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The Interactive Effects of Self-Esteem, Goal Instructions, and Incentives on Personal Goals and Goal Attainment

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An individual's personal goal is one of the strongest motivators, yet its determinants and processes are not well understood, especially those dealing with person–situation interaction. This research examines the interactive effects of monetary incentive types, self-set goal level instructions, and self-esteem on personal goals and goal attainment. A laboratory research study with a sample of 300 students found a statistically significant three-way interaction among monetary incentive types (pay for performance [piece rate], pay for goal attainment [GA-bonus], and pay for participation [hourly flat rate]), self-set goal level instructions (an instruction to set hard, easy, any, and no goals), and self-esteem in influencing personal goals and goal attainment. The highest level of personal goals (and the lowest level of goal attainment) was achieved by high-self-esteem participants who were paid for performance and instructed to set hard goals. This research shows that person–situation interaction is the most promising in understanding personal goals and their determinants. *Organization Management Journal*, 9: 148–169, 2012. doi: 10.1080/15416518.2012.708850

Locke's goal theory (see Locke & Latham, 1990, 2002) has focused extensively on assigned goals and performance, rather than on the determinants of self-set goals. While in the last decade much research has been done on self-set goals, considerably more research is needed, given the central role that personal goals play in motivation, goal setting, and life in general. Such a central role is emphasized by "popular theories of self-regulation [that] focus on personal goals . . . as the most direct determinant of behavior" (Wright & Kacmar, 1995, p. 265). Locke and Latham point out that whether the goal is assigned or participatively set, an individual may have a goal in mind that is different. They further argue that "even

under assigned goals, there is an individual choice process involved. . . . Thus it is important to discover the factors that determine what goals the individual will choose when allowed free choice" (1990, p. 109).

Level of aspiration and contemporary goal-setting research show that monetary incentives, self-esteem, and high expectations placed on the individual by significant others (such as instructing the individual to set hard goals), among other factors, influence an individual's goals. However, the interactive effect among these variables on personal goals and goal attainment has never been examined before. Erez (2005) calls for research that examines the effects of person–situation interaction on goal choice and goal attainment.

Studying the interactive effect of self-esteem, monetary incentive types, and self-set goal level instructions on personal goals and goal attainment is promising for theoretical and practical reasons. Theoretically, behavior, in general, and personal goals, in particular, are a function of a complex interaction between the individual and his/her environment (Bandura, 1986; Latham & Pinder, 2005; Lewin, 1935: Lewin et al., 1944; Vroom, 1964; Weiss & Adler, 1984). In addition, "traits do not work in isolation from other factors" (Baum, Locke, & Smith, 2001, p. 292). In this regard, researchers (e.g., Brockner, 1988) have emphasized the importance of integrating self-esteem with other theoretically relevant situational variables to better understand its effects. Moreover, although much research has been done on self-esteem, the relationship between self-esteem and monetary incentives is one of the least understood and is rarely examined. Accordingly, the interaction among self-esteem, incentive types, and goal instructions may clarify the confusion surrounding self-esteem's responsiveness to the effects of monetary incentives.

Such confusion arises from the fact that some researchers (e.g., Terborg, Richardson, & Pritchard, 1980) argue that high-self-esteem individuals (HSEs) will perform well under contingent and noncontingent rewards due to their personality disposition to behave effectively (i.e., monetary incentives may have no or little effect on HSEs), whereas other researchers (e.g., Korman, 1970; Lawler, 1970) argue that HSEs should be responsive to the effects of contingent rewards to the

extent that such rewards result in more favorable self-evaluation and desirable results for high performance. Terborg et al. (1980), however, found no empirical support for their argument. Accordingly, additional research is needed, especially since the preceding arguments by Korman and Lawler suggest that self-esteem responsiveness to the effects of monetary incentives may depend on the effectiveness of the monetary incentive system.

The review of the literature shows that the effectiveness of the monetary incentive system depends on "goal difficulty level" and "monetary incentive types" (see Lee, Locke, & Phan, 1997; Mowen, Middlemist, & Luther, 1981), such that incentives would not be effective unless the individual set a difficult goal and such goals would lead to a higher level of performance under the pay-for-performance system than under the pay-for-goal-attainment (GA-bonus) and pay-for-participation (the hourly flat rate) systems. Therefore, HSEs would be more responsive to monetary incentives to the extent that managers apply pay for performance and instruct these individuals to set hard goals.

Practically, personal goals are important to employees in order to appraise themselves through the achievement of these goals. Himmelweit (1947, p. 41) points out that "knowledge of the goal a person sets himself is important for the true appraisal of the efficacy of his behaviour and for the understanding of his reaction to environmental stress." Similarly, personal goals are important to management and organizations. This is because it is strongly believed that personal goals influence behavior (Kanfer, 1987; Locke & Latham, 1990), and, accordingly, managers can expect high job performance from employees who set hard goals (Campbell, 1982). On the macro level, Baum and Locke (2004) found that a chief executive officer (CEO) average annual sales growth has a direct effect on venture growth. In addition, it is often argued that the goals of an individual are not always the same as those of the organization (Austin, 1989). Therefore, instructing subordinates to set hard goals for themselves is especially important in order for managers to align the interests of their employees with those of the organization. Self-set hard goal instruction causes employees not only to set high personal goals but also to increase their commitment to the goal (since employees should be committed to the goals they set for themselves; see Locke & Latham, 1990), which, in turn, enhances goal attainment and performance. Self-set hard goal instruction could be an effective managerial tool in participative decision-making programs such as management by objectives.

Furthermore, monetary incentives have been an important tool that managers have utilized to motivate their employees. However, there is much confusion surrounding incentives' effectiveness in the workplace since they do not always generate a high response from workers. Research, however, shows that the boundary conditions under which monetary incentives operate are important. According to Locke, Bryan, and Kendall (1968), monetary incentive plans do not work automatically by themselves and do not operate in a vacuum. The integration of self-set goal level instructions and self-esteem with monetary incentives is crucial in order for managers to guarantee that such a system is producing the desired influence. Moreover, such integration should be valuable to managers and organizations because it deals with a complex model of motivation and this model fits well with the increasing complexity of organizational reality, the diversity of the workplace, and the pressure over managers and organizations today to do well. Such integration with its complex set of variables may contribute more to organizational success than does each variable individually. Recent research has shown that "individual, organizational, and environmental research domains predict venture growth better when the web of complex indirect relationships among them is included than when only multiple simultaneous direct effects are studied" (Baum et al., 2001, p. 299). Baum and Locke (2004) show that entrepreneurial traits and situationally specific motivation such as goals and self-efficacy are related to subsequent venture growth. In addition, organizational life is filled with demands that managers place upon their subordinates to fulfill. Therefore, managers should understand the determinants of personal goals and how such determinants interact to influence employees' behavior in order for managers to help their employees set goals that are challenging, attainable, and rewarding.

The objectives of this research, therefore, are twofold: (a) to examine the interactive effects of monetary incentive types, that is, straight piece rate, hourly flat rate, and differential piece rate with goal attainment step bonus (GA-bonus), self-set goal level instructions (hard, easy, any, & no goal instructions), and self-esteem on personal goals and goal attainment; and (b) to investigate the mediating role of personal goals, self-efficacy (a person's belief about performing a task; see Bandura, 1986), and goal commitment (a determination to try for a goal; see Locke, Latham, & Erez, 1988) on the effects of this interaction on performance.

Figure 1 shows the expected relationships among the research variables. Personal goals are defined in the present research to refer to an individual's future performance intention. Goals are desired objects and do not necessarily cause the individual to act unless he/she intends to do so (Locke & Latham, 1990). Goal intention is a powerful predictor of action (Bandura, 1986; Locke, 1968) and is equivalent to personal goals because it includes the component of intent (Tubbs & Ekeberg, 1991), which makes personal goals the strongest motivator (Wright & Kacmar, 1995). In addition, goal intention terminates thinking about alternative goals (competing goals) and it ties the person to the desired goals so that he/she is committed to act upon them (Dholakia & Bagozzi, 2003). Several researchers (e.g., Frank, 1938; Gardner, 1940; Himmelweit, 1947) asked participants to report their "intended goals" instead of simply asking them to set their goals.
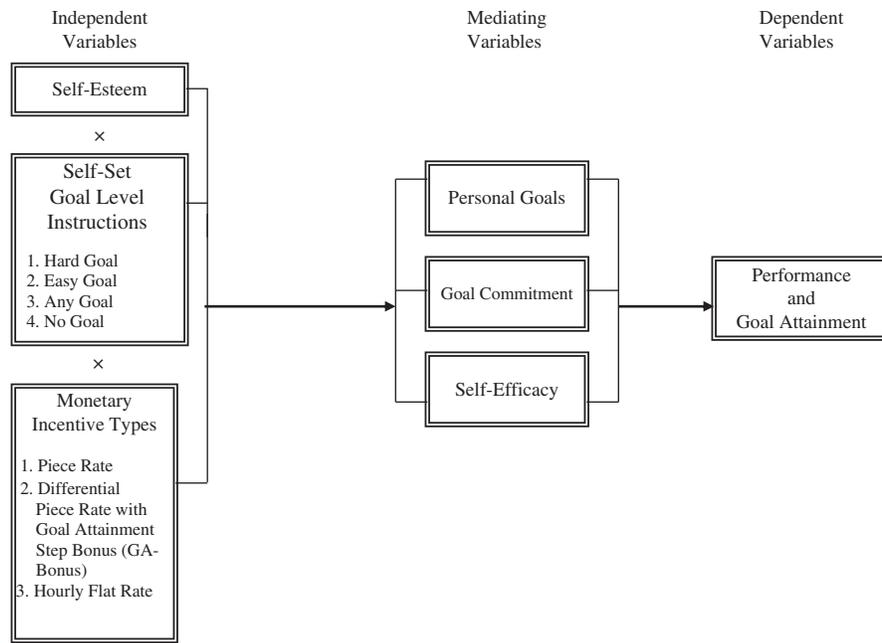
FIG. 1.   Relationships among the research variables.

HYPOTHESES

Situational Influences on Personal Goals: Self-Set Goal Level Instructions and Monetary Incentive Types

Based on the goal theory that asserts that hard goals produce a higher level of performance than easy goals or "do your best goals" (Locke & Latham, 1990, 2002), the present research hypothesizes that instruction to set hard goals causes individuals to set higher goals and to have higher goal attainment and performance than instruction to set easy or any goals. High demands placed on individuals by significant others arouse normative expectations and communicate to them the expected high level of performance (Locke & Latham, 2002), which cause them to set higher goals than the goals that they would have normally set without such instruction. Instruction to set any goal is expected to cause individuals to set, in general, average goals since most individuals would set neither very high goals nor very low goals.

Several studies found that requests by an authority figure to set hard goals (Andrews & Farris, 1972; Forward & Zander, 1971; Harkins and Lowe, 2000; Strang, 1981) and instructions to set arbitrary and unreasonably high anchors (Hinsz, Kalnbach, & Lorentz, 1997) cause participants to choose significantly hard goals.

The present research also hypothesizes that the combination of self-set goal level instruction and monetary incentives should produce better results than either one alone (see Lee, 1988). Monetary incentives increase goal level, goal commitment, performance, self regulation (Condly, Clark, & Stolovitch, 2003; Jenkins, Gupta, Mitra, & Shaw, 1998; Locke & Latham, 1990,

2002), valences of job performance (see Vroom, 1964), and attractiveness of goal attainment (Hollenbeck & Klein, 1987).

However, the effect of incentives on personal goals and performance may differ depending on the type of incentive (i.e., pay for performance, pay for goal attainment [GA-bonus], and pay for participation [hourly flat rate]) offered by the organization. Researchers argue that tying monetary rewards to goal attainment causes the individual to set lower goals (Locke & Latham, 1984; Wood, Atkins, & Bright, 1999; Wright, 1989; Wright & Kacmar, 1995) and to perform worse (Lee et al., 1997; Mowen et al., 1981) than tying rewards to either performance or participation. Accordingly, the present research hypothesizes that individuals should set higher goals and have higher goal attainment under the piece-rate plans than under the GA-bonus and hourly flat-rate plans. This is because goals give direction and cause people to focus attention toward goal-relevant activities (Locke, 2004; Locke & Latham, 2002). Such focused attention, however, would be different under various monetary incentive plans because such plans have different monetary values for setting and achieving personal goals such that under the piece-rate plans, each unit produced is rewarded with no punishment for not achieving personal goals, causing individuals to focus their attention on "goal level" and to set the highest level of personal goals to maximize the effects of incentives. Under the GA-bonus plans, by contrast, individuals will be punished for failure to reach their personal goals, causing them to focus their attention on "goal attainment" and to set the lowest level of personal goals to avoid losing the bonus. Under the hourly plans, individuals receive a flat fee for their participation, and, accordingly, there are neither rewards for achieving,

nor punishments for not achieving, their personal goals, causing them to set goals that are somewhat higher than those goals set by individuals working under the GA-bonus plans (since the latter have the most to lose).

Based on the preceding arguments, the present research hypothesizes that monetary incentive types should interact with self-set goal level instructions such that under the three incentive types, the self-set hard goal instruction would lead to higher personal goals and higher goal attainment than the self-set easy and any goal instructions (due to the goal level effects); however, the strength of the differences in personal goals and goal attainment across self-set goal level instructions would vary as a function of monetary incentive types. That is, under the piece-rate plans, the self-set hard goal instruction will result in the highest level of personal goals and goal attainment as compared to the easy and any goal instructions, whereas under the GA-bonus and hourly plans, the self-set hard goal instruction would result in somewhat higher personal goals and goal attainment than the self-set easy and any goal instructions. However, such interaction should vary as a function of an individual's perception of his/her self-worth.

Personality Characteristics: Self-Esteem

An individual's perception of self-worth is crucial to the full understanding of his/her level of aspiration (i.e., personal future performance goals) and its attainment (see, Lewin et al., 1944). However, linking personality characteristics to goal-setting behavior has produced inconsistent and conflicting results (Locke & Latham, 1990, 2002; Locke, Shaw, Saari, & Latham, 1981; Weiss & Adler, 1984). This is partially because the research design that tested personality variables was based on assigned goals rather than on self-set goals, which masked the personality effects by making situational demands stronger (Locke et al., 1981; Weiss & Adler, 1984). Although in the last two decades much research has been done on goal setting and personality, additional research is needed since less is known about the role of personality regarding the choice of difficult goals and persistence (Kanfer & Heggestad, 1997).

Locke et al. (1981) and level-of-aspiration research assert that self-esteem is one of the most important personality characteristics that influence an individual's choice of his/her personal goal. Self-esteem is defined as "a positive or negative attitude toward a particular object, namely, the self" (Rosenberg, 1968, p. 5). HSEs consider themselves worthy, while low-self-esteem individuals (LSEs) consider themselves unworthy (Rosenberg, 1968).

Korman's (1970) self-consistency theory predicts that people behave in a manner consistent with their self-image. In addition, Hall's (1971) psychological success model and Hall and Foster (1977) assert that the generalized self-confidence of HSEs will cause them to set harder goals and have higher goal attainment and performance than low self-esteem individuals (LSEs). More recent research shows that HSEs are more likely to set higher goals (Levy & Baumgardner, 1991; Pilegge & Holtz, 1997),

accept and try for challenging goals (Tharenou & Harker, 1984), and are high achievers and more resilient when confronted with hardship (Gardner & Pierce, 1998) than LSEs.

While it is theoretically established that self-esteem should positively influence personal goals, research results found no support for the interactive effects of self-esteem and goal difficulty on personal goals and performance (see Martin & Murberger, 1994; Tang & Reynolds, 1993), as well as the main effect of self-esteem on the choice of difficult goals (e.g., Hollenbeck & Brief, 1987), personal goals, and performance (e.g., Kalnback & Hinsz, 1999).

Similarly, the relationship between monetary incentives and self-esteem on performance is not clear and inconclusive, partially because of the paucity of research in this area. Prior research (i.e., Hechler and Wiener, 1974; Terborg et al., 1980) argues that HSEs will not be responsive to the effects of contingent rewards because of their personality disposition to behave effectively, while LSEs will because they need the money to do well. However, Hechler and Wiener (1974) found mixed support for the interaction of self-esteem and expected pay level, and Terborg et al. (1980) found no evidence of the interaction between pay and self-esteem for effort, quantity and quality of performance. Additional research is needed because it is difficult to believe that HSEs will be indifferent to the effects of money. Monetary incentives can satisfy intrinsic and extrinsic needs, especially since, according to Korman (1970), the HSE is a need-satisfying individual. Researchers (i.e., Korman, 1970; Lawler, 1970) argue that HSEs would be responsive to incentives to the extent that a monetary incentive system provides desirable rewards for high performance (see Korman, 1970; Lawler, 1970). Since Lee et al. (1997) and Mowen et al. (1981) argue that the combination of assigned hard goals and pay for performance (piece-rate system) will lead to desirable rewards, the present research hypothesizes that the highest level of personal goals, goal attainment, and performance should occur for HSEs who are instructed to set hard goals and are offered pay for performance.

The Interactive Effects of Self-Set Goal Level Instructions, Monetary Incentive Types, and Self-Esteem on Personal Goals and Goal Attainment

According to Keppel (1982), a significant three-way interaction is present when the interactive effect between two of the independent variables, on the dependent variable, is not the same at different levels of the third independent variable.

Accordingly, the interactive effects of monetary incentive types and self-set goal instructions explained earlier will be different at various levels of self-esteem such that under the *piece-rate plans* (that pay for performance with no punishment for not reaching one's goal), HSEs are expected to have the highest level (while LSEs are expected to have a somewhat higher level) of personal goals and goal attainment in the hard goal instruction as compared to the easy and any goal instructions, due to the personality disposition of HSEs

to behave effectively (see Hall, 1972; Korman, 1970) and the fact that HSEs evaluate their self-worth not only by exceeding their personal standard of excellence but also by exceeding the social standard of excellence within their environment (see Frank, 1935).

Although LSEs are predisposed to behave in an ineffective manner, the incentives provided by the piece-rate plans will give them a motivational reason to somewhat increase their personal goals and goal attainment in the hard goal instruction as compared to the easy and any goal instructions in order to obtain the money.

However, under the *GA-bonus plans* (where participants will be punished if their personal goals are not achieved) and the *hourly plans* (where participants receive neither rewards nor punishment for achieving or not achieving their personal goals, respectively), HSEs will function *somewhat* effectively by setting *somewhat* higher goals and having *somewhat* higher goal attainment under the hard goal instruction than under the easy and any goal instructions. This may be attributed to intrinsic rewards that are associated with task performance (see Hechler & Winner, 1974; Judge, Bono, & Locke, 2005; Locke et al., 1981; Terborg et al., 1980; Yukl & Latham, 1978). Judge et al. (2005, p. 1) found that "individuals with positive self-regard were more likely to pursue goals for intrinsic and identified (value congruent) reasons." However, LSEs will show no significant differences in personal goals and goal attainment among the self-set goal level instructions. In other words, there are both personality and situational (goal-setting) reasons for HSEs to function *somewhat* effectively under the GA-bonus and hourly plans, while LSEs have neither the personality nor the situational reasons to do well.

Hypothesis 1: A three-way interaction among monetary incentive types, self-esteem, and self-set goal level instructions in influencing personal goals and goal attainment is expected such that:

(A) Under the *piece-rate plans*, for HSEs, the self-set hard goal instruction will result in the *highest level*

of personal goals and goal attainment as compared to the self-set easy and self-set any goal instructions, respectively, whereas for LSEs, the self-set hard goal instruction will result in a somewhat *higher level* of personal goals and goal attainment than the self-set easy and self-set any goal instructions, respectively.

(B) Under the *GA-bonus and the hourly plans*, for HSE, the self-set hard goal instruction will result in a somewhat *higher level* of personal goals and goal attainment than the self-set easy and self-set any goal instructions, respectively, whereas for LSEs there will be *no significant differences* in personal goals and goal attainment among self-set hard, self-set easy, and self-set any goal instructions.

Figure 2 shows a diagram of these three-way interactions.

The Mediating Effects of Personal Goals, Self-Efficacy, and Goal Commitment on the Independent Variables–Performance Relationship

Locke's (2001) motivational hub model asserted that personal goals, goal commitment, and self-efficacy should mediate the effects of personality and situational variables on performance. Self-efficacy is defined as task-specific self-confidence—that is, an individual believes that he/she can perform the task (Bandura, 1997). Lee et al. (1997) found that personal goals and self-efficacy mediated the interactive effects of assigned difficult goals and incentives types on performance. Baum and Locke (2004) found that self-efficacy and goals had direct effects on venture growth and that these variables mediated the effects of entrepreneurial traits on subsequent growth. However, a review of the literature reveals that the process by which monetary incentives influence performance is not clear and the research evidence is mixed (Locke, 2001). For example, while several studies (i.e., Lee et al., 1997; Wright, 1989) found that personal goals and self-efficacy mediate the effects of incentives on performance, other studies have shown mixed results (see Lee et al., 1997; Locke, 2001; Locke & Latham,
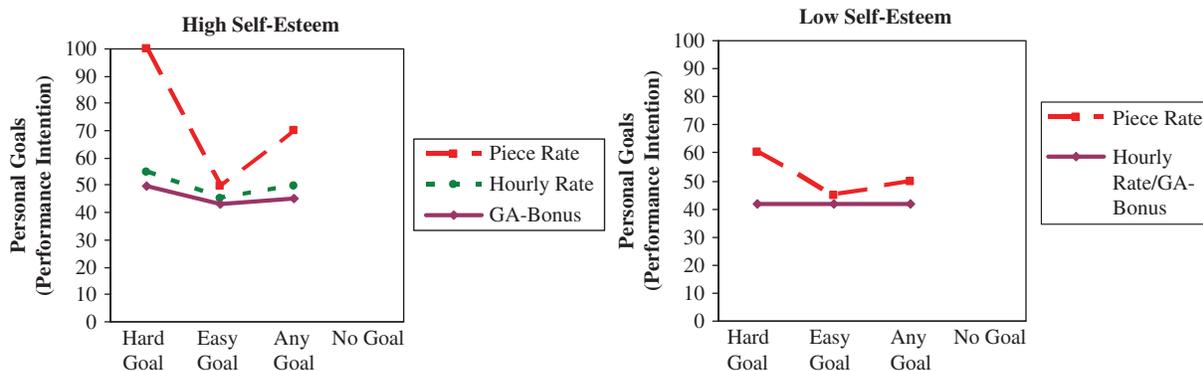

FIG. 2.   The hypothesized three-way interaction among self-esteem, goal instructions, and incentive types on personal goals (performance intention).

2002; Riedel, Nebeker, & Cooper, 1988; Wood et al., 1999; Wright, 1989; Wright & Kacmar, 1995; Yukl & Latham, 1978). Similarly, although personality factors are related to motivation and performance (through self-regulatory mechanisms such as goal level and goal commitment; see Baum & Locke, 2004; Erez & Judge, 2001), Lee, Sheldon, and Turban (2003) point out that the process by which personality influences behavior is not yet clear. Part of the problem is due to researchers using a deficient measurement of goal commitment, a small amount of incentives, and poor experimental design (Locke, 2001), all of which the present research has overcome.

The present research argues that personal goals, self-efficacy, and goal commitment should mediate the interactive effect of self-esteem, goal instructions, and monetary incentive type on performance such that the combination of hard goal instruction, piece-rate plans, and high self-esteem should result in the highest level of personal goals, self-efficacy, and goal commitment, which, in turn, leads to the highest level of performance.

Instruction to set hard goals arouses normative expectation and causes an individual to set high goals and have high goal commitment (see Lee et al., 1997; Locke et al., 1988). Self-set goals imply volition, which, in turn, increases goal commitment (Hollenbeck & Klein, 1987). In addition, instruction to set challenging goals can also raise an individual's self-efficacy because such instruction is an expression of confidence in his/her ability to perform effectively (see Locke & Latham, 2002). Similarly, monetary incentives should increase goal commitment because they increase the attractiveness of goal attainment, which, in turn, increases performance (see Hollenbeck & Klein, 1987), especially under the pay for performance and self-set hard goal instruction that should result in high payoffs. Monetary incentives should also increase self-efficacy because receiving incentives for high personal goals and performance implies task success and high competency (see Stajkovic & Luthans, 2001) and increases performance through better task strategies that are needed to achieve those high goals (see Lee et al., 1997; Wright & Kacmar, 1995). Bandura (1986) argues that monetary incentives (pay for performance) will not be effective unless an individual is able to perform the task effectively in order to receive the incentives.

In addition, HSEs are expected to have high personal goals and goal commitment (see Hall, 1971). Because HSEs have high self-confidence, they probably have high expectancy of achieving hard goals, which leads to high goal commitment and performance (Hollenbeck & Klein, 1987). Moreover, HSEs are expected to have higher self-efficacy than LSEs, which is consistent with Gardner and Pierce's (1998) argument that self-esteem should positively be related to self-efficacy.

Hypothesis 2: Personal goals, self-efficacy, and goal commitment would mediate the interactive effects of the independent variables (self-esteem, monetary incentive types, and self-set goal level instructions) on performance.

METHODS

Experimental Design

A 4 × 3 × 2 (self-set goal level instructions [hard, easy, any, no goal] × monetary incentives types [piece rate, hourly, GA-bonus] × self-esteem [high, low]), between-group factorial design was used. This design incorporates two performance sessions (the practice trial and the experimental trial) that lasted 20 minutes each. A 20-minute trial is typical in goal-setting research (e.g., Hinsz et al., 1997; Wright, 1989).

Sample and Task

Participants were undergraduate college students who were hired, through an advertisement placed in their college newspaper, to perform part-time, paid clerical work for a period of 2 hours. The actual sample size is 300 participants. This size was determined by using Cohen's (1988) methods with average effect size. This sample size has a statistical power of .93 for the 3 × 3 × 2 interaction (omitting the no goal condition), and .89 for the 4 × 3 × 2 interaction. The experiment consisted of a coding task. Each participant was given several questionnaires. Each questionnaire was composed of 100 questions already answered by the experimenter beforehand. Participants were asked to code the answer to each question on this questionnaire to a corresponding number on an IBM scantron sheet. Riedel et al. (1988) used a similar coding task.

Pretest

The pretest data (based on 36 participants) indicated that in a 20-minute trial, the average performance was 400 answers correctly coded and the minimum and maximum amount of performance ranged from 300 to 1,100 correctly coded answers, respectively.

Manipulations and Measurements of the Research Variables

Monetary incentive types. Participants received $0.015 for each answer correctly coded (pay for performance) under the piece-rate plans. By contrast, participants working under the GA-bonus plans were paid for goal attainment as follows: participants received $0.0075 for each answer correctly coded below the attainment of their personal goals, a step bonus of $3.00 when they achieved their personal goals, and $0.015 for each answer correctly coded beyond the attainment of their personal goals. Under the hourly plans, participants received $6.00 for their participation, regardless of their performance. When participants performed at an average level in the three payment conditions, they received the same pay as if they achieved 400 correctly coded answers (average performance). Participants then received identical pay of $6.00 under each pay condition (piece rate [400 × $0.015 = $6.00], hourly [$6.00 for participation], and GA-bonus plans

[400 × \$0.0075 = \$3.00 + \$3.00 step bonus for reaching personal goals = \$6.00]). In the no-goal condition, a differential piece rate with a step bonus was applied. Under this type, participants received \$0.0075 for each answer correctly coded below the average performance (400 answers correctly coded), a step bonus of \$3.00 when they achieve this average performance, and \$0.015 for each answer correctly coded beyond the attainment of their average performance (400 × \$0.0075 = \$3.00 + \$3.00 step bonus for reaching average performance = \$6.00).

Self-set goal level instructions. In the self-set hard goal instruction, participants were told that the experimenter had an approaching deadline to finish coding the questionnaires, and that the participants should set difficult goals for themselves, and work very hard to reach these goals. In the self-set easy goal instruction, participants were told to relax and set easy goals for themselves that could easily be reached. In the self-set any goal instruction, participants were told that they were free to set any goal that they would work to reach. In the no goal instruction, participants neither set nor received instructions about goals.

Self-esteem. Self-esteem was measured by the Rosenberg self-esteem inventory scale (Rosenberg, 1968). This inventory is a 10-item measure, consisting of a 4-point scale with answers ranging from *strongly agree* to *strongly disagree*. A reliability coefficient (test–retest) of .85 was reported by Robinson and Shaver (1973). In this study, the reliability coefficient is .83 (Cronbach's alpha). Self-esteem is treated in the regression analysis as a *continuous* variable. However, in order to explain the regression results, the data were plotted by taking the top and bottom third (ignoring the middle one-third) of the self-esteem scale. This resulted in 104 HSEs and 75 LSEs. This is very important because the measure of self-esteem is skewed, and therefore, using the mean or the midpoint is not appropriate (see Baumeister et al., 1989, 2003). Baumeister et al. (1989) examined the mean of self-esteem scales in 23 studies and found that such skewed distribution is a pattern and is a function of the self-esteem scale, in general, rather than of a specific scale, in particular. Several researchers have used the top and bottom third to determine HSEs and LSEs (see Martin & Murberger, 1994; Terborg et al., 1980).

Personal goals (performance-goal intention). Participants were asked to set their goals as a percent improvement in performance in the experimental trial above their performance in the practice trial (to prevent them from setting goals that are equal to or lower than their practice trial performance). Participants were completely free to choose the performance improvement that, in their own judgment, reflected the goal level (i.e., hard, easy, or any goal instructions) communicated to them. Participants were asked to indicate the number of answers that they intended to correctly code in the experimental trial. Based on the pretest results, participants were provided with the following levels of correctly coded answers to choose from: 300, 400, 500, 600, 700, 800, 900, 1000, and 1100.

Performance. Performance is the number of correctly coded answers in the second trial.

Goal attainment. Goal attainment is the difference between participants' performance in the second trial and their personal goals. A positive number means a participant is exceeding the goal, zero means he/she is meeting the goal, and a negative number means he/she is missing the goal. The magnitude indicates by how much the difference is. Other researchers (e.g., Donovan & Williams, 2003) as well as level-of-aspiration research have used goal-performance discrepancies to measure goal attainment.

Goal commitment. Goal commitment was measured by five items (items 1, 4, 5, 6, and 7), adopted from Hollenbeck, William, and Klein's (1989) measure of goal commitment (nine items rated on a 7-point scale). Klein, Wesson, Hollenbeck, Wright, & DeShon (2001) examined the nine-item scale proposed by Hollenbeck et al. using 2,918 participants and found the five-item scale to be the best predictor of the unidimensional aspect of the goal commitment measure. In the present research, the reliability coefficient (Cronbach's alpha) of the five items already mentioned is .77.

Self-efficacy. Participants' beliefs about self-efficacy were obtained using the self-efficacy scale, adopted with modification, from Locke et al. (1984), whose scale was itself based on Bandura's conceptualization of self-efficacy. Participants were asked to indicate their certainty (ranging from 0%, extremely low chances, to 100%, extremely high chances) in achieving 11 different levels of performance (ranging from very easy [correctly coding 100 answers] to very difficult [correctly coding 1,100 answers]) in a 20-minute work period (self-efficacy strength). In the first column, at each level of performance, participants were asked to indicate whether they could perform at that level by responding either *yes* or *no* (self-efficacy magnitude). Self-efficacy strength is combined with self-efficacy magnitude by the summation of certainty measures of performance for only those participants who answered *yes* in the first column. The reliability coefficient (alpha) of this scale is .84.

Practice trial performance. Practice trial performance refers to the actual number of correctly coded answers in the first trial. Practice trial performance serves as a measure of ability (see Lee et al., 1997); accordingly, it used in the present research as a control variable to eliminate any possibility of ability differences in the individual cells, since the focus of the present research is on the motivational differences rather than ability differences in personal goals, goal attainment, and performance.

Procedures

Participants were randomly and individually assigned to the experimental conditions. Upon arrival, each participant signed the census form, responded to the Rosenberg self-esteem inventory, and performed a 20-minute practice trial. Upon the completion of this trial, each participant was informed that he/she had already earned \$6.00 for his/her participation in the practice trial and that he/she would receive additional money for participating in the experimental trial (those working under the

hourly conditions were told that they would receive an additional $6.00 for their participation). For ethical reasons, no participant received less than a total of $12.00 but was made aware of this fact only after the completion of the experiment. Each participant was given feedback about his/her actual performance (number of answers correctly coded) in the practice trial, was given the incentive type and goal instruction manipulations, was asked to set a goal, was asked to respond to self-efficacy and goal commitment measures, and was asked to perform the 20-minute experimental trial. Upon completion, participants responded to questions regarding money and goal manipulations. The debriefing followed.

RESULTS

Checking the Validity of the Experimental Manipulations

Monetary incentive types. Participants were provided with a one-item scale with three alternatives: piece rate, hourly, GA-bonus, and differential piece rate with a step bonus plans (a control group), and were asked to check the payment system applied to them. The result indicates that participants correctly checked the payment system applied to them, and, accordingly, they understood the manipulation of the monetary incentive types.

Self-set goal level instructions. Participants were asked to describe the self-set goal level instructions applied to them. They were provided with a one-item scale with four alternatives describing the goal conditions. The result demonstrates that in the hard, easy, any, and no goal instructions, participants correctly described the goal manipulation applied to them, and, accordingly, they understood the manipulation of self-set goal level instructions. To further check on goal manipulation, participants were asked to rate their personal goals in terms of difficulty using a single-item scale ranging from 1 (*a very easy goal*) to 7 (*a very difficult goal*). Analysis of variance (ANOVA) shows that the main effect of the self-report of goal difficulty among goal instructions is significant, $F(2, 222) = 230,315$, $p = .000$. Tukey least significant differences (LSD) at the .05 level show that the goal difficulty rating was significantly higher in the hard goal instruction ($M = 5.80$, $SD = .87$) than in the easy ($M = 2.23$, $SD = .82$) and any goal ($M = 4.21$, $SD = 1.31$) instructions, indicating that the manipulation of goal instruction was understood by participants.

Perception of control over the choice of personal goals. Using a one-item scale with five alternatives ranging from 1 (*not at all*) to 5 (*very much*), participants were asked to indicate the degree of their control over the choice of their personal goals. ANOVA shows that the main effect of control over goal choice among goal instructions is significant, $F(2, 222) = 11,528$, $p = .000$. The Tukey LSD at the .05 level shows that control over goal choice was significantly higher in the any goal instruction ($M = 4.71$, $SD = .51$) than in the easy goal instruction ($M = 4.20$, $SD = .82$) and hard goal instruction ($M = 4.19$, $SD = .88$). All participants in each goal instruction condition reported high control over goal choice, exceeding a 4.00 out of 5.00 score. These results indicate that participants have high perception of control over goal choice, especially in the any goal conditions.

Descriptive Statistics

Table 1 shows the inter-correlation and the partial correlation (controlling for the practice trial performance) matrix, and Table 2 shows the means and standard deviations of the research variables under all the experimental conditions.

Examination of Table 1 reveals no sign of multicollinearity except the correlation between the practice trial performance and performance ($r = .73$), and between personal goals and goal attainment ($r = .66$). However, the first correlation is expected since both constructs share considerable variance because they are the same variable taken at different times. The second correlation is also expected since both variables share considerable variance, since goal attainment is the difference between performance and personal goals. Figures in parentheses represent the sample size of 300 where the no-goal conditions are included and 225 where the no-goal conditions are excluded. Controlling for the practice trial performance enhances the magnitude of some correlations (i.e., the correlations between self-efficacy and goal attainment, between performance and goal attainment, between goal attainment and personal goals), but reduces the magnitude of other correlations (i.e., the correlations between self-efficacy and personal goals, between self-efficacy and performance, and between personal goals and performance). It is important to indicate that self-efficacy still correlates significantly with the research variables even after controlling for the practice trial performance.

Statistical Test of the Research Hypotheses

Multiple regression analysis was used to test the research hypotheses. Because monetary incentive types and self-set goal level instructions are categorical variables, they must be examined in the regression as dummy variables. Since monetary incentive type has three categories, only two dummy variables will be needed to represent the three categories holding constant the effects of the hourly flat-rate plans; since self-set goal level instruction has four categories, only three categories will be needed to represent the four categories holding constant the effects of the no-goal conditions. Accordingly, monetary incentive types were dummy coded as two variables (piece rate, GA-bonus, and hourly, coded 1, 0; 0, 1; and 0, 0, respectively). Self-set goal level instructions were dummy coded as three variables (hard, easy, any, and no goals) coded 1, 0, 0; 0, 1, 0; 0, 0, 1; and 0, 0, 0, respectively).

Before examining the hypothesized three-way interaction, it is important to examine the main effects of monetary incentive types and self-set goal level instructions on personal goals, since such an explanation can help in the interpretation of the results. Table 3, Section A, shows that (after controlling for the effects of the practice trial performance), the main effects of monetary incentive types and self-set goal level instructions

TABLE 1
Intercorrelation and partial correlation matrix of all variable measures

Variables	M	SD	A – Correlation among variables						B – Partial correlation controlling for the practice trial performance					
			1	2	3	4	5	6	1	2	3	4	5	6
1. Self-esteem	32.77 (300)	5.213												
2. Goal attainment	44.57 (225)	163.67	-.07 (225)						-.08 (222)					
3. Personal goals (intention)	574.04 (225)	176.80	.08 (225)	-.66*** (225)					.04 (222)	-.80*** (222)				
4. Performance	602.22 (300)	143.59	.03 (300)	.33*** (300)	.49*** (225)				-.07 (222)	.41*** (222)	.21** (222)			
5. Practice trial performance	423.32 (300)	107.60	.06 (300)	.06 (225)	.51*** (225)	.73*** (300)			(222)	(222)	(222)	(222)		
6. Self-efficacy	56.77 (298)	18.25	.17** (300)	-.12 (225)	.54*** (225)	.51*** (300)	.57*** (300)		.13* (222)	-.21** (222)	.33*** (222)	.17** (222)	(222)	
7. Goal commitment	24.71 (225)	4.22	.27*** (225)	.03 (225)	.02 (225)	.07 (225)	.001 (225)	.07 (225)	.27*** (222)	.03 (222)	.02 (222)	.07 (222)	.07 (222)	(222)

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

TABLE 2
Means and standard deviations of all variables

Self-set goal level instructions	Variables	Method of payment					
		Straight piece rate		Hourly flat rate		Differential piece rate/GA-bonus	
		HSE	LSE	HSE	LSE	HSE	LSE
1 – Hard goals	Personal goals (intention)	750.00 (171.59)	540.00 (114.02)	660.00 (151.66)	462.50 (91.61)	511.11 (60.09)	720.00 (277.49)
	Goal attainment	−.72.90 (222.84)	123.60 (51.09)	−.72.00 (148.49)	89.88 (63.38)	127.22 (70.31)	−.35.60 (83.26)
	Performance	677.10 (138.73)	663.60 (112.25)	588.00 (159.99)	552.38 (123.86)	638.33 (26.43)	684.40 (206.79)
	Practice trial performance	404.00 (98.43)	445.80 (87.87)	433.00 (106.19)	368.38 (80.31)	421.33 (66.93)	478.80 (130.65)
	Self-efficacy	66.20 (6.07)	59.20 (10.16)	71.80 (25.83)	50.50 (10.46)	54.67 (7.78)	61.40 (29.89)
	Goal commitment	26.30 (2.79)	22.60 (3.58)	25.60 (4.45)	23.38 (3.58)	26.00 (3.50)	20.20 (6.14)
2 – Easy goals	Personal goals (intention)	533.33 (115.47)	500.00 (63.25)	572.00 (122.15)	514.29 (146.39)	618.18 (244.21)	483.33 (147.20)
	Goal attainment	56.67 (110.32)	133.83 (148.61)	32.40 (51.24)	65.14 (76.11)	−23.27 (216.72)	44.67 (142.55)
	Performance	590.00 (119.70)	633.83 (137.99)	604.40 (112.22)	579.43 (157.32)	594.91 (142.67)	528.00 (153.80)
	Practical trial performance	427.42 (123.65)	370.83 (71.98)	444.00 (81.02)	431.71 (127.34)	444.64 (110.38)	354.83 (108.59)
	Self-efficacy	62.75 (19.70)	51.83 (12.22)	56.80 (8.32)	55.14 (16.09)	53.00 (12.11)	34.33 (17.56)
	Goal commitment	25.08 (3.29)	23.50 (3.45)	25.00 (4.36)	21.00 (6.68)	28.54 (2.66)	26.00 (6.20)
3 – Any goals	Personal goals (intention)	580.00 (147.57)	680.00 (248.99)	500.00 (130.93)	485.71 (89.97)	671.43 (170.43)	540.00 (114.02)
	Goal attainment	118.20 (148.64)	18.80 (303.56)	95.00 (84.64)	108.86 (203.49)	40.00 (157.29)	72.40 (65.84)
	Performance	698.20 (161.97)	698.80 (107.40)	595.00 (126.01)	594.57 (153.95)	711.43 (182.73)	612.40 (64.77)
	Practice trial performance	467.10 (135.24)	390.60 (132.87)	422.75 (97.46)	370.43 (98.32)	511.00 (124.16)	425.60 (54.80)
	Self-efficacy	61.90 (13.09)	57.80 (11.10)	60.88 (18.48)	53.14 (10.92)	69.14 (26.07)	57.00 (10.20)
	Goal commitment	25.80 (3.39)	22.40 (1.82)	24.13 (4.45)	22.43 (3.55)	29.14 (1.95)	24.80 (2.05)
4 – No goals[a]	Performance	546.64 (106.81)	638.17 (99.19)	518.00 (173.24)	431.25 (101.72)	640.00 (111.55)	610.00 (225.38)
	Practice trial performance	384.82 (105.10)	496.17 (113.90)	411.75 (116.82)	340.25 (76.75)	489.63 (83.38)	492.57 (190.65)
	Self-efficacy	62.55 (25.58)	51.83 (18.00)	55.00 (12.90)	45.00 (15.15)	66.75 (17.75)	50.57 (35.50)

Note. Figures in parentheses are the standard deviations. HSE = high self-esteem. LSE = low self-esteem.
[a]Personal goals, goal attainment, and goal commitment are not applicable under this condition. Sample size: hard goal/piece rate: HSE 10, LSE 5; hard goal/hourly: HSE 5, LSE 8; hard goal/bonus: HSE 9, LSE 5. Easy goal/piece rate: HSE 12, LSE 6; easy goal/hourly: HSE 5, LSE 7; easy goal/bonus: HSE 11, LSE 6. Any goal/piece rate: HSE 10, LSE 5; any goal/hourly: HSE 8, LSE 7; any goal/bonus: HSE 7, LSE 5. No goal/piece rate: HSE 11, LSE 6; no goal/hourly: HSE 8, LSE 8; no goal/bonus: HSE 8, LSE 7.

TABLE 3
The effects on personal goals and goal attainment

Independent variables and interactions	A. The effects on personal goals (EQ-2)						B. The effects on goal attainment					
	R^2	F	ΔR^2	ΔF	B-weight	F	R^2	F	ΔR^2	ΔF	B-weight	F
Step 1. Practice trial performance	.258	77.4***	.258	77.4***	.86	77.4***	.004	.82	.004	.82	.095	.82
Step 2. The main effects	.326	17.6***	.068	4.44***			.03	1.15	.027	1.2		
Self-esteem (SE)					.379	.04					−2.38	1.38
Self-set goal level instructions (SSGLIs)												
Hard goals (HG)					83.90	12.1***					−56.90	4.5*
Easy goals (EG)												
Any goals (AG)					49.32	4.2*					−20.02	.55
Monetary incentive types (MIT)												
Straight piece rate (Piece Rate)					73.73	9.2**					−5.77	.05
Differential piece rate with GA-bonus (GA-Bonus)					23.02	.90					−3.39	.02
Step 3. Two-way interaction	.347	7.98***	.02	.847			.05	.82	.02	.58		
SSGLIs × MIT					87.48	2.2					46.68	.50
SE × SSGLIs					−5.04	1.2					3.2	.38
SE × MIT					−3.6	.59					5.23	.98
Step 4. Three-way interaction	.394	7.5***	.047	4.0***			.097	1.2	.045	2.55*		
HG × Piece Rate × SE					13.75	1.28					−.768	.00
EG × Piece Rate × SE												
AG × Piece Rate × SE					−8.91	.71					13.71	1.3
HG × GA-Bonus × SE					−26.68	5.06*					30.80	5.27*
EG × GA-Bonus × SE												
AG × GA-Bonus × SE					−3.77	.11					7.31	.32
Equation	.394	7.45***	.137	2.7***			.097	1.22	.092	1.2		

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

are found to be significant in influencing personal goals. The significant, $F(2, 222) = 3.86$, $p = .020$, main effect of incentives shows that the highest level of personal goals is set under the piece-rate plans ($M = 613.33$, $SD = 185.51$), followed by the GA-bonus plans (M = 574.67, SD = 171.71) and hourly plans ($M = 534.13$, $SD = 165.96$), respectively. The Tukey LSD at the .05 significance level indicates that personal goals are significantly higher under the piece-rate plans than under the hourly plans and the GA-bonus plans. In addition, the significant main effect of self-set goal level instructions, $F(2, 222) = 7.37$, $p = .0006$, on personal goals shows that the highest level of personal goals is set under the hard goal instruction ($M = 618.67$, $SD = 189.38$), followed by the any goal instruction ($M = 589.33$, $SD = 172.87$) and easy goal instruction ($M = 514.13$, $SD = 151.60$), respectively. The Tukey LSD test indicates that personal goals set under the hard and any goal instructions are significantly higher than those set under the easy goal instruction. The results of the main effects of monetary incentive type and goal instructions on personal goals are consistent with the argument of the present research.

Hypothesis 1, which stated that *self-esteem, monetary incentive types, and self-set goal level instructions would significantly interact to influence personal goals and goal attainment* was supported (see Table 3, sections A and B, respectively). Table 3, section A, shows that after controlling for the effects of the practice trial performance (step 1), the main effects of monetary incentive types, self-set goal level instructions, and self-esteem (step 2), and the two-way interactions (step 3), the three-way interactions are found to be significant in influencing personal goals ($p = .004$, with statistical power = .90, and partial eta squared = .07), and goal attainment ($p = .040$, with statistical power = .72, and partial eta squared = .05). Table 2 reports and Figure 3 depicts the group means of these significant three-way interactions on personal goals and goal attainment.

To explain the just-described significant three-way interaction, a simple effect analysis should be performed. The data was broken down by monetary incentive types (piece rate, GA-bonus, and hourly) and under each type, variations in personal goal and goal attainment means among self-set goal level instructions (hard, easy and any) and between HSES and LSEs were reported (see Table 2).

Sub-Hypothesis 1A predicts that *under the piece-rate plans, for HSEs, the hard goal instruction will result in the highest level of personal goals and goal attainment as compared to the easy and any goal instructions, whereas for LSEs, the hard goal instruction will result in a somewhat higher level of personal goals and goal attainment than the easy and any goal instructions*. With respect to *personal goals*, under the *piece-rate plans*, for HSEs, the highest level of personal goals is set under the hard goal instruction and these goals are significantly higher than those set under the easy, $t(29) = 3.50$, $p = .002$, and any, $t(29) = 2.63$, $p = .01$, goal instructions, whereas for LSEs, personal goals are higher under the hard goal and any goal instructions than under the easy goal instruction (see Table 2).

This result supports Sub-Hypothesis 1A regarding HSEs, but for LSEs this hypothesis is partially supported since although the hard goal instruction resulted in higher personal goals than the easy goal instruction, the highest level of personal goals was under the any goal instruction. The nature of this interaction is illustrated in Figure 3, which reveals that under both the straight piece-rate plan and self-set hard goal instruction, a steeper slope of personal goals exists for HSEs than for LSEs, which indicates that a stronger relationship between monetary incentive types and self-set goal level instructions in influencing personal goals exists for the former participants than for the latter. This result is consistent with the major argument of this research, which indicates that the highest level of personal goals should exist for HSEs who are instructed to set hard goals and offered pay for performance.

With respect to *goal attainment*, under the *piece-rate plans,* HSEs show a negative goal attainment discrepancy score in the hard goal instruction only. Goal attainment is significantly lower in the hard goal instruction than in the any goal instruction, $t(29) = -2.44$, $p = .02$ (the any goal instruction shows the highest level of goal attainment, followed by the easy goal instruction and hard goal instruction, respectively). The examination of Table 2 shows that for LSEs, the goal attainment means are significantly higher in the hard goal instruction than in the any goal instruction (which is in the expected direction), but the highest level of goal attainment was under the easy goal instruction (which is not in the expected direction). Sub-Hypothesis 1A is not supported for HSEs but is partially supported for LSEs in terms of goal attainment. The nature of this interaction is shown in Figure 3, which demonstrates that a steeper slope of negative goal attainment discrepancy score under both the straight piece-rate plan and self-set hard goal instruction exists for HSEs than for LSEs, which indicates that a weaker relationship between monetary incentive types and self-set goal level instructions in influencing goal attainment exists for the former participants than for the latter.

Sub-Hypothesis 1B predicts that *under both the GA-bonus and the hourly plans, for HSEs, the hard goal instruction will result in somewhat higher personal goals and goal attainment than the easy and any goal instructions, whereas for LSEs, there will be no significant differences in personal goals and goal attainment among the self-set goal level instructions*. With respect to *personal goals*, under the *GA-bonus plans*, HSEs set the lowest, while LSEs set the highest, level of personal goals in the self-set hard goal instruction (see Table 2). This result offers no support for Sub-Hypothesis 1B regarding personal goals. With respect to *goal attainment,* under the *GA-bonus plans,* for HSEs, the hard goal instruction shows significantly higher goal attainment than is seen in the easy goal instruction, $t(24) = 2.023$, $p = .05$, and is higher than that in the any goal instruction, whereas LSEs show a negative goal attainment discrepancy score in the hard goal instruction only and the highest level of goal attainment is achieved in the any goal instruction. However, no significant differences in goal attainment among
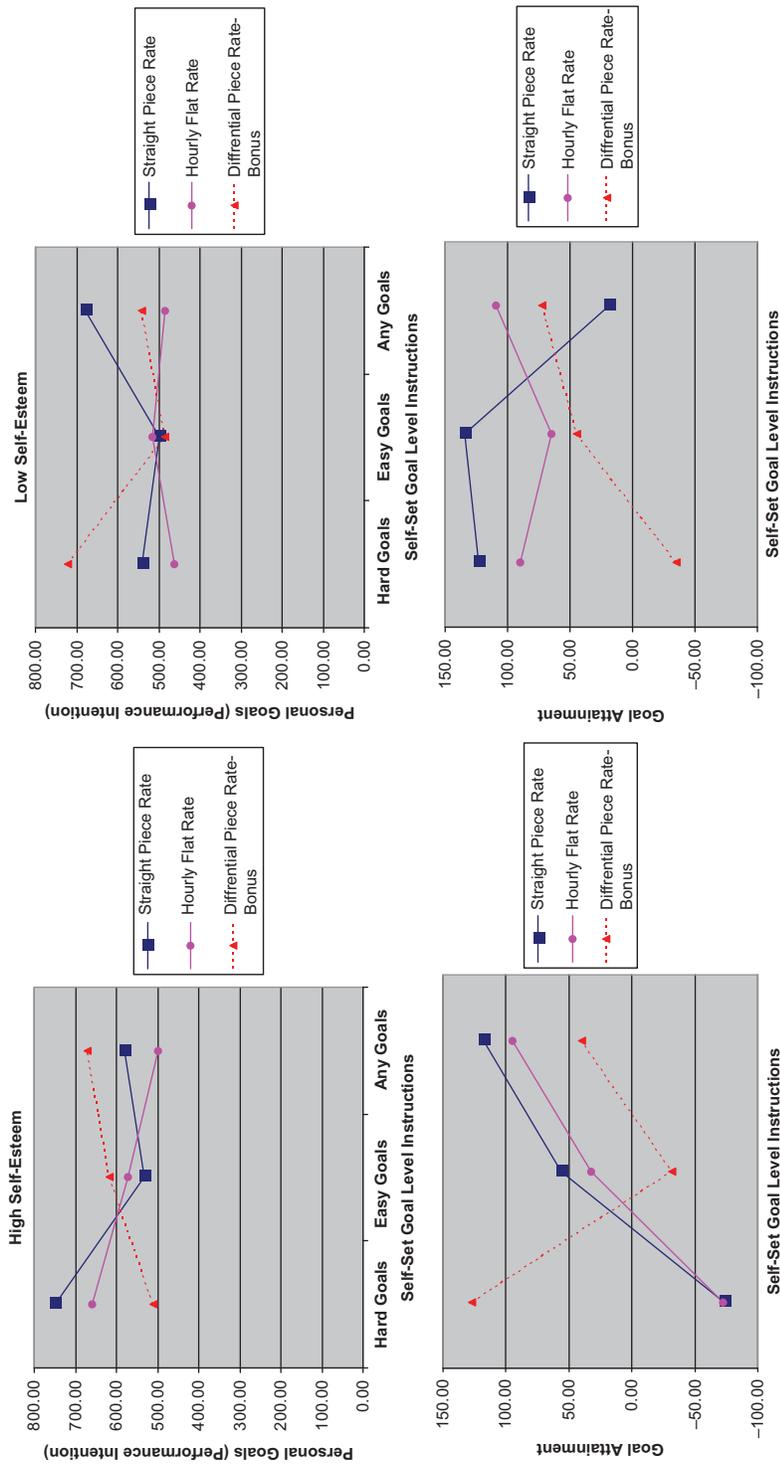
FIG. 3. The effects on personal goals (performance-goal intention) and goal attainment.

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the self-set goal level instructions were found. Sub-Hypothesis 1B is supported for HSEs but partially supported for LSEs regarding goal attainment.

Under *the hourly plans, regarding personal goals,* for HSEs, personal goals in the hard goal instruction are significantly higher than those in the any goal instruction, $t(15) = 2.09$, $p = .05$, and are higher than those in the easy goal instruction; however, LSEs show no significant differences in personal goals among the self-set goal level instructions (see Table 2). This result supports Sub-Hypothesis 1B regarding personal goals. *Regarding goal attainment*, under the *hourly plans,* HSEs show a negative goal attainment discrepancy score in the hard goal instruction only. The goal attainment in the hard goal instruction is significantly lower than that in the any goal instruction, $t(15) = -2.94$, $p = .01$, and the highest level of goal attainment was found under the any goal instruction. LSEs, however, show no significant differences in goal attainment among the goal level instructions (see Table 2), and the highest level of goal attainment is found under the any goal instruction. Thus, Sub-Hypothesis 1B is not supported for HSEs but partially supported for LSEs regarding goal attainment.

Testing the Mediating Effects

To test the mediation, Baron and Kenny (1986) argue that by using moderated multiple regression, three equations can be developed: (1) The dependent variable should be regressed on the independent variable (the independent variable must significantly influence the dependent variable); (2) the mediating variable should be regressed on the independent variable (the independent variable must significantly influence the mediating variable); and (3) the dependent variable should be regressed on the mediating and independent variables. The mediating variable must significantly influence the dependent variable, and the effects of the independent variable on the dependent variable should either be reduced (partial mediating effects) or entirely disappear (complete mediating effects) after controlling for the mediating variable.

Hypothesis 2 *states that personal goals, self-efficacy, and goal commitment would mediate the interactive effects of self-esteem, goal instructions, and monetary incentive types on performance*. In the *first equation*, performance is regressed on the independent variables and their interactions (see Table 4, Section A). The practice trial performance and the main effects of both goal instructions and incentive types are significant in influencing performance. The Tukey LSD at the .05 significance level shows that performance is significantly higher under the self-set hard goal instruction ($M = 632.55$, $SD = 142.00$) than under the self-set easy goal ($M = 582.04$, $SD = 138.26$) and no goal ($M = 553.03$, $SD = 143.51$) instructions. However, there are no significant differences in performance between the self-set hard goal and self-set any goal ($M = 641.25$, $SD = 134.51$) instructions. In addition, performance is significantly higher under both the piece-rate ($M = 634.83$, $SD = 131.50$) and GA-bonus ($M = 614.07$,

$SD = 142.60$) plans than under the hourly ($M = 557.75$, $SD = 146.39$) plans, respectively.

The *second equation*, regarding the effects on the mediators (personal goals, self-efficacy, and goal commitment) is supported for personal goals (see Table 3, section A) and partially supported for self-efficacy and goal commitment (see Table 5, sections A and B, respectively). The main effects of self-set goal level instructions and monetary incentive types are not significant in influencing self-efficacy. However, the contrast analysis shows that self-efficacy is significantly higher under both the hard, $t(296) = 2.63$, $p = .009$, and any, $t(296) = 3.08$, $p = .002$, goal instructions than under the easy goal instruction. In addition, self-efficacy is the highest under the piece-rate plans ($M = 58.34$, $SD = 16.23$), followed by the GA-bonus plans ($M = 56.82$, $SD = 20.02$) and the hourly plans ($M = 55.14$, $SD = 18. 36$), respectively. Regarding goal commitment, only the main effect of monetary incentive types is significant, $F(2, 222) = 4.24$, $p = .015$, in influencing goal commitment. The Tukey LSD)at the .05 significance level shows that goal commitment is significantly higher under the piece-rate ($M = 25.16$, $SD = 3.62$), and GA-bonus ($M = 25.39$, $SD = 4.27$) plans than under the hourly ($M = 23.57$, $SD = 4.52$) plan. Table 5 shows that the main effect of self-esteem is significant in influencing both goal commitment and self-efficacy. HSEs have higher goal commitment and higher self-efficacy in almost all the experimental conditions than LSEs (see Table 2).

In the *third equation* (see Table 4, section B), performance is regressed on both the mediating and independent variables. According to Table 4, section B, only self-efficacy and personal goals significantly influence performance, and controlling for personal goals cancels out the significant main effect that self-set goal level instruction has on performance (see Table 4, section A for comparison). Thus, personal goals completely mediate the main effects of self-set goal level instructions on performance. Controlling for self-efficacy has no effects on the relationship between the independent variables and performance as reported in Table 4, section A. Accordingly, self-efficacy and goal commitment have no mediating effects on the described independent variables–performance relationship. Hypothesis 2, therefore, is partially supported.

DISCUSSION

Determinants of Personal Goals and Goal Attainment

The present research contributes to the literature of goal setting, monetary incentives, and self-esteem in many ways. First, it shows that self-set goal level instructions, monetary incentive types, and self-esteem significantly interact to influence personal goals and goal attainment. This finding supports Lewin et al. (1944), who argue that level of aspiration is a complicated concept influenced by the person–situation interaction, as well as other researchers (e.g., Brockner, 1988) who argue that the

TABLE 4

The mediating roles of personal goals (PG), self-efficacy beliefs (SEB), and goal commitment (GC) on the interactive effects of the independent variables on performance

Independent variables and interactions	A. The effects on performance (EQ-1)						B. The effects on performance controlling for the effects of PG, SEB, and GC (EQ-3)					
	R^2	F	ΔR^2	ΔF	B-weight	F	R^2	F	ΔR^2	ΔF	B-weight	F
Step 1. Practice trial performance	.529	335***	.529	335***	.97	335***	.505	278***	.505	228***	.959	228***
Self-efficacy beliefs (SEB)							.519	120***	.014	6.2***	1.23	6.2**
Personal goals (PG)							.53	83.8***	.013	6.15***	.111	6.15***
Goal commitment (GC)							.536	63***	.004	1.7	2.01	1.7
Step 2. The main effects	.61	66***	.08	10.6***			.576	32.4***	.04	4.06***		
Self-esteem (SE)					−1.02	1.01					−2.75	4.76*
Self-set goal level instructions (SSGLIs)												
Hard goals (HG)					77.37	27.5***						
Easy goals (EG)					50.7	11.7***					−21.00	1.7
Any goals (AG)					79.77	29.2***					1.32	.01
Monetary incentive types (MIT)												
Straight piece rate (Piece Rate)					64.04	24.6***					58.16	13.6***
Differential piece rate with GA-bonus (GA-Bonus)					21.07	2.63					15.92	1.03
Step 3. Two-way interaction	.626	26.1***	.01	.84			.589	17.1***	.011	.694		
SSGLIs × MIT					−34.43	.89					39.85	1.1
SE × SSGLIs					−6.05	4.3*					−3.95	1.6
SE × MIT					1.83	.52					−2.53	.73
Step 4. Three-way interaction	.63	19.5***	.005	.56			.591	14.4***	.004	.435		
HG × Piece Rate × SE					−4.64	.38					10.91	1.84
EG × Piece Rate × SE					−8.49	1.47						
AG × Piece Rate × SE					−3.61	.31					5.40	.597
HG × GA-Bonus × SE					.54	.005						
EG × GA-Bonus × SE					−3.77	.248					−6.34	.637
AG × GA-Bonus × SE					−.16	.001					−2.33	.102
Equation	.630	19.5***	.101	3.27***			.592	14.0***	.054	1.57		

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

TABLE 5
The effects on self-efficacy beliefs and goal commitment

Independent variables and interactions	A. The effects on self-efficacy belief (EQ-2), n = 300						B. The effects on goal commitment (EQ-2), n = 225					
	R^2	F	ΔR^2	ΔF	B-weight	F	R^2	F	ΔR^2	ΔF	B-weight	F
Step 1. Practice trial performance	.329	146***	.329	146***	.097	146***	.00	.00	.00	.00	−3.23	.00
Step 2. The main effects	.371	24.6***	.04	3.23**			.118	4.87***	.118	5.84***		
Self-esteem (SE)					.475	8.33*					.20	15.3***
Self-set goal level instructions (SSGLIs)												
Hard goals (HG)					2.42	1.02					−1.33	4.07*
Easy goals (EG)					−2.87	1.43						
Any goals (AG)					3.20	1.78					−.145	.048
Monetary incentive types (MIT)												
Straight piece rate (Piece Rate)					.91	.19					1.24	3.52
Differential piece rate with GA-bonus (GA-Bonus)					−2.66	1.59					1.507	5.18*
Step 3. Two-way interaction	.39	10***	.02	.93			.163	2.9***	.044	1.4		
SSGLIs × MIT					8.03	1.9					−3.5	4.9*
SE × SSGLIs					−.636	2.0					.13	.95
SE × MIT					.639	2.6					.19	2.2
Step 4. Three-way interaction	.41	8.1***	.02	1.6			.173	2.4***	.01	.65		
HG × Piece Rate × SE					−1.43	1.4					.498	2.16
EG × Piece Rate × SE					−1.52	1.8						
AG × Piece Rate × SE					−2.377	5.18*					.255	.747
HG × GA-Bonus × SE					−2.366	4.18*					.398	1.45
EG × GA-Bonus × SE					−.358	.09						
AG × GA-Bonus × SE					−1.248	1.23					.189	.35
Equation	.413	8.08***	.085	1.72*			.173	2.40***	.173	2.54***		

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

effects of self-esteem can only be understood when studied in combination with other relevant factors.

The described significant three-way interaction is particularly important because it does shed light on the confusion regarding the relationship between monetary incentives and self-esteem by showing that self-esteem's responsiveness to monetary incentives is a function of the interaction between monetary incentive types and self-set goal level instructions. Consistent with the present research prediction, the results show that HSEs set the highest level of personal goals under the piece-rate/self-set hard goal instruction condition and these goals were significantly ($d < .01$; see Cohen, 1988) higher than equivalent goals set by LSEs. Although LSEs set higher goals under the "self-set hard goal instruction" than under the self-set easy goal instruction, which is consistent with prediction, the highest level of personal goals was set under the "self-set any goal instruction," which is against the prediction of the present research. One explanation could be that the self-set any goal instruction condition was more attractive than the self-set hard goal instruction condition because it maximizes volition and thereby enhances LSEs' self-control and self-determination. Accordingly, self-esteem responsiveness to pay for performance is a function of self-set goal level instructions, such that HSEs were more responsive to the effects of pay for performance under the "self-set hard goal instruction," whereas LSEs were more responsive to the effects of pay for performance under the "self-set any goal instruction." The result for HSEs is consistent with the Lee et al. (1997) and Mowen et al. (1981) research, which showed that under the piece-rate system, participants performed better under assigned hard goals than under assigned moderate or easy goals.

Similarly, under *the hourly plans/self-set hard goal instruction,* HSEs set considerably higher personal goals than LSEs ($M = 660$ vs. $M = 462.50$, respectively). This result is consistent with Terborg et al. (1980), who argue that HSEs will be more responsive to the effects of noncontingent rewards than LSEs. However, the present research further advances our understanding of this relationship by showing that goal level is an important variable—that is, HSEs' responsiveness to noncontingent rewards is more likely to appear under the self-set hard goal instruction than under the self-set easy and self-set any goal instructions.

Under the *GA-bonus/self-set hard goal instruction* condition, the results regarding personal goals are contrary to prediction since HSEs set the lowest, and LSEs set the highest, level of personal goals under this condition. In this regard, HSEs behaved more rationally (by setting low goals to obtain the bonus) than LSEs who set significantly ($d < .05$; see Cohen, 1988) higher goals than those set by HSEs even though such high goals are against their financial self-interest (80% of LSEs did not attain their goals and did not receive the bonus under this condition). It is not clear why LSEs behaved in this irrational way. One possible explanation for this unexpected result is that the GA-bonus coupled with the self-set hard goal instruction

was stressful and risky, given the lack of trust LSEs had in their ability to achieve the goal and receive the bonus. Baumeister (1998) argues that individuals engage in self-defeating behavior in situations characterized by emotional distress and high risk. Although the behavior of LSEs regarding the GA-bonus plans was not expected by the present research, it is consistent with the dysfunctional behavior of LSEs as compared to that of HSEs and, more importantly, it does show that HSEs and LSEs react differently to various combinations of monetary incentive types and self-set goal level instructions, which supports the general arguments of the present research. However, it is important to indicate that the sample size for LSEs under the GA-bonus/hard goal instruction is small, and a bigger sample may show different results. Therefore, such a finding should be taken with caution, and further replication of the present research is needed to reexamine and assess the validity of this finding.

An interesting result is that under the GA-bonus, HSEs set the highest level of personal goals under the any goal instruction. This result is consistent with the Lee et al. (1997) and Mowen et al. (1981) research, which showed that under the goal attainment bonus plans, participants performed better under assigned moderate goal than under assigned hard goals.

Second, this research directs attention to the negative side effects associated with pay for performance where self-set hard goal instruction is communicated. Considering the whole sample, 29.3% of participants did not attain their goals and only the *piece rate/self-set hard goal instruction condition* showed a negative ($M = -12.76$) goal attainment discrepancy score (40% of participants did not attain their goals under this condition) among the 12 experimental conditions. Accordingly, although the piece-rate/self-set hard goal instruction condition causes participants to have the highest level of personal goals and performance, it also causes them to overestimate their goals and thus to underachieve them. This finding is particularly important because previous research (e.g., Lee et al., 1997; Locke & Latham, 1984; Mowen et al., 1981; Wright 1989) indicates that GA-bonus plans, as compared to pay-for-performance plans, are detrimental to goal level and performance. Yet the present research further advances our understanding of this finding by demonstrating that under certain conditions (i.e., self-set hard goal instruction), there is a negative side effect (i.e., inability to reach one's goal) associated with the pay-for-performance systems and there is a positive side effect (achievement of one's goal) associated with the GA-bonus system. In addition, the present research further advances our understanding of this finding by also demonstrating that the effects just described are found to be a function of self-esteem. That is, in the *self-set hard goal instruction*, HSEs set very high goals under the piece-rate plans but failed to achieve them, and set low goals under the GA-bonus plans but achieved them (100% of HSEs achieved their goals under the GA-bonus plan and goal attainment under this plan was significantly higher than that under the piece-rate plan, $t(21) = -2.63$, $p = .01$). The focus for HSEs was to set high goals at all costs to maximize gratification

of self-esteem (see Frank, 1938). Although there is no punishment for failure to achieve the goal under pay for performance, the psychological consequences could be humiliating for HSEs, especially if the goal was under their control. Baumeister et al. (1989, p. 551) pointed out that "it would be reckless to suggest that people with high self-esteem are indifferent to humiliating experience." Several researchers (e.g., Baumeister, 1998; Baumeister, Campbell, Krueger, & Vohs, 2003; Crocker & Park, 2004, Latham & Locke, 2006; Locke, 2004) have shed light on the negative side effects of pursuing self-esteem to the degree that overconfidence could cause high-self-esteem individuals to be overcommitted and willing to take big risks. In addition, ego involvement goals (where one's self-worth is invested in such goals and in their attainment) can pressure an individual to do well; however, such pressure may cause anxiety and a reduction in an individual's intrinsic motivation (see Deci & Ryan, 1985; Elliot & Harackiewicz, 1996; Rawsthorne & Elliot, 1999), which hinders goal attainment. However, Bandura (1987, p. 49) pointed out that "when people err in their self-appraisal they tend to overestimate their capabilities," and such overestimation is beneficial because when people act under ordinary conditions their risk of failure may be reduced "but they would not mount the extra effort needed to surpass their ordinary performance."

In short, HSEs acted in a rational and calculative way. Under the piece-rate/self-set hard goal instruction, they overestimated their goals to maximize their outcomes, especially since the consequences for not achieving those goals were neither financially harmful (since there is no punishment for not achieving them) nor self-destructive (HSEs knew that they would bounce back in the face of adversity), and they probably believed that they could achieve those goals in any event. Under the GA-bonus/self-set hard goal instruction, however, HSEs became cautious in determining their goals in order to prevent the humiliating failure of not reaching such goals and to receive the bonus. Since HSEs are high achievers, they focused their attention on achieving their goals by setting low ones and, consequently, obtained gratification from achieving such goals, which is consistent with the hedonistic assumption. The results show that, for HSEs, the hard goal instruction ceased to work under the GA-bonus plan in influencing personal goals but such instruction exerted its positive influence on goal attainment by directing attention and mobilizing effort toward attaining the goal. Thus, the question of whether it is better to maximize than to minimize one's goals (asked by Gould, 1939) cannot adequately be answered without examining the effects of situational and personality variables associated with goal choice behavior. "Obviously, higher risk strategies sometimes lead to worse performance outcomes than lower risk ones and the conditions under which better or worse outcomes occur need to be studied further" (Locke & Latham, 2002, p. 713).

Further examination of the goal attainment results shows that HSEs did not achieve their goals in the following conditions: (a) self-set hard goal instruction/piece-rate plans, which has already been discussed; (b) self-set hard goal instruction/hourly plans; and (c) self-set easy goal instruction/GA-bonus plans. Similarly, LSEs did not achieve their goals under the self-set hard goal/GA-bonus condition. It is clear that personal goal level may contribute to a lack of goal attainment in the preceding conditions (the correlation is very high between goal attainment and personal goals; see Table 1). Latham and Locke (1991, p. 214) point out that "the higher the absolute level of the goal the more difficult it is for a person to achieve it." A lingering question that needs to be answered is, why do HSEs set high goals under the GA-bonus/easy goal instruction and LSEs set high goals under the GA-bonus/hard goal instruction, although setting high goals under these conditions is against HSEs' and LSEs' self-interest (i.e., hurting them financially by not attaining those goals and losing the bonus)?

In addition, under every monetary incentive type (i.e., piece-rate, hourly, and GA-bonus plans), the self-set any goal instruction condition produced positive goal attainment score regardless of goal level and self-esteem. This goal attainment result is inconsistent with Mowen et al. (1981) and Lee et al. (1997), who found that in the assigned moderate and easy goal conditions, participants performed better under the GA-bonus plans than under the piece-rate plans. The "self-set any goal instruction" may have increased participants' control over goal choice, thereby increasing self-determination, which contributed to high intrinsic motivation and high goal attainment. This is consistent with the achievement motivation theory by Atkinson (1958), which argues that the highest level of achievement should occur at a moderate level of difficulty (such as the case in the any goal instruction) where the probability of achievement is 50/50.

The conclusion from the present research is that person–situation interaction is promising in understanding the effects on personal goals and goal attainment, as explained in the preceding material. Although some hypotheses are not supported and some are partially supported, the general finding of the present research indicates that a combination of self-set hard goal instruction, pay for performance, and high self-esteem produced better personal goals, performance, and goal attainment than their individual contributions. Such a conclusion is important since there has been little interest in exploring the role of personality in goal setting, given that goal directs behavior, thus leaving little room for personality-based explanations (Seijts, Latham, Tasa, & Latham, 2004). After all, personality variables still account for a small amount of variance in personal goals and performance (Baumeister, Campbell, Krueger, & Vohs, 2003; Kalnbach & Hinsz, 1999), and the interaction between personality and situational variables in influencing personal goals and subsequent behavior has been an unpopular topic in the goal-setting literature (presumably because of the confusion over the role of personality in goal setting and the complexity of interaction research). While the last two decades have seen substantial advances in the field of personality and motivation, "several researchers have expressed concern about

the incompleteness and inadequacy of extant formulations, particularly with respect to person–situation interaction" (Kanfer & Heggestad, 1997, p. 6). The present research, therefore, sheds light on this problem and shows that personality when studied interactively with the right variables can influence behavior.

Future research should also focus on (a) person–situation interaction when examining determinants of personal goals and goal attainment, and identify the conditions under which the maximization of one's goals can be counterproductive; and (b) the psychological process associated with personal goals such as self-enhancement versus self-protection, the positive and negative consequences of goal attainment under different incentive types, and the impact of goal attainment on subsequent performance.

The preceding findings are new, and have significant theoretical implications for theory and research. While Korman's self-consistency theory indicates that HSEs will behave effectively across situations consistent with their self-image, the present research argues that this may not be necessarily the case since HSEs may backfire and fail even under the most favorable conditions (i.e., pay for performance and self-set hard goal instruction). Accordingly, incorporating person–situation interaction into the theory may have considerable potential. Researchers should investigate conditions under which HSEs would be more responsive to the effects of monetary incentives.

The Mediating Effects of Personal Goals, Self-Efficacy, and Goal Commitment on the Independent Variables–Performance Relationship

The main effects of goal instructions and incentive types were significant in influencing performance. The performance results are consistent with the Mowen et al. (1981) and Lee et al. (1997) results such that, in general, piece-rate participants had the highest performance under the self-set hard goal instruction, whereas GA-bonus participants had the highest performance under the self-set any goal instruction. A similar pattern of results was also obtained by HSEs regarding personal goals.

Regarding the process by which the described interaction (among goal instruction, incentive types, and self-esteem) influences performance, the present research shows that personal goals completely mediate the effects of self-set goal level instructions on performance. This finding supports Locke and Latham (1990), who argue that instructions do not automatically influence an individual's behavior except when they are transformed into goals and the individual is willing to act upon those goals. However, the mediating effects of self-efficacy and goal commitment were not supported. The lack of support for self-efficacy is not consistent with Lee et al. (1997), who found that self-efficacy mediated the interactive effects of incentive types and assigned goal difficulty on performance. This difference in results can be attributed to goal origins (Lee et al. used assigned goals, whereas the present research used self-set goal level instruction). However, self-efficacy correlated significantly with self-esteem, personal goals, and performance

even after controlling for the practice trial performance (see Table 1). The significant main effect of self-esteem on both goal commitment and self-efficacy is consistent with the present research arguments. HSEs have higher goal commitment and higher self-efficacy in almost all the experimental conditions than LSEs. Such findings support Gardner and Pierce's (1998) and Hollenbeck and Klein's (1987) arguments that self-esteem should positively influence self-efficacy and goal commitment, respectively. In addition, the finding that goal commitment is significantly higher under both the piece-rate and GA-bonus plans than under hourly plans supports Locke and Latham (1990), who argue that monetary incentives should increase goal commitment.

Limitations and Practical Implications

Although "laboratory findings regarding goal setting generalize very well to field setting" (Latham & Locke, 1991, p. 216), caution should be exercised when making recommendations to managers due to some limitations of the present research, such as the use of student volunteers and the time duration of the experiment. Further, not all the research hypotheses were fully supported, and such a lack of support could partially be due to the small sample size of HSEs and LSEs in each experimental cell.

The present research has several practical implications for managers regarding selection, participation in decision making, performance evaluation, design of an incentive system, and training.

The present research showed that HSEs as opposed to LSEs behaved more rationally and that their behavior was more consistent with the research arguments than was found with LSEs. Organizations and their managers are increasingly in need of individuals with high self-esteem, especially during times of high uncertainty and high competition. To select HSEs, managers may use the "situation interview" developed by Latham, Saari, Pursell, and Campion (1980). The situation interview is used to evaluate an applicant's credentials, prior to employment, by providing a series of questions, each of which contains a dilemma, that assesses an applicant's goals for what he/she would do if he/she is faced with such a dilemma. A situation interview can help in the assessment of an individual's self-esteem because those with high self-worth will choose to persist in the face of hardship and will choose harder goals as the environment becomes tougher.

Although HSEs are predisposed to behave effectively, managers should not rely on the personality characteristics of HSEs as the sole determinants of behavior since the present research shows that self-esteem responsiveness to the effects of monetary incentives is a function of the combination of monetary incentive types and self-set goal level instructions. Therefore, managers should instruct HSEs to set hard goals for themselves and apply pay for performance (such as the piece-rate system). Self-set hard goal instruction enhances the competency, motivational, and regulatory functions of pay for performance,

and therefore the combination of self-set hard goal instruction and pay for performance provides a high target to shoot for that motivates an individual to regulate his/her action toward the achievement of that target and, at the same time, to direct his/her effort toward the fulfillment of organizational goals. Locke and Latham (1990) point out that "non-commitment to organizational goals is a well-known phenomenon. It usually manifests itself to restriction of output" (p. 124).

Managers, however, should be cautious when combining the piece-rate system with self-set hard goal instruction because such a combination causes individuals to overestimate their goals and underachieve them, especially for HSEs. To prevent individuals from choosing risky goals and engaging in risky strategies that sometimes hurt the organization, managers should communicate to employees the organizational vision in order to align the goals of the individual with that of the organization (see Locke & Latham, 2002). In this regard, the employees' personal goals can be decided upon participatively with managers, where both managers and employees engage in negotiation to arrive at the goal level that both agree upon. Consequently, participatively set goals can serve as the basis for performance appraisal. Performance that exceeds, or falls short of, the negotiated goals can have a positive or negative impact, respectively, on employees' performance evaluations.

In addition, employees' attainment of their personal goals can help managers in achieving organizational goals. Research findings have shown a significant correlation between goal setting and organizational profitability (Locke & Latham, 2002). Accordingly, managers should contribute to employees' goal attainment by facilitating conditions that support, and by suppressing situations that hinder, the attainment of those goals. The result of the present study suggests that there is a great need for managers to understand the determinants of personal goals.

How to motivate employees and how to reward them are always some of the major concerns for managers. The present research offers some suggestions for managers for the design of an incentive system. Managers should instruct HSEs to set hard goals under the piece-rate system since, according to Figure 3, HSEs set the highest level of personal goals under the hard goal instruction/piece-rate condition. However, managers should instruct HSEs to set moderate goals under the GA-bonus system, since HSEs set the highest level of personal goals under the GA-bonus/any goal instruction condition (see Figure 3). These moderate goals, however, should be set above average performance to prevent those goals from becoming easy to achieve over time (see Lee et al., 1997). Managers should prevent employees from setting low goals by determining a minimum performance goal for employees below which performance will not be acceptable (see Locke, 2004).

Although assigned hard goals and self-set hard goal instruction are effective external mechanisms designed to increase motivation (assuming that goal level is the same under both), instructing employees to set hard goals for themselves may be more effective then assigning hard goals to them because

self-set goals, as compared to assigned goals, imply volition (Hollenbeck & Kelin, 1987) and they are a very important part of the employees' self-management and self-regulation, due to the fact that conscious human activities and actions are regulated by the individual's goals (Latham & Locke, 1991). "Given adequate ability and commitment to the goal, the harder the goal the higher the performance" (Latham & Locke, 1991, p. 214). The result of this research shows that personal goals mediate the self-set goal level instruction–performance relationship. Unless an individual sets a difficult goal in response to self-set hard goal instruction, goal instruction would not be effective. Managers should make sure that employees understand self-set hard goal instruction and that they are able and willing to act upon such instruction by setting hard goals and achieving high performance. In addition, managers should train people in effective self-regulation (Latham & Locke, 1991). "Training in self management teaches people to assess their problems, to set specific hard goals in relation to those problems, to self-monitor . . . , and to identify and administer rewards for working toward and penalties for failing to work toward goal attainment" (Latham & Locke, 1991, pp. 234–235).

Although self-efficacy does not mediate the interactive effects of the independent variables (self-esteem, goal instructions, and incentive types) on performance, it does correlate with the dependent variables even after controlling for the practice trial performance. An organization should enhance self-efficacy at work by providing training that helps employees gain task mastery. An organization should also expose employees to effective role modeling and enhance communication that expresses confidence in its employees' ability to achieve the organizational goals (Locke & Latham, 2002), such as instructing employees to set hard goals.

In conclusion, human behavior is complex and can only be understood by studying the person–situation interaction. This research sheds light on the determinants of goal choice and goal attainment and shows that person–situation interaction is the most promising in advancing our understanding of an individual's personal goals through providing a concise and complete picture of the factors that influence such a complex and important construct. Such a focus will eventually generate new research that brings on an integrative link among different personality and situational variables that influence personal goals and their consequences.

REFERENCES

Aguinis, H. (2007). *Performance management*. Englewood Cliffs, NJ: Prentice Hall.

Andrews, F., & Farris, G. (1972). Time pressure and performance of scientists and engineers: A five-year panel study. *Organizational Behavior & Human Performance*, *8*, 185–200.

Atkinson, J. (1958). Towards experimental analysis of human motivation in terms of motives, expectancies and incentives. In J. W. Atkinson (Ed.), *Motives in fantasy, action and society* (pp. 288–305). New York, NY: Van Nostrand.

Austin, J. T. (1989). Effects of shifts in goal origin on goal acceptance and attainment. *Organizational Behavior and Human Decision Processes*, *44*, 415–435.

Bandura, A. (1986). *Social foundations of thoughts and action: A social-cognitive view*. Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. (1987). Self-regulation of motivation and action through goal systems. In V. Hamilton, G. Bower, & N. Frijda (Eds.), *Cognitive perspectives on emotion and motivation* (pp. 37–61). Boston, MA: Kluwer Academic.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research. *Journal of Personality & Social Psychology*, *51*, 1173–1182.

Baum, J., & Locke, E. (2004). The relationship of entrepreneurial traits, skill, and motivation to subsequent venture growth. *Journal of Applied Psychology*, *89*, 587–598.

Baum, J., Locke, E., & Smith, K. (2001). A multidimensional model of venture growth. *Academy of Management Journal*, *44*(2), 292–303.

Baumeister, R. F. 1998. The Self. In D. Gilbert, S. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (4th ed., pp. 680–740). New York, NY: McGraw-Hill.

Baumeister, R. F., Tice, D., & Hutton, D. (1989). Self-presentational motivations and personality differences in self-esteem. *Journal of Personality*, *57*, 547–579.

Baumeister, R. F., Campbell, J., Krueger, J., & Vohs, K. (2003). Does high self-esteem cause performance, interpersonal success, happiness, or healthier lifestyle? *Psychological Science in the Public Interest*, *4*, 1–44.

Brockner, J. (1988). *Self-esteem at work*. Lexington, MA: Lexington Books.

Campbell, D. J. (1982). Determinants of choice of goal difficulty level: A review of situational and personality influences. *Journal of Occupational Psychology*, *55*, 79–95.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

Condly, S., Clark, R., & Stolovitch, H. (2003). The effects of incentives on workplace performance: A meta-analytic review of research. *Performance Improvement Quarterly*, *16*, 46–63.

Crocker, J., & Park, L. 2004. The costly pursuit of self-esteem. *Psychological Bulletin*, *130*, 392–414.

Deci, G., & Ryan, R. (1985). *Intrinsic motivation and self-determination in human behavior*. New York, NY: Plenum.

Dholakia, U., & Bagozzi, R. 2003. How goal and implementation intentions influence enactment of short-fuse behaviors. *Journal of Applied Social Psychology*, *33*(5), 889–922.

Di Paula, A., & Campbell, J. (2002). Self-esteem and persistence in the face of failure. *Journal of Personality and Social Psychology*, *83*, 711–724.

Donovan, J., & Williams, K. (2003). Missing the mark: Effects of time and causal attributions on goal revision in response to goal performance discrepancies. *Journal of Applied Psychology*, *88*, 379–390.

Elliot, A., & Harackiewicz, J. (1996). Approach and avoidance achievement goals and intrinsic motivation: A meditational analysis. *Journal of Personality & Social Psychology*, *70*(3), 461–475.

Erez, M. (2005). "Goal setting", "goal orientation." In N. Nicholson, P. Audia, & M. Pillutta (Eds.), *Blackwell encyclopedic dictionary of organizational behavior* (pp. 138–141). Oxford, UK: Blackwell.

Erez, A., & Judge, T. (2001). Relationship of core self-evaluations to goal setting, motivation, and performance. *Journal of Applied Psychology*, *86*, 1270–1279.

Farh, J., Griffeth, R. W., & Balkin, D. B. (1991). Effects of choice of pay plans on satisfaction, goal setting, and performance. *Journal of Organizational Behavior*, *12*, 55–62.

Frank, J. D. (1935). Some psychological determinants of the level of aspiration. *American Journal of Psychology*, *47*, 285–293.

Frank, J. D. (1938). Level of aspiration test. In H. A. Murray (Ed.), *Exploration in personality* (pp. 461–471). New York, NY: Oxford University Press.

Frank, J. D. (1941). Recent studies of the level of aspiration. *Psychological Bulletin*, *38*(4), 218–226.

Forward, J., & Zander, A. (1971). Choice of unattainable group goals and effects on performance. *Organizational Behavior & Human Performance*, *6*, 184–199.

Gardner, D., & Pierce, J. (1988). Self-esteem and self-efficacy within the organizational context: An empirical examination. *Group & Organizational Management*, *23*, 48–70.

Gardner, J. W. 1940. The relation of certain personality variables to level of aspiration. *Journal of Psychology*, *9*, 191–206.

Gould, R. 1939. An experimental analysis of "level of aspiration." *General Psychological Monograph*, *21*, 1–116.

Hall, D. (1971). A theoretical model of career subidentity development in organizational setting. *Organizational Behavior and Human Decision Process*, *6*, 50–76.

Hall, D., & Foster, L. W. (1977). A psychological success model cycle and goal-setting: Goals, performance, and attitudes. *Academy of Management Journal*, *20*, 282–290.

Harkins, S. G., & Lowe, M. D. (2000). The effects of self-set goals on task performance. *Journal of Applied Psychology*, *85*, 1–40.

Hechler, P., & Wiener, Y. (1974). Chronic self-esteem as a moderator of performance consequences of expected pay. *Organizational Behavior & Human Performance*, *11*, 9–105.

Heimpel, S., Elliot, A., & Wood, J. (2006). Basic personality dispositions, self-esteem, and personal goals: An approach-avoidance analysis. *Journal of Personality*, *75*(5), 1293–1319.

Himmelweit, H. (1947). A comparative study of the level of aspiration of normal and of neurotic persons. *British Journal of Psychology*, *37*, 41–59.

Hinsz, V. B., Kalnbach, L. R., & Lorentz, N. R. (1997). Using judgmental anchors to establish challenging self-set goals without jeopardizing commitment. *Organizational Behavior & Human Decision Processes*, *71*, 287–308.

Hollenbeck, J. R., & Brief, A. P. (1987). The effects of individual differences and goal origin on goal setting and performance. *Organizational Behavior & Human Decision Processes*, *40*, 392–414.

Hollenbeck, J., & Klein, H. (1987). Goal commitment and the goal-setting process: Problems, prospects, and proposals for future research. *Journal of Applied Psychology*, *72*(2), 212–220.

Hollenbeck, J. R., Williams, C., & Klein, H. (1989). An empirical examination of the antecedents of commitment to difficult goals. *Journal of Applied Psychology*, *74*, 18–23.

Hoppe, F. (1930). Erfolg und misserfolg. *Psychologische Forschung*, *14*, 1–62.

Jenkins, G. D., Gupta, N., Mitra, A., & Shaw, J. D. (1998). Are financial incentives related to performance? A meta-analytic review of empirical research. *Journal of Applied Psychology*, *83*, 777–787.

Judge, T., Bono, J., Erez, A., & Locke, E. (2005). Core self-evaluation and job and life satisfaction: The role of self-concordance and goal attainment. *Journal of Applied Psychology*, *90*(2), 257–268.

Kalnbach, L. R., & Hinsz, V. B. (1999). A conceptualization and test of the influences of individual differences in goal-setting situations. *Journal of Applied Social Psychology*, *29*, 1854–1878.

Kanfer, R. (1987). Task-specific motivation: An integrative approach to issues of measurement, mechanisms, processes, and determinants. *Journal of Social & Clinical Psychology*, *5*, 237–264.

Kanfer, R., & Heggestad, E. (1997). Motivational traits and skills: A person-centered approach to work motivation. *Research in Organizational Behavior*, *19*, 1–57.

Keppel, G. (1982). *Design and analysis: A research's handbook* (2nd ed.). Englewood Cliffs, NJ: Prentice Hall.

Klein, H., Wesson, M., Hollenbeck, J., Wright, P., & DeShon, R. (2001). The assessment of goal commitment: A measurement model meta-analysis. *Organizational Behavior & Human Decision Processes*, *85*, 32–55.

Klein, H., & Wright, P. (1994). Antecedents of goal commitment: an empirical examination of personal and situational factors. *Journal of Applied Social Psychology*, *24*(2), 98–114.

Korman, A. (1970). Toward a hypothesis of work behavior. *Journal of Applied Psychology*, *54*, 31–41.

Latham, G., & Locke, E. (1991). Self-regulation through goal setting. *Organizational Behavior & Human Decision Processes*, 50, 212–247.

Latham, G., & Locke, E. (2006). Enhancing the benefits and overcoming the pitfalls of goal setting. *Organizational Dynamics*, *25*, 332–340.

Latham, G., & Pinder, C. (2005). Work motivation theory and research at the dawn of the twenty-first century. *Annual Review of Psychology*, *56*, 485–516.

Latham, G., Saari, L., Pursell, E., & Campion, M. (1980). The situational interview. *Journal of Applied Psychology*, 65, 422–427.

Lawler, E. E. (1970). Job attitudes and employee motivation. *Personnel Psychology*, *23*, 223–237.

Lee, C. (1988). The effects of goal setting and monetary incentives on self-efficacy and performance. *Journal of Business & Psychology*, 2 (4), 366–372.

Lee, F., Sheldon, M., & Turban, D. (2003). Personality and the goal-striving process. *Journal of Applied Psychology*, 88, 256–265.

Lee, T. W., Locke, E. A., & Phan, S. H. (1997). Explaining the assigned goal-incentive interaction: The role of self-efficacy and personal goals. *Journal of Management*, 23, 541–559.

Levy, P. E., & Baumgardner, A. H. (1991). Effects of self-esteem and gender on goal choice. J*ournal of Organizational Behavior*, 12, 529–541.

Lewin, K. (1935). *A dynamic theory of personality*. New York, NY: McGraw-Hill.

Lewin, K., Dembo, T., Festinger, L., & Sears, P. S. (1944). Level of aspiration. In J. M. Hunt (Ed.), *Personality and the behavior disorder* (pp. 333–378). New York, NY: Ronald Press.

Locke, E. (1970). Job satisfaction and job performance. *Organizational Behavior & Human Performance*, 5, 484–500.

Locke, E. A. (2001). Self-set goals and self-efficacy as mediators of incentives and personality. In M. Erez, H. U. Kleinbeck, & H. Thierry (Eds.), *Work motivation in the context of a globalizing economy* (pp.13–26). Mahwah, NJ: Lawrence Erlbaum Associates.

Locke, E. A. (2004). Linking goals to monetary incentives. *Academy of Management Executive*, 18, 130–133.

Locke, E. A., Bryan, J. F., & Kendall, L. M. (1968). Goals and intentions as mediators of the effects of monetary incentives on behavior. *Journal of Applied Psychology*, 52, 104–121.

Locke, E. A., Frederick, E., Buckner, E., & Bobko, P. (1984). Effects of previously assigned goals on self-set goals and performance. *Journal of Applied Psychology*, 69, 694–699.

Locke, E., & Latham, G. (1984). *Goal setting: A motivational tool that works*. Englewood Cliffs, NJ: Prentice Hall.

Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting and task performance*. Englewood Cliffs, NJ: Prentice Hall.

Locke, E. A., & Latham, G. (2002). Building a practically useful theory of goal setting and task motivation. *American Psychologist*, 57, 705–717.

Locke, E. A., & Latham, G. (2004). What should we do about motivation theory? Six recommendations for the twenty-first century. *Academy of Management Review*, 29, 388–403.

Locke, E., & Latham, G. (2009). Has goal setting gone wild, or have its attackers abandoned good scholarship? *Academy of Management Perspectives*, 23, 17–23.

Locke, E. A., Latham, G., & Erez, M. (1988). The determinants of goal commitment. *Academy of Management Review*, 13, 23–39.

Locke, E. A., Shaw, K. N., Saari, L. M., & Latham, G. P. (1981). Goal setting and task performance: 1969–1980. *Psychological Bulletin*, 90, 125–152.

Martin, B., & Murberger, B. (1994). Effects of self-esteem and assigned goals on actual and perceived performance. *Journal of Social Behavior & Personality*, 9, 81–87.

Mowen, J. C., Middlemist, R. D., & Luther, D. (1981). Joint effects of assigned goal level and incentive structure on task performance: A laboratory study. *Journal of Applied Psychology*, 66, 598–603.

Peterson, S., & Luthans, F. (2006). The impact of financial and nonfinancial incentives in business-unit outcomes over time. *Journal of Applied Psychology*, 91, 156–165.

Pilegge, A. J., & Holtz, R. (1997). The effects of social identity on the self-set goals and task performance of high and low self-esteem individuals. *Organizational Behavior & Human Decision Processes*, 70, 17–26.

Rawsthorne, L., & Elliot, A. (1999). Achievement goals and intrinsic motivation: A meta-analytic review. *Personality & Social Psychology Review*, 3(4), 326–344.

Riedel, J. A., Nebeker, D. M., & Cooper, B. L. (1988). The influence of monetary incentives on goal choice, goal commitment, and task performance. *Organizational Behavior & Human Decision Processes*, 42, 155–180.

Robinson, J., & Shaver, P. (1969). *Measures of social psychological attitudes*. Ann Arbor, MI: Institute of Social Research.

Rosenberg, M. (1968). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.

Ryan, R. (1982). Control and information in the intrapersonal: An extension of cognitive evaluation theory.*Journal of Personality & Social Psychology*, 34(3), 450–461.

Seijts, G., Latham, G., Tasa, K., & Latham, B. (2004). Goal setting, goal orientation: An integration of two different yet related literatures. *Academy of Management Journal*, 47(2), 227–239.

Stajkovic, A., & Luthans, F. (2001). Differential effects of incentive motivators on work performance. *Academy of Management Journal*, 44, 580–590.

Strang, H. (1981). The effects of challenging goal instructions upon goal setting and performance on a reaction-time task. *Journal of Psychology*, 107, 241–246.

Steers, R. M., & Porter, L. W. (1974). The role of task-goal attributes in employee performance. *Psychological Bulletin*, 81, 434–452.

Tang, T., & Reynolds, D. (1993). Effects of self-esteem and perceived goal difficulty on goal setting, certainty, task performance, and attributions. *Human Resource Development Quarterly*, 4, 153–170.

Terborg, J., Richardson, P., & Pritchard, R. (1980). Person–situation effects in the prediction of performance: An investigation of ability, self-esteem, and reward contingencies. *Journal of Applied Psychology*, 65, 574–583.

Tharenou, P., & Harker, P. (1984). Moderating influence of self-esteem on relationships between job complexity, performance, and satisfaction. *Journal of Applied Psychology*, 69, 623–632.

Tubbs, M. E. (1986). Goal-setting: A meta-analytic examination of the empirical evidence. *Journal of Applied Psychology*, 71, 474–483.

Tubbs, M. E., & Ekeberg, S. E. (1991). The role of intentions in work motivation: Implications for goal-setting theory and research. *Academy of Management Review*, 16, 180–199.

Uhl-Bien, M., & Graen, G. (1998). Individual self-management: Analysis of professionals' self-managing activities in functional and cross-functional work teams. *Academy of Management Journal*, 41, 340–350.

Weiss, H. M., & Adler, S. (1984). Personality and Organizational Behavior. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior* (Vol. 6, pp. 1–50). Greenwich, CT: JAI.

Wood, R., Atkins, P., & Bright, J. (1999). Bonuses, goals, and instrumentality effects. *Journal of Applied Psychology*, 84, 703–720.

Wright, P. M. (1989). Test of the mediating role of goals in the incentive-performance relationship. *Journal of Applied Psychology*, 74, 699–705.

Wright, P., & Kacmar, K. M. (1995). Mediating roles of self-set goals, goal commitment, self-efficacy, and attractiveness in the incentives-performance relation. *Human Performance*, 8, 263–296.

Yukl, G., & Latham, G. (1978). Interrelationships among employee participation, individual differences, goal Difficulty, goal acceptance, goal instrumentality, and performance. *Personnel Psychology*, 31, 305–323.

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