-analysis improves upon past research in five key ways. First, we use a broader conceptualization of interest fit by including studies that measured fit using occupational interest scales. Second, we address the potential for publication bias by including results from a number of unpublished studies (k = 70). Third, our expanded dataset includes over four-times the combined sample size (N = 39,602) of the next largest meta-analysis, providing substantially more statistical power. Fourth, the number of samples (k =194) allowed us to examine previously untested moderator variables, such as different types of interest fit, facets of satisfaction, measures, and study design variables. Fifth, we apply updated psychometric corrections to account for methodological artifacts. By addressing these critical issues, we aim to draw new conclusions about the interest fit-job satisfaction relation.

Current Study

We proposed three sets of primary hypotheses. First, we consider the overall strength of the true score correlation between interest fit and job satisfaction. The size of this correlation is vital for understanding the extent to which interest fit matters for job satisfaction. Second, we evaluate how different types of interest fit are related to job satisfaction. Although interest scores can be linked to career environments in multiple ways, it is not known which type of interest fit is most strongly related to job satisfaction. Third, we assess potential differences across facets of job satisfaction, which inform how interest fit is related to satisfaction with specific aspects of jobs (in addition to global job satisfaction). After presenting the primary hypotheses, we then discuss other potential moderators such as sample characteristics and study design variables.

Primary Hypotheses

1. Size of overall correlation. The three previously published meta-analyses reported interest fit-job satisfaction correlations ranging from .17 to .21 (Tranberg et al., 1993; Tsabari et al., 2005). However, these estimates were calculated without appropriate corrections for unreliability and range restriction. These psychometric corrections typically increase correlations by providing a better estimate of the true population effects (Schmidt & Hunter, 2014). Qualitative reviews on the interest fit literature have also speculated stronger correlations. For example, Spokane et al. (2000) stated that if methodological issues were addressed, correlations between interest fit and job satisfaction would exceed .25, even up to .40 (p. 179). Hansen's (2013) review also asserted that the correlation should be between .25 - .30 (p. 395). Based on these ideas and previous estimates, we proposed the following overall hypothesis:

> ***Hypothesis 1***. Vocational interest fit will be statistically related to job satisfaction, and the overall true score correlation (ρ) will be between .25 - .30.

2. Different types of interest fit. As noted, most studies have used one of three main methods to quantify interest fit: occupational scales, congruence indices, and matching interest scales. Recent meta-analyses on interest fit and *job performance* have provided mixed evidence about the predictive utility of different types of interest fit. Van Iddekinge et al. (2011b) found that matching interests were stronger predictors of job performance compared to congruence indices. However, in a larger, updated meta-analysis, Nye et al. (2017) found that congruence indices were stronger predictors of performance outcomes. Nye et al's findings may be due to the fact that congruence indices typically use more information to quantify fit than matching interests. Whereas matching interests are solely based on the interest scale that best describes an occupation, most congruence indices compare the rank-ordering of multiple interest types between a person and job. Because of this difference, we proposed the following hypothesis:

Hypothesis 2a. The type of fit measure used (i.e., occupational scales, congruence indices, and matching interests) will moderate the relation between interest fit and job satisfaction, such that congruence indices will be the strongest predictor.

We also sought to examine whether non-matching interest scale scores would provide additional predictive utility for job satisfaction based on the structure of Holland's RIASEC model. Many occupations involve multiple RIASEC types that are adjacent to each other on the hexagon. For example, a civil engineer's three-letter code from O*NET is RIE (Rounds, Armstrong, Liao, Lewis, & Rivkin, 2008). This means that civil engineering primarily involves realistic interests, but also some investigative and conventional. As a result, investigative and conventional interests (i.e., adjacent scales) may still explain variance in civil engineers' job satisfaction. In contrast, the other three interest scales (i.e., alternate and opposite) should be less important. We therefore proposed the following hypothesis:

Hypothesis 2b. When correlations are reported between non-matching RIASEC interest scales and job satisfaction, adjacent scales will show stronger correlations compared to alternate and opposite scales (in that order).

3. Different facets of job satisfaction. Next, we sought to examine whether interest fit is more strongly related to certain facets of job satisfaction. For this moderator analysis, we used seven specific facets that are commonly measured in job satisfaction questionnaires, including satisfaction with pay, promotion opportunities, coworkers, supervisors, the work itself, job choice, and one's organization (Smith et al, 1969). In addition, we also used two broader facets: intrinsic versus extrinsic job satisfaction (Weiss, Dawis, England, & Lofquist, 1967). Because vocational interests reflect preferences for work activities, we expected that interest fit would be more strongly related to intrinsic satisfaction facets, which focus on the work itself rather than

extrinsic aspects of a job (e.g., pay or promotions). We also expected that interest fit would be strongly related to satisfaction with one's job choice and organization because interest measures are, in large part, designed to help people make career decisions. Thus, we proposed the following hypotheses:

Hypothesis 3a. When job satisfaction is examined in intrinsic vs. extrinsic subcategories, interest fit will show a stronger, positive relation with intrinsic job satisfaction.

Hypothesis 3b. When job satisfaction is examined in specific facets, interest fit will show the strongest, positive relations with job choice-, organization-, and work itself-satisfaction (compared to satisfaction with pay, promotions, coworkers, and supervisors).

Other Potential Moderators

In addition to the three major sets of hypotheses, we also examined other potential moderators which fell into three broad categories. First, we examined whether the interest fit-job satisfaction relation differed across interest measures, satisfaction measures, or congruence indices. Prior meta-analyses have not found consistent differences in the interest fit-job satisfaction relation across specific measures (Assouline & Meir, 1987; Tranberg et al., 1993; Tsabari et al., 2005). Thus, we did not have a priori expectations for interest measures, satisfaction measures, or congruence indices.

The second category of other potential moderators was study characteristics (i.e., longitudinal versus cross-sectional studies, and publication formats). We tested whether correlations differed between cross-sectional and longitudinal studies to examine the possible effect of a time gap between predictor and criterion measurement. Although we did not expect to find differences, this was an important test for examining whether common method bias (stemming from the same measurement occasion) inflated correlations between interest fit and

job satisfaction (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Also, to support our publication bias analyses, we examined if studies from government reports, dissertations, or peer-reviewed journal articles reported significantly different correlations.

The third category of potential moderators was sample characteristics. We focused on whether the sample was composed of individuals from the same job or multiple jobs, sample nationality, and military jobs. We did not have a priori expectations for single versus multiple jobs. For sample nationality, most studies we identified were from the U.S. or Israel[2]. Tsabari et al. (2005) found that the interest fit-satisfaction relation was stronger among Israeli samples. We therefore expected to find stronger correlations among Israeli samples compared to U.S. samples. For military jobs, we generally did not expect to find significant differences in the size of correlations. However, there were three notably large military samples included in the present meta-analysis (Alley, Wilboum & Berberich, 1976, $N = 6{,}716$; Carter, 1991, $N = 6{,}939$; Reilly & Echternacht, 1979, $N = 3{,}072$). Including military samples as a moderator allowed us to examine whether these large samples had a disproportionate influence on the results.

Method

Literature Review

A systematic literature search was conducted to locate published and unpublished research on vocational interest fit and job satisfaction. Online databases included PsycINFO, ERIC (Education Resources Information Center), Dissertation Abstracts International, Scopus, Web of Science, and Google Scholar. The Defense Technical Information Center website was used to identify military reports. The following keywords were searched both individually and in

[2] Most of the studies from Israel were authored or coauthored by Elchanan I. Meir (see Table S1 of the supplemental materials). Thus, testing the Israeli samples as a moderator category also enabled us to examine whether studies from Meir's lab disproportionally influenced the overall meta-analytic correlation, since one lab using similar methods can produce non-independent effect sizes.

combination: *interests, vocational interests*, *interest congruence*, *interest fit*, *work satisfaction*, *job satisfaction*, *occupational satisfaction*, *RIASEC*, *Holland codes*, and *person-environment fit*. Studies cited by the three published meta-analyses on the topic were also reviewed (Assouline & Meir, 1987; Tranberg et al., 1993; Tsabari et al., 2005). In total, the search process resulted in 2,902 initial studies. We screened these studies based on their abstracts, titles, and keywords and found 199 suitable candidate articles, which were then evaluated using our inclusion criteria.

Inclusion Criteria

There were three main inclusion criteria (see Figure S1 in the supplemental materials for the PRISMA flow diagram). To be included in the meta-analysis, studies must have (*1*) been written in English and (*2*) included measures of both vocational interests and job satisfaction. In addition, (*3*) studies needed to report an empirical relation (e.g., correlation) between a measure of interest fit and job satisfaction. Studies that measured other forms of satisfaction were excluded (e.g., academic satisfaction). When multiple studies using the same data were discovered, only the study with the largest sample was used. Using these criteria, the 199 relevant studies were refined to a final dataset of 105 studies containing 194 independent samples (publication dates ranged from 1949 - 2016).

Coding Procedure and Reliability

All papers were coded by at least two study authors. The vast majority of variables were directly coded from primary studies and did not require subjective decision-making. One exception was for studies that reported correlations between multiple interest scales and job satisfaction with single-occupation samples. For these studies, we performed two steps to determine matching, adjacent, alternate, and opposite interest scales to the sample's occupation. First, if the study itself reported that an interest scale matched the sample's occupation (e.g.,

social interests for teachers), we used the corresponding effect size as the matching scale. Second, if the study did not specify a matching scale, we looked up the occupation on O*NET to determine its high point RIASEC category (Rounds et al, 2008). After assigning matching scales, we assigned adjacent, alternate, and opposite scales based on the structure of the RIASEC hexagon (see Figure 1). For example, Aranya, Barak, and Amernic (1981) studied the vocational interests of accountants and reported effect sizes for all six RIASEC dimensions. Based on the O*NET profile for 'Accountants', *conventional* was used as the matching scale; *enterprising* and *realistic* were adjacent; *social* and *investigative* were alternate; and *artistic* was opposite.

Interrater reliability was assessed using Fleiss' kappa statistic for categorical variables and percentage agreement rates for continuous variables. Kappa coefficients ranged from .74 for method of measuring interest fit to 1.00 for sample characteristics (i.e., "single job" or "multiple jobs"). The percentage of agreement for continuous variables ranged from 98% for effect sizes to 100% for sample sizes. All inconsistencies in coding were resolved through group discussion. Table S1 in the supplemental materials displays the full list of study descriptions

Study/Variable Characteristics

Type of interest fit. Among all sample-level correlations between interest fit and job satisfaction, 44 used matching interest scales (21%), 58 used occupational scales (27%), and 111 used congruence indices (52%). Of the 44 studies that used matching scales, 29 also reported correlations for a non-matching scale (i.e., adjacent, alternate, or opposite). For occupational scales, a direct match was made between the scale and employee's occupation (i.e., there were no non-matching occupational scales).

Congruence indices. We examined eight major types of indices used by studies. The eights types mainly differed by RIASEC information used, such as: (1) the number of RIASEC

scales and (2) whether hexagonal interrelations are considered. Congruence indices are described in detail in other reviews (see Brown & Gore, 1994; Camp & Chartrand, 1992; Young, Tokar, & Subich, 1998), so we focus on the key distinguishing features here. The Two-Letter (k = 22; Healy & Mourton, 1983) and Three-Letter Agreement (k = 5; Wolfe & Betz, 1981) indices are computationally the simplest. These indices compare either the two or three strongest RIASEC interests of the person and environment to assign a congruence score on a 3-point scale. The Wiggins-Moody Compatibility Index (k = 6; Wiggins, & Moody, 1981) uses a 9-point scale (0 to 8) to compare three-letter codes giving more weight to whether the order of letters match. Iachan's M-index (k = 16; Iachan, 1986) uses similar information but with a 28-point scale that differentially weights matches between first-, second-, and third-letter codes.

The remaining four indices use information about hexagonal interrelations among RIASEC scales when calculating fit. The First-Letter Agreement (k = 28; Holland, 1973) is the simplest index to consider RIASEC interrelations. This index considers the distance between the person's highest RIASEC type and that of their environment using a 4-point scale (ranging from '4' for direct matches to '1' for opposite scales). The K-P index (k = 23) uses a decimal scale (ranging from 0 to 1) to weigh the match between three-letter codes while incorporating hexagonal structure into the scoring (Kwak & Pulvino, 1982). The C-Index (k = 37; Brown & Gore, 1994) uses similar information but with an 18-point scale that differs in computational complexity. Finally, the SB index (k = 17) measures congruence using a 5-point scale that incorporates multiple types of information (Gati, 1985), including hexagonal proximity and crystallization (differentiation of scores).

Facets of job satisfaction. Global job satisfaction was measured for 154 samples (79%), whereas only facet-level satisfaction was reported for 40 samples (21%). For these 40 samples,

all satisfaction facets were averaged together to obtain an estimate of overall job satisfaction. We then used two classifications for moderator analyses on satisfaction facets. First, we coded effect sizes for seven specific facets which were commonly reported in primary studies: pay (k = 27), promotion opportunities (k = 28), coworkers (k = 30), supervisors (k = 30), the work itself (k = 42), job choice (k = 13), and organization (k = 17). Second, we classified satisfaction facets into intrinsic vs. extrinsic categories. Intrinsic satisfaction (k = 47) included the work itself and scales directly measuring intrinsic job satisfaction (e.g., Weiss et al, 1967). Extrinsic satisfaction (k = 36) included satisfaction with pay, promotion, supervisors, coworkers, and scales directly measuring extrinsic job satisfaction.

Interest and Satisfaction Measures. The most common interest inventory was the Self-Directed Search (k = 47; SDS, Holland, Fritzsche, & Powell, 1994), followed by the Vocational Preference Inventory (k = 23; VPI, Holland, 1965). Three different versions of the Strong Interest Inventory (Donnay et al., 2005) were also frequently used, including the Strong Interest Inventory (k = 21), the Strong Vocational Interest Blank (k = 15), and the Strong-Campbell Interest Inventory (k = 8).

For job satisfaction, the most common measure was a single, global item (k = 80; e.g., “How satisfied are you, in general, with your current job?”, Feij, der Velde, Taris, & Taris, 1999). Three other satisfaction scales were frequently used, including the Minnesota Satisfaction Questionnaire (k = 15; Weiss et al, 1967), the Job Descriptive Index (k = 33; Smith et al, 1969), and the Hoppock Job Satisfaction Blank (k = 19; Hoppock, 1935).

Study and sample characteristics. Cross-sectional correlations between interest fit and job satisfaction were reported for 177 samples (91%). Longitudinal correlations were reported for 20 samples (10%). Most effect sizes came from studies in journal articles (k = 122), followed

by dissertations (k = 50) and government reports (k = 20). For sample characteristics, most studies used participants from single jobs (k = 123), rather than multiple jobs (k = 71). Samples from the United States were most common (k = 151), followed by Israeli samples (k = 38). The remaining samples were from the Netherlands (k = 1; Feij et al, 1999), Germany (k = 1; Marcus & Wagner, 2015), India (k = 2; Leong, Austin, Sekaran & Komarraju, 1998) and Australia (k = 1; Power, 1979). Lastly, most samples were non-military (k = 143), rather than military (k = 51).

Data Analysis

Software used. The *MetaInd* R package (Song, 2017; R Core Team, 2017) was used to perform the synthesis of study effect sizes. This package supports individual correction for reliability and range restriction.

Observed validities. Formulae from Schmidt and Hunter (2014) were used to estimate the aggregate correlations for interests and satisfaction. When multiple effect sizes were reported in a study, all reported correlations were coded. All relevant correlations were then used to estimate meta-analytic effect sizes. When a single sample had more than one effect size within a moderator subset, the effect sizes were averaged so that only one unique effect size was used for that sample. For example, Tokar and Subich (1997) reported correlations between two congruence indices and job satisfaction (K-P index r = .01; C-index r = .05). We used the average of these two correlations (r = .03) in the calculation of (a) the overall effect size and (b) the effect size for congruence indices.

Corrected validities. To estimate true-score correlations between interest fit and job satisfaction, we corrected for sampling error, measurement error of both the predictor (interest scale scores) and criterion (job satisfaction), and indirect range restriction. This practice is consistent with meta-analyses on interest fit and job performance (e.g., Nye et al, 2012; 2017).

The corrections were conducted using formulae from Schmidt and Hunter (2014; Chapter 2) and Hunter, Schmidt, and Le (2006; p. 603). Following the recommendation of Schmidt & Hunter (2014, p. 160), measurement error was corrected for each individual effect size (instead of using artifact distribution). When possible, reliabilities from original papers were used to correct for unreliability of interest scale scores and job satisfaction. When reliabilities were not reported in the original study, they were obtained from technical manuals of the measures used in the study. If information could not be found in technical manuals, the average reliability calculated across all studies using that measure was used for the corrections. The imputed average reliability values for relevant measures are reported in Table S2 of the supplementary materials.

For RIASEC interests and occupational scales, we corrected for indirect range restriction using the restricted standard deviations of interest scales reported in primary studies. If primary studies did not report such information, we obtained unrestricted population standard deviations from technical manuals and corrected for indirect range restriction using formulae presented by Hunter et al. (2006; p. 603). If neither primary study nor technical manual reported restricted standard deviations, an average standard deviation ratio across studies was used. Specifically, we used the average standard deviation ratios reported by Nye et al. (2012, p. 395) and Nye et al. (2017, p. 142): .86, .93, .91, and .87 for matching, adjacent, alternate, and opposite interests, respectively. Congruence indices were not corrected for restriction of range because corresponding unrestricted standard deviations were not available.

Results

Primary Hypotheses

Overall meta-analytic effect size. Our quantitative review of 105 primary studies on the relation between interest fit and job satisfaction contained 194 separate samples with 918

reported correlations. Table 1 displays the results for the overall correlation between interest fit and job satisfaction, as well as correlations for different types of interest fit and satisfaction facets. Figure 2 displays these results graphically. Hypothesis 1 predicted that the overall correlation (ρ) between interest fit and job satisfaction would be between .25 - .30. Results did not support this hypothesis, as the overall correlation was lower than expected, although still positive and statistically significant (ρ = .19, 95% *CI* [.16, .21]).

Types of interest fit. Hypothesis 2a predicted that congruence indices, compared to occupational scales and matching interests, would be the strongest predictor of job satisfaction. This hypothesis was not supported. Matching interest scales were most strongly related to job satisfaction (ρ = .25, 95% *CI* [.18, .31]), followed by congruence indices (ρ = .18, 95% *CI* [.15, .22]), and occupational scales (ρ = .17, 95% *CI* [.14, .21]). This indicates that matching interest scales explain the most variance in job satisfaction, despite using fewer items to measure fit. Note, however, that the 95% confidence intervals overlapped for all three types of interest fit.

Hypothesis 2b predicted that when non-matching RIASEC scales were used to predict job satisfaction, adjacent interests would be better predictors than alternate or opposite scales (consistent with Holland's model). This hypothesis was supported. Adjacent interest scales showed a small, but still positive correlation with job satisfaction (ρ = .07, 95% *CI* [.03, .10]). A decreasing trend was observed for alternate (ρ = .04, 95% *CI* [.01, .08]) and opposite scales (ρ = -.02, 95% *CI* [-.10, .06]). This result supports Holland's structural model based on the ordered pattern of relations between RIASEC scales and job satisfaction.

Facets of job satisfaction. Hypothesis 3a predicted that the relation between interests and job satisfaction would be stronger for intrinsic compared to extrinsic job satisfaction. This hypothesis was partially supported (see again, Table 1). Interest fit was slightly more strongly

related to intrinsic satisfaction (ρ = .10, 95% *CI* [.06, .15]) compared to extrinsic satisfaction (ρ = .06, 95% *CI* [.02, .09]). However, interest fit was more strongly related to global job satisfaction (ρ = .18, 95% *CI* [.15, .21]) than either intrinsic or extrinsic facets.

Hypothesis 3b predicted that among all facets of job satisfaction, interest fit would be most strongly related to satisfaction with one's job choice, organization, and the work itself. This hypothesis was supported. Overall, interest fit showed the strongest relations with job choice- (ρ = .34, 95% *CI* [.25, .44]) and organization-satisfaction (ρ = .33, 95% *CI* [.26, .40]), followed by work itself-satisfaction (ρ = .10, 95% *CI* [.05, .14]). Interest fit was unrelated or weakly correlated with pay-, promotion-, supervisor-, and coworker-satisfaction (ρ's ranged from .02 to .07). Overall, the results for Hypotheses 3a and 3b indicate that interest fit is most strongly related to global job satisfaction and satisfaction with one's job choice and organization. We note, however, that the meta-analytic correlations for job choice- (N = 1,836) organization-satisfaction (N = 1,293) were based on smaller combined sample sizes.

Other Potential Moderators

Measures and congruence indices. Table 2 displays meta-analytic correlations for commonly used interest measures, congruence indices, and satisfaction measures. There were some differences in the strength of correlations for different interest measures (ρ's ranged from .11 to .24), but all confidence intervals overlapped. Across congruence indices, studies using the SB Index (ρ = .07), K-P Index (ρ = .07), and 3-letter agreement index (ρ = .09) showed the weakest correlations with job satisfaction. Meta-analytic estimates for the other congruence indices ranged from ρ = .13 (Iachan's M Index) to ρ = .25 (Wiggins-Moody Index) with overlapping confidence intervals. Among satisfaction measures, the results were fairly homogenous (ρ*'s* ranged from .15 to .26). Overall, these results suggest that the interest fit-job

satisfaction relation is generally robust across interest measures, congruence indices, and satisfaction measures.

Study characteristics. Table 3 displays the meta-analytic correlations across study characteristics. The relation between interest fit and job satisfaction was slightly stronger in longitudinal studies (ρ = .22, 95% *CI* [.14, .30]) compared to cross-sectional studies (ρ = .18, 95% *CI* [.15, .21]). However, the difference was small and there were far fewer longitudinal samples. Among publication formats, the average correlations from studies published in government reports (ρ = .26, 95% *CI* [.22, .31]) were similar to those from peer-reviewed journal articles (ρ = .24, 95% *CI* [.20, .28]). Correlations were notably weaker in dissertations (ρ = .07, 95% *CI* [.04, .10]). This may suggest some degree of bias in the published literature, in addition to other method factors which may vary across publication formats. However, our inclusion of so many effect sizes from dissertations (k = 50) helped counteract the effects of publication bias on the overall effect size estimates.

Sample characteristics. Table 3 also displays the results across sample characteristics. There were essentially no differences in single-job samples (ρ = .18) compared to multiple-job samples (ρ = .19). For sample nationality, the vast majority of studies came from either the U.S. or Israel. Meta-analytic correlations from studies with Israeli samples (ρ = .39, 95% *CI* [.33, .45]) were notably stronger than those with U.S. samples (ρ = .17, 95% *CI* [.15, .20]). Samples from other countries showed the weakest correlations (ρ = -.03, 95% *CI* [-.15, .10]); however, there were only five such samples. For military jobs, the correlations were similar for non-military (ρ = .20, 95% *CI* [.16, .24]) and military samples (ρ = .17, 95% *CI* [.13, .21]). Importantly, these results show that the large sample sizes from military studies did not substantially skew the overall meta-analytic correlation between interest fit and job satisfaction.

Publication bias. To assess for the potential of publication bias in the meta-analytic dataset, we conducted sensitivity analyses using funnel plots. Funnel plots display the relation between sample size and effect size for each unique sample. Asymmetry in a funnel plot can suggest the presence of publication bias or the existence of outlier studies. Figure 3 displays the funnel plot for the current meta-analysis. By examining the funnel plot, we identified three outlier effects (N = 922, Alley et al., 1976; N = 492, Feij et al., 1999; N = 271; Geist, 1963). We reran the models for the overall effect size and relevant moderators omitting these outliers. The effect sizes changed minimally across all models ($\Delta \rho$'s ≤ .02) and no inferences differed with or without the outlier effects.

Discussion

The current meta-analysis quantitatively reviewed the relation between interest fit and job satisfaction. Although interest assessments are widely used to guide people towards satisfying careers, three prior meta-analyses did not find a statistically significant correlation between interest fit and job satisfaction (Assouline & Meir, 1987; Tranberg et al., 1993; Tsabari et al., 2005). Our review included substantially more studies than prior meta-analyses, comprehensive effect size coding, and updated psychometric corrections. With this expanded dataset, our results revealed three new findings. First, we found a statistically significant true score correlation (ρ = .19) between vocational interest fit and job satisfaction. The magnitude of this correlation was lower than expected based on previous qualitative reviews (Hansen, 2013; Spokane et al., 2000). Nonetheless, the results provide a clear resolution to criticisms that interest assessments do not predict satisfaction "at a better than chance level" (Tinsley, 2000, p. 155).

A second key finding was that interest fit showed different relations with facets of job satisfaction. Interest fit was most strongly related to satisfaction with one's job choice and

organization, followed by global job satisfaction. In contrast, interest fit was weakly associated with all other specific facets, including satisfaction with pay, promotions, supervisor, and coworkers. Satisfaction with these specific aspects of a job may be more closely related to value fit. For example, satisfaction with pay likely depends on how much an employee values income, and whether the organization can meet that expectation. From a theoretical perspective, our findings suggest that interest fit is most relevant for predicting satisfaction with one's overall career choices (Holland, 1997). This makes sense given that interests play a key role in shaping people's career paths across the life span (Hanna & Rounds, 2020).

Third, our results revealed new information about the predictive utility of different types of interest fit. Among the three main ways of measuring interest fit, matching interest scales showed the strongest relations with job satisfaction (followed by congruence indices and occupational scales). This was surprising because matching interests only assess fit using one interest scale that matches the dominant RIASEC category of a job. The reduced time required to assess fit with matching interests can therefore be a practical advantage (see applied recommendations, below). Results also revealed that non-matching interest scales showed a decreasing pattern of relations with job satisfaction as the interest scales became more dissimilar to a job (i.e., matching > adjacent > alternate > opposite). This finding supports the structure of Holland's (1997) hexagonal model in relation to job satisfaction. Most other study design variables (i.e., measures and sample characteristics) did not substantially moderate the relation between interest fit and job satisfaction.

Contrasting the Relative Importance of Interest Fit for Applied Outcomes

When examined alongside recent meta-analyses on job performance (e.g., Nye et al., 2017; Van Iddekinge et al., 2011b), our findings suggest a need to reconceptualize the

importance of vocational interests. Holland's (1997) theory makes general claims about the role of interest fit in promoting a variety of work outcomes, including job satisfaction, performance, and tenure. However, interest fit does not predict each of these outcomes equally. Nye et al's (2017) meta-analysis on interest fit and performance-outcomes revealed a surprisingly strong correlation between interest congruence and job performance (ρ = 0.32). The magnitude of this correlation is similar to our findings for job choice- (ρ = 0.34) and organization-satisfaction (ρ = 0.33). However, our estimated correlation for overall job satisfaction was notably weaker.

Together, these results indicate that interest fit is most useful for predicting employees' performance in their current job and satisfaction with their overall career path. Su, Stoll, & Rounds (2019) proposed a conceptual model that helps explain this idea. In their model, vocational interests serve three motivational functions, influencing direction, vigor, and persistence. *Direction* elucidates why interests impact people's selection into work environments (Hanna & Rounds, 2020). *Vigor* helps explain why interest fit predicts performance, given that people generally work harder at tasks in which they are interested (e.g., Nye, Butt, Bradburn, & Prasad, 2018). Finally, *persistence* helps clarify the link between interest fit, turnover, and satisfaction with career choices (e.g., Nye et al., 2017). All other considerations held equal, people will generally be more satisfied with career decisions that result in better fit. Overall, Su et al.' s (2019) model provides a more detailed account of why interest fit predicts applied outcomes differently, relative to the broad claims of Holland's (1997) theory.

Importantly, our findings still show that interest fit matters for job satisfaction. However, there are likely more proximal predictors related to the person and environment. For example, job autonomy (ρ = .46) and skill variety (ρ = .41) are strongly related to job satisfaction (Loher et al., 1985). This means that employees working in certain types of jobs will generally be more

satisfied, independent of their interests. Person-organization value fit, which is related to but distinct from interest fit, is another important predictor of job satisfaction (ρ = .29; Kristof-Brown et al., 2005). In addition to interests and values, other dispositional traits also predict job satisfaction (Judge et al., 2002). Generalized self-efficacy (ρ = .45) and internal locus of control (ρ = .32) show particularly strong relations with job satisfaction across occupations (Judge & Bono, 2001). These results lead to a clear practical implication: interest fit is just one factor, among many, that determines whether people are satisfied with their jobs. We next turn to other practical implications of our results.

Recommendations for the Applied Use of Vocational Interests

Table 4 presents recommendations for using interest inventories to inform decision-making for (a) career guidance and (b) organizational selection and placement. In both contexts, the first recommendation is to use interest inventories in combination with other individual difference measures. Previous studies have consistently shown that integrative models that incorporate multiple individual difference variables are better predictors of work outcomes compared to models that examine single variables in isolation (Austin & Hanisch, 1990; Lubinski, 2020; Rounds & Tracey, 1990). If the goal is to optimize predictions of job satisfaction, researchers and practitioners can benefit by assessing a tandem of interests, values, personality, and abilities.

For career guidance purposes, we proposed three additional recommendations. First, we recommend discussing interest fit as a predictor of several major career outcomes in addition to job satisfaction (e.g., performance, persistence, and career success; Neumann, Olitsky, & Robbins, 2009; Su, 2020). Second, we recommend reassessing interests at various stages throughout the life span. Interests can change in meaningful ways at different age periods (Hoff,

Briley, Wee, & Rounds, 2018; Wille & De Fruyt, 2019). It may be particularly useful to reassess interests after major career or educational transitions, as interests may change as part of an adjustment process to new environments (Nye, Wille, Armory, & De Fruyt, 2020; Stoll, Rieger, Nagengast, Trautwein, & Rounds, 2020). Third, we suggest asking clients how much they value being interested in their work relative to other considerations, such as pay or coworker relationships. Some people may care deeply about having a job that fits their interests, whereas others may care more about work value fit. By clarifying the relative importance of interest fit for different clients, career guidance practitioners can make more informed decisions about how to discuss interest assessment results with clients.

We also proposed two other recommendations for organizations using interest inventories to inform personnel selection or placement decisions. First, we suggest that organizations use matching interest scales to predict employees' job satisfaction levels. In the current meta-analysis, matching interests were more strongly related to job satisfaction than congruence indices or occupational scales, despite requiring fewer items to assess fit. Organizations can save time and resources by only measuring interests in the dominant RIASEC category of a job when using interest assessments to predict satisfaction. Second, we highlight the potential utility of interest assessments for informing job crafting and role assignment decisions during major organizational changes. Managers who understand what different employees like to do can make more informed decisions about how to best utilize human capital. In addition, interest measures can be a useful tool for organizations seeking to fill temporary openings and positions that allow for non-traditional work arrangements (e.g., working from home).

Future Directions and Limitations

Our meta-analytic review revealed several limitations as well as directions for future research. In general, the interest fit-job satisfaction relation was fairly robust across study and sample characteristics. However, there were two notable exceptions. First, we made every effort to locate unpublished studies which led to the inclusion of 70 unique effect sizes from dissertations and government reports. Results indicated that the magnitude of correlations were lower, on average, in studies reported in dissertations compared to journal articles and government reports. This may be a sign of publication bias if the dissertations were not published *because* they reported lower correlations. Yet it is important to note that these correlations were still included in the estimation of overall effect sizes, which was critical for minimizing the effects of publication bias on our meta-analysis. There may also be other method factors, such as the quality of study designs, that differed between publication formats.

Second, results revealed that correlations between interest fit and job satisfaction were larger in samples from Israel compared to the United States. There are a number of possible reasons for this discrepancy. We expect that method factors likely played a role, as many Israeli studies used their own interest measure based on a set of occupations from nine vocational domains (see: the Ramak Interest Inventory; Barak & Meir, 1974). The expanded scope of nine interest domains may afford more precision for assessing fit between people and environments. Future research should consider alternatives to Holland's RIASEC typology, such as the eight-dimensional SETPOINT model (Su, Tay, Liao, Zhang, & Rounds, 2019). Developing emic interest scales within specific labor markets can also yield alternative interest typologies which may be more accurate across countries (e.g., Einarsdóttir, Rounds, & Su, 2010). Nonetheless, the effect size from U.S. studies (ρ = .17) was not substantially different from the overall effect size estimate (ρ = .19) which included studies from Israel. Because we only found five samples

outside of the United States and Israel, more research is needed to examine the impact of cultural differences.

It is also important to note two additional factors which impact interest fit research. First, any employee sample is likely to have reduced variability in their interests (i.e., range restriction) because people often select environments based on their interests (Hanna & Rounds, 2020). Range restriction typically reduces observed correlations. Though we corrected for indirect range restriction in the estimation of true score effects, this artifact is difficult to address fully because it would take random assignment of people to occupations to estimate the direct restriction of ranges in interests. Second, P-E fit measures each have strengths and weaknesses in precision (Rauthmann, in press). For example, congruence indices capture rank information about interest profiles, but do not take into account interest intensity. Conversely, matching interests capture intensity but not rank information. Future studies should take advantage of the unique information captured by different fit measures by including multiple types of interest fit in the prediction of career outcomes (e.g., Xu & Li, 2020).

We also found very few studies examining the relation between interest fit and work outcomes using polynomial regression (Nye, Prasad, Bradburn, & Elizondo, 2018). Polynomial regression is an advanced method of quantifying interest fit that can reveal more nuanced information about how person and environment attributes interact to predict work outcomes (Edwards, 1994). In addition, most existing studies included participants of varying ages and did not report separate correlations across age groups, gender, or race/ethnicity. Future research is needed to test whether the interest fit-job satisfaction relation varies across demographic groups. Previous research has identified gender and race differences in certain interest categories which relate to educational and workforce disparities (Jones, Newman, Su, & Rounds, 2020; Morris,

2016; Su, Rounds, & Armstrong, 2009). Studying interest fit across race/ethnicity, gender, and socio-economic status is especially important in today's changing labor market because certain groups can have less agency in their career choices (Blustein, Duffy, Ferreira et al., 2020). Future longitudinal studies could also examine how the *state of being interested* predicts job satisfaction. Experience sampling methods would be well-suited for studying dynamic relations between situational interest and work outcomes (e.g., Roemer, Horstmann, & Ziegler, 2020).

Conclusion

The purpose of this meta-analysis was to update and advance current understanding about the importance of vocational interest fit for predicting job satisfaction. Our results clearly show that people who are more interested in their jobs tend to be more satisfied. This finding was robust across different ways of measuring interest fit (i.e., through congruence indices, matching interests, or occupational scales). However, it is important to note that job satisfaction also depends on a number of other factors related to the person, job, and organization. Likewise, interest fit is not only important for job satisfaction. Interest assessments are also useful for guiding people towards jobs in which they will perform better and make more money.

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**See supplemental materials for references of studies included in meta-analytic dataset.*

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TABLES

Table 1. *Meta-Analytic Effect Size Estimates for Overall Interest Fit-Job Satisfaction Relation, Types of Interest Fit, and Facets of Job Satisfaction*

						95% CI		80% CV	
	N	*k*	Avg *r*	ρ	SD_ρ	Lower	Upper	Lower	Upper
Overall	39,602	194	.14	.19	.07	.16	.21	.10	.27
Type of Interest Fit									
Interest Congruence Index	16,100	111	.15	.18	.08	.15	.22	.08	.29
Matching Occupational Scale	19,816	58	.13	.17	.05	.14	.21	.11	.24
Matching Interest Scale	8,497	44	.18	.25	.07	.18	.31	.16	.33
Non-matching RIASEC Scales									
[a]Adjacent Interest Scale Score	6,810	29	.05	.07	.07	.03	.10	-.02	.15
[a]Alternate Interest Scale Score	6,751	28	.04	.04	.06	.01	.08	-.04	.12
[a]Opposite Interest Scale Score	5,816	25	-.01	-.02	.07	-.10	.06	-.10	.07
Type of Satisfaction									
Global	34,139	154	.14	.18	.07	.15	.21	.10	.27
[b]Intrinsic Satisfaction	12,618	47	.08	.10	.06	.06	.15	.03	.18
[c]Extrinsic Satisfaction	10,632	36	.04	.06	.06	.02	.09	-.02	.13
Specific Facets of Satisfaction									
Job Choice	1,836	13	.26	.34	.07	.25	.44	.25	.44
Organization	1,293	17	.28	.33	.10	.26	.40	.19	.46
Work Itself	11,528	42	.07	.10	.06	.05	.14	.02	.17
Coworker	9,408	30	.05	.07	.06	.01	.13	.00	.14
Supervisor	9,446	30	.04	.05	.06	.02	.09	-.02	.13
Promotion	9,250	28	.02	.03	.06	-.01	.07	-.04	.10
Pay	8,716	27	.02	.02	.06	-.01	.05	-.05	.09

Note. *N* = sample size; *k* = number of independent samples; Avg *r* = uncorrected effect size estimate; ρ = population effect size estimate corrected for unreliability and indirect range restriction, when applicable; 95% CI = 95% confidence interval; 80% CV = 80% credibility interval.
[a]Adjacent, Alternate, and Opposite Interest Scale Scores refer to non-matching RIASEC dimensions based on Holland's (1997) model.
[b]Intrinsic Satisfaction includes intrinsic satisfaction scales and scales measuring satisfaction with the work itself.
[c]Extrinsic Satisfaction includes extrinsic satisfaction scales and scales measuring satisfaction with pay, promotion, supervisor, and coworkers.

Table 2. *Meta-Analytic Effect Size Estimates across Different Measures of Interests, Congruence Indices, and Satisfaction*

						95% CI		80% CV	
	N	*k*	Avg *r*	*ρ*	*SDρ*	Lower	Upper	Lower	Upper
Interest Measure									
Vocational Preference Inventory	2,713	23	.15	.19	.09	.10	.29	.08	.31
Self-Directed Search	6,806	47	.14	.18	.08	.12	.23	.07	.28
Strong Vocational Interest Blank	2,610	15	.14	.20	.07	.11	.30	.11	.30
Strong Campbell Interest Inventory	1,334	8	.17	.24	.07	.12	.36	.14	.33
Strong Interest Inventory	2,383	21	.09	.11	.09	.05	.17	-.01	.23
Navy Vocational Interest Inventory	903	10	.10	.15	.10	.04	.26	.02	.29
Other	21,621	65	.15	.19	.05	.15	.24	.13	.26
Congruence Index Used									
First-Letter Agreement Index	3,402	28	.13	.16	.09	.07	.25	.05	.27
Two-Letter Agreement Index	1,832	22	.19	.24	.10	.16	.31	.10	.37
Three-Letter Agreement Index	1,612	5	.07	.09	.06	-.01	.20	.02	.17
Wiggins-Moody Compatibility Index	1,196	6	.20	.25	.07	.08	.42	.16	.33
Iachan's M Index	2,787	16	.11	.13	.07	.07	.18	.03	.23
SB Index	1,956	17	.05	.07	.09	.01	.12	-.05	.19
K-P Index	3,248	23	.06	.07	.08	.02	.12	-.03	.18
C Index	5,212	37	.11	.13	.08	.07	.19	.03	.24
Other	6,441	44	.15	.18	.08	.12	.24	.08	.28
Satisfaction Measure									
Global Item Measure	20,347	80	.12	.17	.06	.13	.21	.09	.25
Minnesota Satisfaction Questionnaire	2,550	15	.13	.16	.07	.09	.24	.07	.26
Job Descriptive Index	6,644	33	.15	.19	.07	.13	.24	.10	.27
Hoppock Job Satisfaction Blank	2,627	19	.19	.26	.08	.11	.42	.16	.36
Other	14,665	64	.11	.15	.06	.10	.19	.06	.23

Note. *N* = sample size; *k* = number of independent samples; Avg *r* = uncorrected effect size estimate; *ρ* = population effect size estimate corrected for unreliability and indirect range restriction, when applicable; 95% CI = 95% random effects confidence interval; 80% CV = 80% credibility interval.

Table 3. *Meta-Analytic Effect Size Estimates across Study and Sample Characteristics*

						95% CI		80% CV	
	N	*k*	Avg *r*	*ρ*	*SDρ*	Lower	Upper	Lower	Upper
Study Characteristics									
Study Design									
Longitudinal	3,529	20	.16	.22	.07	.14	.30	.13	.31
Cross-Sectional	36,058	177	.14	.18	.07	.15	.21	.09	.27
Publication Format									
Journal	17,588	122	.18	.24	.08	.20	.28	.14	.34
Dissertation	13,591	50	.05	.07	.06	.04	.10	-.01	.14
Government Report	8,195	20	.19	.26	.05	.22	.31	.20	.32
Sample Characteristics									
Occupational Homogeneity									
Single Job	27,338	123	.14	.18	.07	.15	.21	.10	.27
Multiple Job	12,264	71	.15	.19	.07	.14	.25	.10	.29
Sample Nationality									
U.S. Samples	35,503	151	.13	.17	.06	.15	.20	.09	.26
Israeli Samples	3,084	38	.31	.39	.10	.33	.45	.27	.51
Other Nationality	1,015	5	-.03	-.03	.07	-.15	.10	-.12	.06
Military vs. Non-Military									
Military Sample	20,032	51	.13	.17	.05	.13	.21	.11	.23
Non-Military Sample	19,570	143	.15	.20	.08	.16	.24	.09	.31

Note. *N* = sample size; *k* = number of independent samples; Avg *r* = uncorrected effect size estimate; *ρ* = population effect size estimate corrected for unreliability and indirect range restriction, when applicable; 95% CI = 95% confidence interval; 80% CV = 80% credibility interval.

Table 4. *Recommendations for Using Interest Inventories to Inform Decision-Making in Applied Settings*

Recommendation	Description
Career Guidance	Use interest inventories in combination with other career assessments (e.g., abilities, values, personality) that predict work outcomes.
	Discuss interest fit as a predictor of multiple career-related outcomes (e.g., job satisfaction, job performance, and career success).
	Encourage people to retake interest inventories at various stages throughout their career, particularly after major educational or work transitions.
	Ask clients how much they value being interested in their work compared to other considerations (e.g., pay, relationships, autonomy, etc.).
Organizational Selection/Placement	Use interest inventories in combination with other individual difference measures (e.g., personality, values, abilities) to inform selection or placement decisions.
	If the goal is to predict job satisfaction, use matching interests to assess fit. Using matching interests will reduce the number of items required to assess fit while maximizing predictive utility.
	Reassess interests during major organizational changes to inform placement decisions and the potential for job crafting.

FIGURES

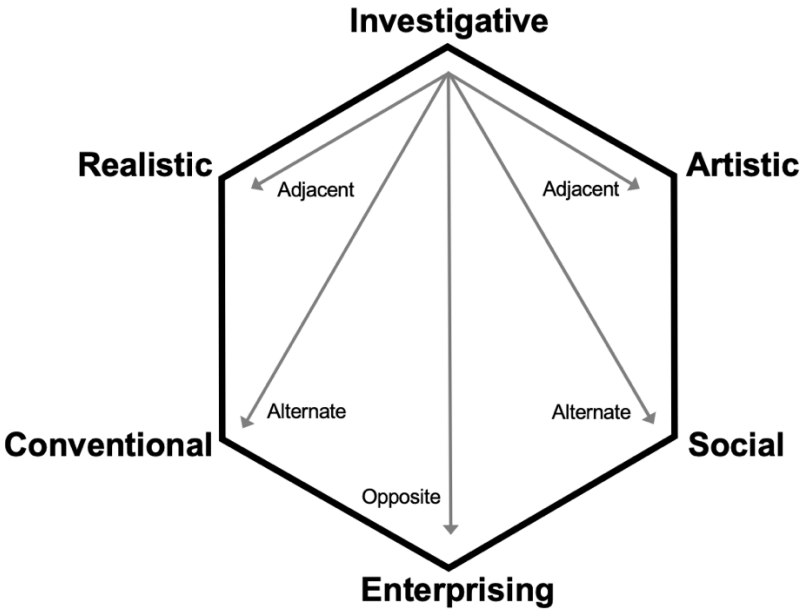

Figure 1. Holland's (1997) RIASEC model of interest scale congruence for an Investigative occupation (i.e., Investigative interests are the *matching scale*). Figure adapted from Nye, Su, Rounds, & Drasgow, 2012 (p. 385).

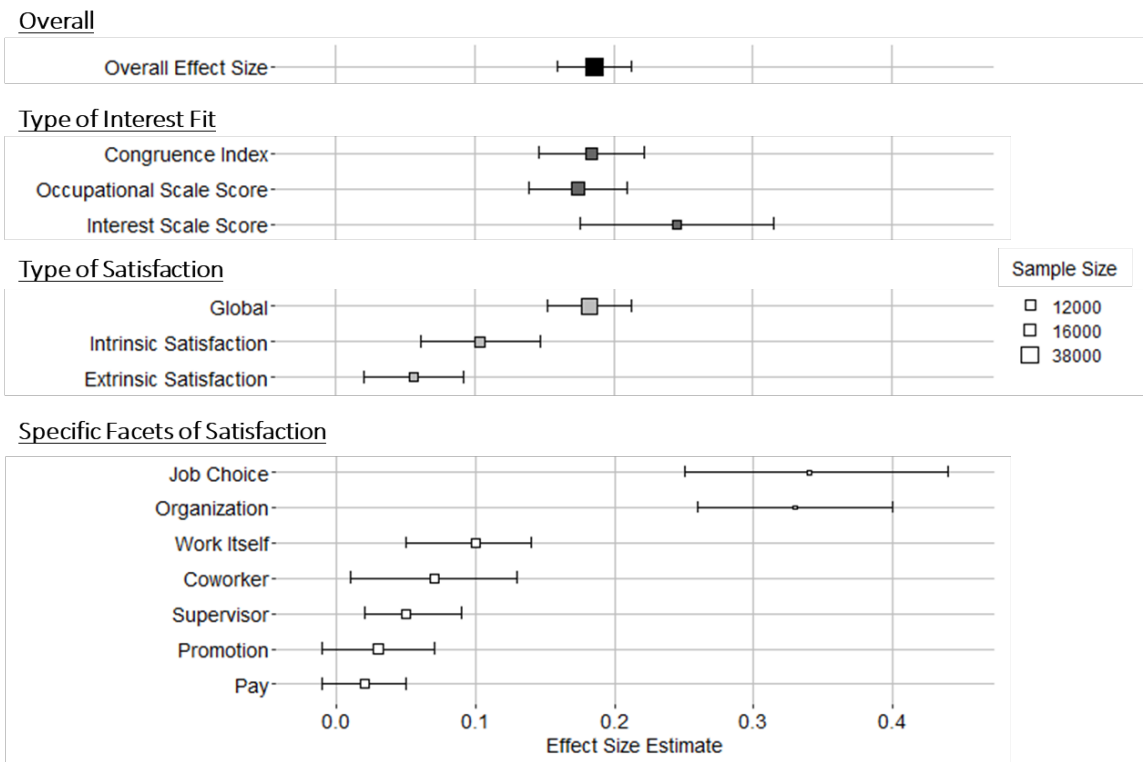

Figure 2. Meta-analytic effect size estimates (ρ's) for the relation between vocational interest fit and job satisfaction. Sizes of boxes reflect cumulative sample size. The overall effect size is plotted with a black box (N = 39,602); types of interest fit are plotted with dark gray boxes; types of job satisfaction are plotted with gray boxes; specific facets of satisfaction are plotted with white boxes.

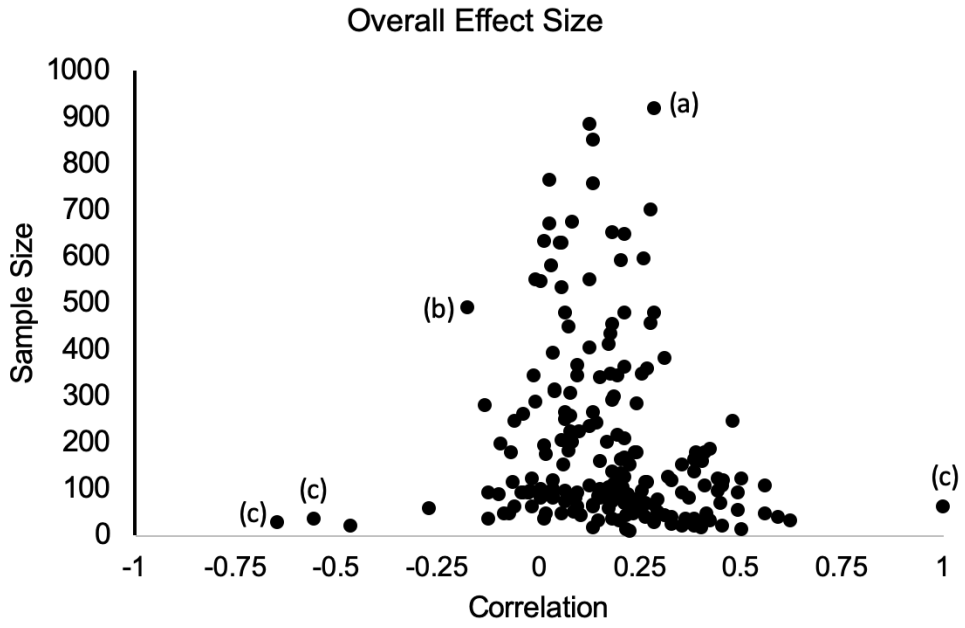

Figure 3. Funnel Plot displaying relation between effect size (correlation) and sample size for all samples included in the estimation of overall meta-analytic effect size. Potential outlier correlations are identified from (a) Alley et al, 1991; (b) Feij et al, 1999; and (c) Geist, 1963. Results changed minimally excluding these effects. For the overall effect size, ρ = .18 without outliers (compare to ρ = .19). For matching interests, ρ = .24 without outliers (compare to ρ = .25). For congruence indices, ρ = .20 without outliers (compare to ρ = .18). For occupational scales, ρ = .16 without outliers (compare to ρ = .18).