



Unpacking job satisfaction among law enforcement through self-determination theory: a meta-analytic approach

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Abstract

Objective The objective of this study is to conduct the first peer-reviewed meta-analysis of the predictors of job satisfaction among law enforcement. We draw upon self-determination theory (SDT) to guide our selection of six antecedents to include in our analysis.

Methods We utilize Schmidt and Hunter's (2015) meta-analytic methods of correcting correlations individually for artifacts. We also employ meta-analytic sub-group comparison methods as part of a moderator analysis.

Results The results in order from the smallest to the largest effect size are cynicism towards the public $\rho = -.34$, job autonomy $\rho = .41$, supervisor support $\rho = .43$, co-worker support $\rho = .53$, opportunities for professional development $\rho = .58$, and training $\rho = .59$. Regarding the subgroup analyses, the effect sizes for supervisor support were significantly weaker in individualistic countries than in collectivistic countries, and the effect size for autonomy was significantly stronger in individualistic countries than in collectivistic countries.

Conclusions Our findings support the utility of SDT in explaining job satisfaction among law enforcement. While SDT has broad applications, the relative impact of each dimension of SDT on job satisfaction varies meaningfully across cultures.

Keywords Job satisfaction · Self-determination theory · Job benefits · Job characteristics · Recruitment · Retention

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Introduction

Working in law enforcement is a challenging profession, given that officers must deal with the danger of encountering those who have potentially committed crimes, as well as navigate the emotional labor involved with supporting persons who have been victims of crime. While a certain level of danger and emotional labor is inherent to the profession, there are resources that law enforcement agencies can provide to facilitate job satisfaction amidst the stress of the job. Self-determination theory (SDT) provides a valuable framework for thinking about such job resources.

SDT contends that humans are “inherently prone toward psychological growth and integration, and thus toward learning, mastery and connection with others” (Ryan & Deci, 2020, p. 1). Therefore, SDT asserts that three psychological needs are fundamental to psychological wellness, “namely needs for competence, autonomy, and relatedness” (Ryan & Deci, 2022, p. 1). Ryan and Deci (2020) define autonomy as “a sense of initiative and ownership in one’s actions” (p. 1). Work environments that give employees discretion over their assignments, processes, and/or schedules enhance their feelings of autonomy. The authors define competence as “the feeling of mastery, a sense that one can succeed and grow” (p. 1). Feelings of competence are enhanced by work environments that provide opportunities for growth and development. Lastly, Ryan and Deci (2020) define relatedness as “a sense of belonging and connection” (p.1). Feelings of relatedness are enhanced by work environments that convey respect and care (Ryan & Deci, 2020).

A robust body of empirical literature, primarily outside of the criminal justice and policing literature, has found that competence, autonomy, and relatedness are important predictors of job satisfaction (Battaglio et al., 2022; Demircioglu, 2018; Fernandez & Moldogaziev, 2015; Van den Broeck et al., 2016). What remains less clear, however, is the relative impact of each dimension on job satisfaction among law enforcement.

In this study, we conduct the first peer-reviewed meta-analysis of job satisfaction among law enforcement. We examine the relationship between six variables that facilitate competence, autonomy, and relatedness and their relationship with job satisfaction among law enforcement. More specifically, we calculate effect sizes regarding the relationship between the following six antecedents: 1) job autonomy, 2)co-worker support, 3)cynicism towards the public, 4)opportunities for professional development, 5)supervisor support, and 6)training and job satisfaction.

Job autonomy enhances feelings of autonomy. Job autonomy is “the freedom to exercise professional discretion and operate independently within the organization” (Johnson, 2012, p. 164). Job autonomy is commonly measured with items like “I make my own decisions regarding what is to be done in my work” and “On the job I make a lot of decisions on my own” (Demirkol, 2021, p. 364).

Co-worker and supervisor support enhance feelings of relatedness while feelings of cynicism towards the public undermine feelings of relatedness. Co-worker

support refers to “the extent to which ...[employees] feel supported by their co-workers” (Brady & King, 2018, p. 260). Typical items include “I know I can get help from my co-workers when I need it” and “The people I work with are helpful to me in getting my job done” (Brady & King, 2018, p. 260).

Supervisor support refers to “how well officers feel supported, appreciated, and encouraged by their immediate supervisors” (Paoline & Gau, 2020, p. 62). Supervisor support is commonly measured with items like “My supervisor looks out for the personal welfare of his or her subordinates” and “My supervisor lets officers know what is expected of them” (Paoline & Gau, 2020, p. 75).

Cynicism toward the public refers to “a general distrust and lack of hope toward citizens” (Chen, 2018, p. 899). Cynicism towards the public is commonly measured with items like “Most people do not respect the police” and “The public is more apt to obstruct the police than to cooperate” (Chen, 2018, p. 913).

Lastly, opportunities for professional development and training enhance feelings of competence. Opportunities for professional development are commonly measured with items like “The organization provides me with adequate resources and chances to develop myself professionally” and “I am given the chance to try out some of my own ideas” (Chen, 2018, p. 913). Satisfaction with training is commonly measured with items like “My organization offers meaningful, practical training” and “I have been provided enough training to do my job well” (Liu et al., 2023, p. 5).

We also conduct a moderator analysis to assess whether the effect sizes for the antecedents differ between collectivist and individualistic countries. In collectivist countries, the interest of the group prevails over the interest of the individual, whereas in individualistic countries, the opposite is true (Hofstede et al., 2010). Most people live in collectivistic countries (Hofstede et al., 2010). While there is some evidence that SDT is universal, few cross-cultural studies exist (Deci et al., 2017).

Methods

Literature search, inclusion criteria, and coding procedures

Multiple keyword searches were conducted to find potentially relevant articles. These searches were conducted in Web of Science, PsycINFO, and ProQuest Dissertations in March 2024 (see Table 1 for more details on keywords used and other information about the keyword search strategies). We did not use timeframe restrictions in these database searches. A total of 1,466 articles were identified through the search. Among them, 515 were removed due to duplication, and the remaining 951 articles were retained for further consideration.

We used the following criteria to screen the remaining articles for inclusion in the meta-analysis – an article would be included if it satisfied all the following criteria: (a) it was published in the English language; (b) it was published in a peer-reviewed journal or as a dissertation in the ProQuest Dissertation database; (c) it collected data from participants that worked in law enforcement; and (d) it provided correlation and sample size information regarding the relations between job satisfaction

Table 1 Keyword Search Strategies and Results

Database	Keywords	Keyword Area	Field of Study	Type of Publication	Number of Articles Found
Web of Science	"job satisfaction" AND "police" OR "job satisfaction" AND "law enforcement" OR "job satisfaction" AND "sheriff" OR "job satisfaction" AND "sheriff's" OR "job satisfaction" AND "constable" "job satisfaction"	Topic	All	Article OR Review Article OR Proceeding Paper OR Early Access	533
Web of Science	"job satisfaction"	Topic	"Criminology / Penology"	Article OR Review Article OR Proceeding Paper OR Early Access	496
PsycINFO	"job satisfaction" AND "police" OR "job satisfaction" AND "law enforcement" OR "job satisfaction" AND "sheriff" OR "job satisfaction" AND "sheriff's" OR "job satisfaction" AND "constable" "job satisfaction"	Topic	All	Peer Reviewed AND Academic Journals	251
ProQuest Dissertations	"job satisfaction" AND "police" OR "job satisfaction" AND "law enforcement" OR "job satisfaction" AND "sheriff" OR "job satisfaction" AND "sheriff's" "job satisfaction"	Abstract	All	Dissertations	186

and at least one of the six antecedents. Fifty-two manuscripts (52 samples) were retained that met all these inclusion criteria.

For each study and each sample, we coded the effect sizes, sample sizes, and reliability coefficients between job satisfaction and at least one of the six antecedents specified above. The lowest sample size was used if a study reported multiple sample sizes associated with the same effect size. In addition, sample information about the countries where data were collected was also coded in preparation for moderator analyses. The first and third authors conducted all the coding.

Meta-analytic procedures

For the meta-analysis, we used Schmidt and Hunter's (2015) meta-analytic methods of correcting correlations individually for artifacts. Thus, each correlation (Pearson r) was first weighted by the corresponding study's sample size (n) to account for sampling error. Then, a corrected correlation (ρ) was calculated to account for measurement error using reliability coefficients (Cronbach's α) of the antecedent and outcome variables, respectively. Whenever reliability information was available, we used this information for the correction; alternatively, we used the mean reliability estimates from the reliability distribution across all samples when reliability information was unavailable. After all individual correlations were weighted and corrected, a mean corrected correlation ($\bar{\rho}$) was calculated by averaging all corrected correlations across studies.

In addition to the weighted mean and corrected correlations, we calculated the following statistics following Schmidt and Hunter's (2015) method. First, 95% confidence intervals (95% CIs) were calculated to assess the precision of the meta-analytic effect size estimates. Second, 80% credibility intervals (80% CIs) were calculated to evaluate the heterogeneity across effect sizes. An 80% CI width greater than 0.11 (Koslowsky & Sagie, 1993) indicates that the effect sizes are highly heterogeneous (Whitener, 1990) and that a search for moderators is warranted (Cortina, 2003). We also computed the I^2 index (Higgins & Thompson, 2002), which refers to "the percentage of the total variability in a set of effect sizes due to true heterogeneity" (Huedo-Medina et al., 2006, p. 5). For instance, $I^2 = 25$, which suggests low heterogeneity, indicates that 25% of the variance across all effect sizes is due to true heterogeneity, and the remaining 75% is due to sampling error. Correspondingly, I^2 values of 50 and 75 indicate moderate and high heterogeneity, respectively (Higgins & Thompson, 2002).

Sub-group comparisons between individualistic and collectivistic countries

For sub-group analyses, first, we leveraged the country information for each study to categorize studies into those that collected samples from individualistic vs. collectivistic countries. We followed Hofstede et al. (2010) definition and findings regarding the national culture of individualism-collectivism when categorizing countries. All studies included in this meta-analysis were categorized into individualistic or collectivist countries. Accordingly, Australia, Canada, Germany, Norway, Ukraine,

the United Kingdom, the United States, Spain, and Sweden are coded as individualistic countries. In contrast, China, India, Nigeria, Singapore, South Korea, Taiwan, Thailand, and Turkey are coded as collectivistic countries.

Next, separate meta-analytic calculations were carried out with studies that collected samples from individualistic and collectivistic countries. To determine whether correlations differed significantly across areas, we used the meta-analytic sub-group comparison methods suggested by Raju and Brand (2003) to test the significance of the difference between the mean corrected meta-analytic correlations. Specifically, a z -test was calculated based on the difference between the mean corrected correlations ($\bar{\rho}_1 - \bar{\rho}_2$) and then adjusted for the measurement errors in each sub-group. A significant z -test result (i.e., $p < 0.05$ for the corresponding z -statistics) indicates a significant difference in mean corrected correlations between the two sub-groups. Sub-group comparisons were not conducted when there were fewer than two studies in one of the two sub-groups. As such, sub-group analyses were only conducted for the following four antecedents: autonomy, co-worker support, cynicism towards the public, and supervisory support.

Hofstede et al. (2010) work suggests that co-worker support, cynicism towards the public, and supervisor support would have a stronger relationship with job satisfaction in collectivist countries compared to individualistic countries and that autonomy would have a stronger relationship with job satisfaction in individualistic countries compared to collectivistic countries. In collectivist countries, relations between supervisors and subordinates tend to be emotional, and patriotism and harmony in society are valued goals. In individualistic countries, however, relations between supervisors and subordinates tend to be pragmatic, and autonomy and self-actualization are valued goals (Hofstede et al., 2010).

Results

Meta-analytic relations

Table 2 presents the meta-analytic results. The antecedents, in order from those with the largest to the smallest number of studies, are supervisor support ($k=23$), co-worker support ($k=21$), autonomy ($k=20$), cynicism towards the public ($k=6$), training ($k=4$), and opportunities for professional development ($k=3$). It is clear from these results that the relationships between satisfaction with training, opportunities for professional development, and job satisfaction are understudied.

To facilitate the interpretation of the effect sizes, we used the benchmarks for Pearson correlation r set by Cohen (1992): $|r|=0.10, 0.30, 0.50$ represent a small, medium, and large effect size, respectively. The results in order from the smallest to the largest effect size are cynicism towards the public $\rho=-0.34$, autonomy $\rho=0.41$, supervisor support $\rho=0.43$, co-worker support $\rho=0.53$, opportunities for professional development $\rho=0.58$, and training $\rho=0.59$. All six antecedents had medium or large effect sizes which provide further validation for SDT.

As a point of comparison, we conducted the same search processes to identify the relationship between pay and benefits and job satisfaction, given that pay and

Table 2 Meta-Analytic Results between Each Focal Antecedents and Job Satisfaction

<i>Antecedent</i>	<i>k</i>	<i>N</i>	\bar{r}	$\bar{\rho}$	95% CI	<i>CI width</i>	<i>80% CV</i>	<i>CV width</i>	I^2
Autonomy	20	12,557	0.3	0.41	[0.34, 0.47]	0.13	[0.23, 0.59]	0.36	89.3
Co-worker Support	21	16,472	0.42	0.53	[0.47, 0.59]	0.12	[0.35, 0.70]	0.35	92.87
Cynicism Towards the Public	6	5,586	-0.23	-0.34	[-0.45, -0.24]	0.21	[-0.51, -0.18]	0.33	90.92
Professional Development	3	1,598	0.43	0.58	[0.53, 0.63]	0.10	[0.57, 0.57]*	0.00	0.00
Supervisor Support	23	11,909	0.35	0.43	[0.37, 0.50]	0.13	[0.25, 0.62]	0.37	91.46
Training	4	2,750	0.52	0.59	[0.46, 0.73]	0.26	[0.43, 0.76]	0.33	95.7

k=number of studies, *N*=sample size, \bar{r} = mean effect size weighted by sample size, $\bar{\rho}$ = mean effect size corrected by reliability coefficients, CI=confidence interval, CV=credibility interval, I^2 =the percentage of the total variability in a set of effect sizes due to true heterogeneity

*The 80% CV is zero for professional development because there are only three studies for this antecedent, and the corrected correlations are similar across the three studies

benefits are viewed as primary tools for recruiting and retaining law enforcement. We identified five studies that met the criteria and computed a corrected effect size of $\rho=0.61$.¹ Thus, our findings suggest that providing professional development and training opportunities is nearly as crucial for job satisfaction among law enforcement as pay and benefits.

These findings provide three important contributions to research and practice. First, too often, training and professional development opportunities are only offered to law enforcement following cases of police misconduct. The findings from this study indicate that training and professional development should be promoted as an ongoing job benefit that enhances job satisfaction in addition to being viewed as a resource that can improve the quality of policing.

Second, there is concern by many that tensions between the police and the public are undermining the morale of law enforcement. We find evidence that supports this concern, given that cynicism towards the public has a negative and medium effect size on job satisfaction among law enforcement. That being said, co-worker and supervisor support have larger effect sizes, suggesting that law enforcement is more affected by what happens within the station than outside the station.

Third, while research on police personality is prominent, less research focuses on whether there are universal job resources that would enhance job satisfaction among law enforcement just as they do for other professions and the relative impact of those resources. The findings from this study indicate that autonomy, competence, and relatedness are essential to law enforcement, just as they are for other professions.

¹ $K=5$, $N=10,444$, $\bar{r}=0.5$, $\bar{\rho}=0.61$, 95% CI=[0.5, 0.73], CI width=0.24, 80% CV=[0.45, 0.78], CV width=0.33, $P=96.87$.

Moreover, the finding that training and professional development had large effect sizes directly challenges the negative stereotypes that cops are dumb or hate change. All humans desire growth.

Across all pairs of relations, the 95% *CI* did not include 0, and the width of the 95% *CI* was lower than 0.50, indicating that all the meta-analytic correlations represented non-zero correlations and that there was high precision in the meta-analytic estimations. That said, as shown in Table 2, all pairs of correlations had greater than 0.11 difference between the upper and lower bounds of the 80% *CVs* except for opportunities for professional development. All the antecedents had I^2 's higher than 75, except for opportunities for professional development. The 80% *CV* and I^2 are zero for professional development because there are only three studies for this antecedent, and the corrected correlations are similar across the three studies.

These results indicate a large amount of heterogeneity across studies in how each antecedent correlates with job satisfaction except for opportunities for professional development. Thus, a search for moderators for all of the antecedents except for opportunities for professional development is warranted.

Moderators

Accordingly, we examined whether the relations between each antecedent and job satisfaction differed depending on whether the data were collected in an individualistic or collectivistic country. The meta-analytic results by sub-groups and the sub-group comparison results are shown in Table 3. All antecedents had non-zero relations with job satisfaction even when calculated in sub-groups. Two antecedents showed significant sub-group differences between individualistic and collectivistic countries, and two did not. As expected, the relationship between autonomy and job satisfaction was significantly stronger for individualistic than collectivistic countries ($z=4.90$, $p=0.00$). Furthermore, as expected, the relation between supervisor support and job satisfaction is significantly weaker in individualistic countries than in collectivistic countries (Supervisor Support, $z=-2.19$, $p=0.05$).

In contrast to what we expected, we did not find a statistically significant difference between individualistic and collectivist countries regarding the relationships between co-worker support, cynicism toward the public, and job satisfaction (Co-worker Support, $z=-1.09$, $p=0.22$, Cynicism toward the public, $z=-0.70$, $p=0.31$). We should note, however, that the sample size for collectivistic countries for the antecedent co-worker support was small ($k=4$ for collectivistic countries). Furthermore, the sample sizes for both collectivistic and individualistic countries were small for the antecedent cynicism toward the public ($k=3$ for collectivistic and individualistic countries). As such, these results should be interpreted with caution.

Table 3 Meta-Analytic Sub-Group Analysis Results: Individualistic vs. Collectivistic Countries

<i>Antecedent & Sub-Groups</i>	<i>k</i>	<i>N</i>	\bar{r}	\bar{p}	95% <i>CI</i>	<i>CI width</i>	80% <i>CV</i>	<i>CV width</i>	<i>I</i> ²	<i>Diff z (p)</i>
Autonomy										4.90 (0.00)
<i>Individualistic Countries</i>	12	4,520	0.37	0.47	[0.37, 0.58]	0.20	[0.25, 0.69]	0.44	86.73	
<i>Collectivistic Countries</i>	8	8,037	0.27	0.37	[0.30, 0.45]	0.16	[0.24, 0.51]	0.27	89.75	
Co-worker Support										-1.09 (0.22)
<i>Individualistic Countries</i>	17	13,530	0.41	0.52	[0.45, 0.59]	0.14	[0.33, 0.70]	0.37	93.7	
<i>Collectivistic Countries</i>	4	2,942	0.48	0.54	[0.48, 0.59]	0.11	[0.48, 0.59]	0.11	75.51	
Cynicism Towards the Public										-0.70 (0.31)
<i>Individualistic Countries</i>	3	604	-0.22	-0.31	[-0.44, -0.17]	0.27	[-0.41, -0.20]	0.21	46.3	
<i>Collectivistic Countries</i>	3	4,982	-0.24	-0.35	[-0.50, -0.20]	0.30	[-0.52, -0.18]	0.34	96.1	
Supervisor Support										-2.19 (0.04)
<i>Individualistic Countries</i>	18	9,320	0.33	0.43	[0.35, 0.50]	0.15	[0.23, 0.63]	0.40	90.51	
<i>Collectivistic Countries</i>	5	2,589	0.41	0.48	[0.36, 0.60]	0.24	[0.31, 0.65]	0.34	93.79	

k=number of studies, *N*=sample size, \bar{r} = mean effect size weighted by sample size, \bar{p} = mean effect size corrected by reliability coefficients, *CI*=confidence interval (bolded values suggest 95%*CI*s that do not include 0, indicating non-zero relations), *CV*=credibility interval, *I*² = the percentage of the total variability in a set of effect sizes due to true heterogeneity (bolded values suggest large heterogeneity), *Diff z (p)* = *z*-statistics for sub-group difference comparing individualistic countries against collectivistic countries, and the corresponding *p*-value (bolded cells suggest *p*-values lower than 0.05, indicating significant sub-group differences)

Conclusion

This study is the first peer-reviewed meta-analysis of job satisfaction among law enforcement. We examined the relationship between six variables that facilitate competence, autonomy, and relatedness and their relationship with job satisfaction among law enforcement. The overall meta-analysis found that all six antecedents had medium or large effect sizes, which provides support for the utility of SDT in explaining job satisfaction among law enforcement.

Our results also indicate a dearth of research exploring the relationships between the antecedents, opportunities for professional development and training, and the outcome job satisfaction. This is concerning, given that our findings indicate that both antecedents have large effect sizes, nearly equal to pay and benefits.

Regarding the subgroup analyses, there were some significant differences between collectivistic and individualist cultures, as Hofstede et al. (2010) work suggests. Most notably, the effect size for supervisor support was significantly weaker in individualistic countries than in collectivistic countries, and the effect size for autonomy was substantially stronger in individualistic countries than in collectivistic countries. Therefore, while the three dimensions of SDT have broad applications, their relative impact on job satisfaction for law enforcement may vary across cultures in meaningful ways. Cross-cultural studies within policing and criminal justice research are pretty rare, and the findings from this study indicate that more work should be done in this area.

This study is not without limitations. There is a dearth of experimental studies regarding job characteristics and job satisfaction among law enforcement. Consequently, the data used in this study are correlational, so we cannot establish cause-and-effect relationships. Moreover, while we conducted moderator tests, the results indicated that significant heterogeneity remains. We encourage scholars to conduct a meta-analysis of experimental studies regarding job characteristics and job satisfaction among law enforcement once there is a large enough body of them.

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Author contributions Data collection and preparation were performed by Gordon Abner and Eloy Oliveira. Data analysis was performed by Gordon Abner and Yi Lala Wang. The first draft of the manuscript was prepared by Gordon Abner and Yi Lala Wang. All authors contributed to the conceptualization of the study.

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