

CHAPTER 14

GUIDE FOR CONSTRUCTING SELF-EFFICACY SCALES

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Perceived self-efficacy is concerned with people's beliefs in their capabilities to produce given attainments (Bandura, 1997). One cannot be all things, which would require mastery of every realm of human life. People differ in the areas in which they cultivate their efficacy and in the levels to which they develop it even within their given pursuits. For example, a business executive may have a high sense of organizational efficacy but low parenting efficacy. Thus, the efficacy belief system is not a global trait but a differentiated set of self-beliefs linked to distinct realms of functioning. Multidomain measures reveal the patterning and degree of generality of people's sense of personal efficacy.

There is no all-purpose measure of perceived self-efficacy. The "*one measure fits all*" approach usually has limited explanatory and predictive value because most of the items in an all-purpose test may have little or no relevance to the domain of functioning. Moreover, in an effort to serve all purposes, items in such a measure are usually cast in general terms divorced from the situational demands and circumstances. This leaves much ambiguity about exactly what is being measured or the level of task and situational demands that must be managed. Scales of perceived self-

efficacy must be tailored to the particular domain of functioning that is the object of interest.

Although efficacy beliefs are multifaceted, social cognitive theory identifies several conditions under which they may co-vary even across distinct domains of functioning (Bandura, 1997). When different spheres of activity are governed by similar sub-skills there is some inter-domain relation in perceived efficacy. Proficient performance is partly guided by higher-order self-regulatory skills. These include generic skills for diagnosing task demands, constructing and evaluating alternative courses of action, setting proximal goals to guide one's efforts, and creating self-incentives to sustain engagement in taxing activities and to manage stress and debilitating intrusive thoughts. Generic self-management strategies developed in one realm of activity are serviceable in other activity domains with resulting co-variation in perceived efficacy among them.

Co-development is still another correlative process. Even if different activity domains are not sub-served by common sub-skills, the same perceived efficacy can occur if development of competencies is socially structured so that skills in dissimilar domains are developed together. For example, students are likely to develop similarly high perceived self-efficacy in dissimilar academic subjects, such as language and mathematics in superior schools, but similarly low perceived efficacy in ineffective schools, which do not promote much academic learning in any subject matter.

And finally, powerful mastery experiences that provide striking testimony to one's capacity to effect personal changes can produce a transformational restructuring of efficacy beliefs that is manifested across diverse realms of functioning. Extraordinary personal feats serve as transforming experiences.

The conceptual and methodological issues regarding the nature and structure of self-efficacy scales are discussed in detail in Chapter 2 in the book *Self-Efficacy: The Exercise of Control* and will not be reviewed here. The present guide for constructing self-efficacy scales supplements that conceptual and empirical analysis.

Content Validity

Efficacy items should accurately reflect the construct. Self-efficacy is concerned with perceived capability. The items should be phrased in terms of *can do* rather than *will do*. *Can* is a judgment of capability; *will* is a statement of intention. Perceived self-efficacy is a major determi-

nant of intention, but the two constructs are conceptually and empirically separable.

Perceived self-efficacy should also be distinguished from other constructs such as *self-esteem*, *locus of control*, and *outcome expectancies*. Perceived efficacy is a judgment of capability; self-esteem is a judgment of self-worth. They are entirely different phenomena. Locus of control is concerned, not with perceived capability, but with belief about outcome contingencies—whether outcomes are determined by one’s actions or by forces outside one’s control. High locus of control does not necessarily signify a sense of enablement and well-being. For example, students may believe that high academic grades are entirely dependent on their performance (high locus of control) but feel despondent because they believe they lack the efficacy to produce those superior academic performances.

Another important distinction concerns performance outcome expectations. Perceived self-efficacy is a judgment of capability to execute given types of performances; outcome expectations are judgments about the outcomes that are likely to flow from such performances. Outcome expectations take three different forms (Bandura, 1986). They include the positive and negative physical, social, and self-evaluative outcomes. Within each form, the positive expectations serve as incentives, the negative ones as disincentives. The outcomes people anticipate depend largely on their judgments of how well they will be able to perform in given situations.

Perceived efficacy plays a key role in human functioning because it affects behavior not only directly, but by its impact on other determinants such as goals and aspirations, outcome expectations, affective proclivities, and perception of impediments and opportunities in the social environment (Bandura, 1995, 1997). Efficacy beliefs influence whether people think erratically or strategically, optimistically or pessimistically. They also influence the courses of action people choose to pursue, the challenges and goals they set for themselves and their commitment to them, how much effort they put forth in given endeavors, the outcomes they expect their efforts to produce, how long they persevere in the face of obstacles, their resilience to adversity, the quality of their emotional life and how much stress and depression they experience in coping with taxing environmental demands, and the life choices they make and the accomplishments they realize. Meta-analyses across different spheres of functioning confirm the influential role of perceived self-efficacy in human self-development, adaptation, and change (Boyer et al., 2000; Holden, 1991; Holden, Moncher, Schinke, & Barker, 1990; Moritz, Feltz, Fahrback, & Mack, 2000; Multon, Brown, & Lent, 1991; Sadri & Robertson, 1993; Stajkovic & Luthans, 1998).

Domain Specification and Conceptual Analysis of Self-Efficacy Multicausality

The construction of sound efficacy scales relies on a good conceptual analysis of the relevant domain of functioning. Knowledge of the activity domain specifies which aspects of personal efficacy should be measured. Consider the self-management of weight as an example. Weight is determined by what people eat, by their level of exercise, which burns calories and can raise the body's metabolism, and by genetic factors that regulate metabolic processes. A comprehensive self-efficacy assessment would be linked to the behavioral factors over which people can exercise some control. This would include perceived capability to regulate the foods that are purchased, to exercise control over eating habits, and to adopt and stick to an increased level of physical activity. Behavior is better predicted by people's beliefs in their capabilities to do whatever is needed to succeed than by their beliefs in only one aspect of self-efficacy relevant to the domain. In the present example, perceived self-efficacy will account for more of the variation in weight if the assessment includes perceived capability to regulate food purchases, eating habits, and physical exercise than if it is confined solely to eating habits.

The preceding example further illustrates how different facets of perceived efficacy operating within a domain may weigh in more heavily in different phases of a given pursuit. Perceived efficacy to purchase healthful foods that make it easier to manage one's weight accounts for daily caloric and fat intake prior to treatment when self-regulatory skills are infirm. After self-regulatory skills are developed, however, perceived efficacy to curb overeating maintains reduced caloric and fat intake, and perceived efficacy to manage what one brings home fades in importance. Apparently, savory foods are not a problem as long as one can eat them in moderation. If negative affect triggers overeating, assessment of perceived efficacy for affect regulation will explain additional variance in self-management of weight. Thus, multifaceted efficacy scales not only have predictive utility but provide insights into the dynamics of self-management of behavior.

If self-efficacy scales are targeted to factors that, in fact, have little or no impact on the domain of functioning, such research cannot yield a predictive relation. If, for example, relaxation does not affect drug use, then perceived self-efficacy to relax will be unrelated to consumption of drugs because the causal theory is faulty. Under these circumstances, negative findings will reflect faulty theory rather than limitations of self-efficacy beliefs. In short, self-efficacy scales must be tailored to activity domains and assess the multifaceted ways in which efficacy beliefs operate within the selected activity domain. The efficacy scales must be linked to

factors that, in fact, determine quality of functioning in the domain of interest.

Gradations of Challenge

Perceived efficacy should be measured against levels of task demands that represent gradations of challenges or impediments to successful performance. Self-efficacy appraisals reflect the level of difficulty individuals believe they can surmount. If there are no obstacles to overcome, the activity is easily performable and everyone is highly efficacious.

The events over which personal influence is exercised can vary widely. It may entail regulating one's own motivation, thought processes, performance level, emotional states, or altering environmental conditions. The content domain should correspond to the area of functioning one seeks to manage. The nature of the challenges against which personal efficacy is judged will vary depending on the sphere of activity. Challenges may be graded in terms of level of ingenuity, exertion, accuracy, productivity, threat, or self-regulation required, just to mention a few dimensions of performance demands.

Many areas of functioning are primarily concerned with self-regulatory efficacy to guide and motivate oneself to get things done that one knows how to do. In such instances, self-regulation is the capability of interest. The issue is not whether one can do the activities occasionally, but whether one has the efficacy to get oneself to do them regularly in the face of different types of dissuading conditions. For example, in the measurement of perceived self-efficacy to stick to a health-promoting exercise routine, individuals judge how well they can get themselves to exercise *regularly* under various impediments, such as when they are under pressure from work, are tired or depressed, are in foul weather, or when they have other commitments or more interesting things to do (see Appendix).

Constructing scales to assess self-regulatory efficacy requires preliminary work to identify the forms the challenges and impediments take. People are asked in open-ended interviews and pilot questionnaires to describe the things that make it hard for them to perform the required activities regularly. The identified challenges or impediments are built into the efficacy items. In the formal scale, participants judge their ability to meet the challenges or to surmount the various impediments. Sufficient gradations of difficulties should be built into the efficacy items to avoid ceiling effects.

Response Scale

In the standard methodology for measuring self-efficacy beliefs, individuals are presented with items portraying different levels of task demands, and they rate the strength of their belief in their ability to execute the requisite activities. They record the strength of their efficacy beliefs on a 100-point scale, ranging in 10-unit intervals from 0 (“Cannot do”); through intermediate degrees of assurance, 50 (“Moderately certain can do”); to complete assurance, 100 (“Highly certain can do”). A simpler response format retains the same scale structure and descriptors but uses single unit intervals ranging from 0 to 10. The instructions and standard response format are given below.

The attached form lists different activities. In the column **Confidence**, rate how confident you are that you can do them **as of now**. Rate your degree of confidence by recording a number from 0 to 100 using the scale given below:

0	10	20	30	40	50	60	70	80	90	100
Cannot do at all					Moderately certain can do					Highly certain can do

The sample efficacy scales in the Appendix illustrate some variations in format depending on the age of the respondents and the sphere of efficacy being assessed.

Scales that use only a few steps should be avoided because they are less sensitive and less reliable. People usually avoid the extreme positions so a scale with only a few steps may, in actual use, shrink to one or two points. Including too few steps loses differentiating information because people who use the same response category may differ if intermediate steps were included. Thus an efficacy scale with the 0-100 response format is a stronger predictor of performance than one with a 5-interval scale (Pajares, Hartley, & Valiante, 2001). In sensitive measures, the responses are distributed over a good part of the range of alternatives.

Efficacy scales are unipolar, ranging from 0 to a maximum strength. They do not include negative numbers because a judgment of complete incapability (0) has no lower gradations. Bipolar scales with negative gradations below the zero point that one cannot perform a given level of activity do not make sense.

Preliminary instructions should establish the appropriate mindset that participants should have when rating the strength of belief in their personal capability. People are asked to judge their operative capabilities as of now, not their potential capabilities or their expected future capabilities.

ties. It is easy for people to imagine themselves to be fully efficacious in some hypothetical future. However, in the case of perceived self-regulatory efficacy to maintain a given level of functioning over time, people judge their efficacy that they can perform the activity regularly over designated periods of time. For example, recovered alcoholics would judge their perceived capability to refrain from drinking over specified time intervals.

A practice item, such as the capability to lift objects of increasing weight, helps to familiarize respondents with the scale gauging strength of efficacy belief and reveals any misunderstanding about how to use it. With young children, one can use a physical performance task to familiarize them with the scale for rating the strength of their perceived efficacy. For example, one can place markers on the floor at progressively farther distances. Children are asked to rate their degree of confidence that they can jump to each of the distances. They do so by selecting a number from the scale with the following descriptors (e.g., cannot do it, not too sure, pretty sure, certain I can do it). They perform the task after each rating. In this concrete way, children learn how to use numerical scale values to convey the strength of their perceived self-efficacy.

With very young children one may have to use pictorial rather than verbal descriptors of strength of self-efficacy belief. For example, circles with progressively larger size could be used with explanation that the size gradations represent increasing confidence that they can perform the tasks. Happy or sad faces are to be avoided. Children may misread such a scale as measuring their happiness or sadness rather than how confident they are that they can perform given tasks.

Efficacy beliefs differ in generality, strength, and level. People may judge themselves efficacious across a wide range of activity domains or only in certain domains of functioning. Generality can vary across types of activities, the modalities in which capabilities are expressed (e.g., behavioral, cognitive, affective), situational variations, and the types of individuals toward whom the behavior is directed. Assessments linked to activity domains, situational contexts, and social aspects reveal the patterning and degree of generality of people's beliefs in their efficacy. Within the network of efficacy beliefs, some are of greater import than others. The most fundamental self-beliefs are those around which people structure their lives.

In addition, efficacy beliefs vary in strength. Weak efficacy beliefs are easily negated by disconfirming experiences, whereas people who have a tenacious belief in their capabilities will persevere in their efforts despite innumerable difficulties and obstacles. They are not easily dissuaded by adversity. Strength of perceived self-efficacy is not necessarily linearly related to choice behavior (Bandura, 1977). A certain

threshold of self-assurance is needed to attempt a course of action, but higher strengths of self-efficacy will result in the same attempt. The stronger the sense of personal efficacy, however, the greater the perseverance and the higher the likelihood that the chosen activity will be performed successfully.

One could also designate self-efficacy beliefs in terms of level, that is, the number of activities individuals judge themselves capable of performing above a selected cutoff value of efficacy strength. However, converting a continuous measure of efficacy strength into a dichotomous measure on the basis of a minimal cutoff strength value loses predictive information. If a low cutoff value is selected, a relatively low sense of efficacy is treated the same as complete self-assurance. Conversely, if the cutoff criterion is set at a high level, a moderately strong sense of capability gets defined as a lack of efficacy. Either too low or too high cutoffs can produce artifactual discrepancies between perceived self-efficacy and performance.

A more refined microanalysis of congruence is provided by computing the probability of successful performance as a function of the strength of perceived self-efficacy (Bandura, 1977). This microlevel analysis retains the predictive value of variations in strength of efficacy beliefs. Because efficacy strength incorporates efficacy level as well as gradations of certainty above any threshold value, efficacy strength is generally a more sensitive and informative measure than efficacy level.

Minimizing Response Biases

The standard procedure for measuring beliefs of personal efficacy includes a number of safeguards to minimize any potential motivational effects of self-assessment. These safeguards are built into the instructions and the mode of administration. Self-efficacy judgments are recorded privately without personal identification to reduce social evaluative concerns. The self-efficacy scale is identified by code number rather than by name. Respondents are informed that their responses will remain confidential and be used only with number codes by the research staff. If the scale is labeled, use a nondescript title such as "*Appraisal Inventory*" rather than *Self-Efficacy*. To encourage frank answers, explain to the respondents the importance of their contribution to the research. Inform them that the knowledge it provides will increase understanding and guide the development of programs designed to help people to manage the life situations with which they have to cope.

People make multiple judgments of their efficacy across the full range of task demands within the activity domain rather than making each

judgment immediately before each performance. The assessments of perceived efficacy and behavior are conducted in different settings and by different assessors to remove any possible carryover of social influence from assessment to the performance setting.

Does rating one's self-efficacy affect one's behavior? If merely recording a level of self-efficacy made it so, personal change would be trivially easy. People would rate themselves into grand accomplishments. Nevertheless, the question arises as to whether making efficacy judgments may contribute some motivational inducement to improve the match between self-judgment and performance. Numerous tests for reactive effects of self-efficacy assessment have been conducted (Bandura, 1997). The findings show that people's level of motivation, affective reactions, and performance attainments are the same regardless of whether they do or do not make prior self-efficacy judgments. The nonreactivity of self-efficacy assessment is corroborated for diverse activities, including coping with threats, self-regulation of motivation, pain tolerance, cognitive attainments, recovery of functioning after coronary surgery, and exercise adherence. Nor are efficacy judgments influenced by a responding bias to appear socially desirable, regardless of whether the domain of activity involves sexual behavior, alcohol consumption, smoking, dietary practices, or self-management of diabetes.

Private recording of efficacy judgments may reduce evaluative concerns and consistency expectations, but it could be argued that it does not eliminate them entirely. To the extent that people assume their private recordings will be evaluated at a later time, they may retain some evaluative concerns. However, evidence shows that making efficacy judgments does not increase congruence between perceived efficacy and behavior under either high or low social demand for consistency (Telch, Bandura, Vinciguerra, Agras, & Stout, 1982).

Item Analysis in Scale Construction

Pretest the items. Discard those that are ambiguous or rewrite them. Eliminate items where most people are checking the same response point. Such items do not differentiate among respondents. Items on which the vast majority of respondents check the maximum efficacy category lack sufficient difficulty, challenge, or impediments to distinguish levels of efficacy among respondents. Increase the difficulty level by raising the level of challenge in the item.

The items tapping the same domain of efficacy should be correlated with each other and with the total score. Factor analyses verify the homo-

geneity of the items. Different domains of efficacy require different sets of scales with item homogeneity within each of the domain-relevant scales.

Reliability places an upper limit on the maximum possible correlation that can be obtained between variables. Internal consistency reliabilities should be computed using Cronbach's alpha. If the reliability coefficients are low, discard or rewrite the items with low correlates. Including only a few items will limit the alpha level. Increase the number of items.

Assessment of Perceived Collective Efficacy

The theorizing and research on human agency has centered almost exclusively on personal influence exercised individually. People do not live their lives autonomously. Many of the outcomes they seek are achievable only through interdependent efforts. Hence, they have to work together to secure what they cannot accomplish on their own. Social cognitive theory extends the conception of human agency to collective agency. People's shared beliefs in their collective power to produce desired results is a key ingredient of collective agency (Bandura, 2000).

A group's attainments are the product not only of shared knowledge and skills of the different members, but also of the interactive, coordinative, and synergistic dynamics of their transactions. Therefore, perceived collective efficacy is not simply the sum of the efficacy beliefs of individual members. Rather, it is an emergent group-level property. A group operates through the behavior of its members. It is people acting coordinatively on a shared belief, not a disembodied group mind that is doing the cognizing, aspiring, motivating, and regulating. There is no emergent entity that operates independently of the beliefs and actions of the individuals who make up a social system. Although beliefs of collective efficacy include emergent aspects, they serve functions similar to those of personal efficacy beliefs and operate through similar processes (Bandura, 1997).

There are two main approaches to the measurement of a group's perceived efficacy. The first method aggregates the individual members' appraisals of their personal capabilities to execute the particular functions they perform in the group. The second method aggregates members' appraisals of their group's capability operating as a whole. The latter holistic appraisal encompasses the coordinative and interactive aspects operating within groups.

Some researchers advocate that perceived collective efficacy be measured by having a group arrive at a single judgment of the group's capability (Guzzo, Yost, Campbell, & Shea, 1993). The discussion approach is methodologically problematic, however. Constructing unanimity about a

group's efficacy via group discussion is subject to the distorting vagaries of social persuasion by members who command power and other types of pressures for social conformity. Indeed, a group's collective judgment of its efficacy reflects mainly the personal judgments of higher status members rather than those of subordinate members (Earley, 1999). The discussion approach is likely to produce reactive effects in that persuasory efforts to reach consensus will alter members' views. Assessments that operate through social influence should be avoided. A method of measurement should not change what it is measuring. Moreover, no social system is a monolith with a unitary sense of efficacy (Bandura, 1997). A forced consensus to a single judgment masks the variability in efficacy beliefs among the various factions within a social system and misrepresents their beliefs.

The two informative indices of perceived collective efficacy differ in the relative weight given to individual factors and social interactive ones, but they are not as distinct as they might appear. Being socially situated, and often interdependently so, individuals' judgments of their personal efficacy are not detached from the other members' enabling or impeding activities. Rather, a judgment of individual efficacy inevitably embodies the coordinative and interactive group dynamics. Judgment of efficacy in a group endeavor is very much a socially embedded one, not an individualistic, socially disembodied one. To take an athletic example, in judging the collective efficacy of their football team, the quarterback obviously considers the quality of his offensive line, the fleetness and blocking capabilities of his running backs, the adeptness of his receivers, and how well they work together as an offensive unit. Conversely, in judging the efficacy of their team, members certainly consider how well key teammates can execute their roles. Players on a basketball team would judge their team efficacy quite differently depending on whether or not a key superstar was in the lineup.

Self-efficacy theory distinguishes between the *source* of the data (i.e., individual) and the *level* of the phenomenon being measured (i.e., personal efficacy or group efficacy). As noted earlier, there is no group mind that believes. Perceived collective efficacy resides in the minds of members as beliefs in their group's capability. All too often the source of the judgment is misconstrued as the level of the measured phenomenon. The level is concerned with whether the efficacy of an individual or the group is being judged.

Given the interdependent nature of the appraisal process, linking efficacy measured at the individual level to performance at the group level does not necessarily represent a cross-level relation. The two indexes of collective efficacy are at least moderately correlated and predictive of group performance. The fact that appraisals of group efficacy embody

members' dependence on one another has important bearing on gauging emergent properties. It is commonly assumed that an emergent property is operative if differences between groups remain after statistical methods are used to control variation in characteristics of individuals within the groups. The analytic logic is fine, but the results of such statistical controls can be quite misleading. Because judgments of personal efficacy take into consideration the unique dynamics of a group, individual-level controls can inadvertently remove most of the emergent group properties.

The relative predictiveness of the two indexes of collective efficacy will depend largely on the degree of interdependent effort needed to achieve desired results. For example, the accomplishments of a gymnastics team are the sum of successes achieved independently by the gymnasts, whereas the accomplishments of a soccer team are the product of players working intricately together. Any weak link, or a breakdown in a subsystem, can have ruinous effects on a soccer team despite an otherwise high level of talent. The aggregated holistic index is most suitable for performance outcomes achievable only by adept teamwork. Under low system interdependence, members may inspire, motivate, and support each other, but the group outcome is the sum of the attainments produced individually rather than by the members working together. Aggregated personal efficacies are well suited to measure perceived efficacy for the latter types of endeavors.

A growing body of research attests to the impact of perceived collective efficacy on group functioning (Gully, Incalcaterra, Joshi, & Beaubien, 2002; Stajkovic & Lee, 2001). Some of these studies have assessed the motivational and behavioral effects of perceived collective efficacy using experimental manipulations to instill differential levels of perceived collective efficacy. Other investigations have examined the effects of naturally developed beliefs of collective efficacy. The latter studies have analyzed diverse social systems, including educational systems, business organizations, athletic teams, combat units, urban neighborhoods, and political systems.

The findings taken as a whole show that the higher the perceived collective efficacy, the higher the groups' motivational investment in their undertakings, the stronger their staying power in the face of impediments and setbacks, and the greater their performance accomplishments.

Predictive and Construct Validation

As noted earlier, self-efficacy scales should have face validity. They should measure what they purport to measure, that is, perceived capability to produce given attainments. But they should also have discriminative

and predictive validity. The construct of self-efficacy is embedded in a theory that explains a network of relationships among various factors. Construct validation is a process of hypothesis testing. People who score high on perceived self-efficacy should differ in distinct ways from those who score low in ways specified by the theory. Verifications of predicted effects provide support for the construct's validity.

Perceived self-efficacy can have diverse effects on motivation, thought, affect, and action, so there are many verifiable consequences that can be tested. There is no single validity coefficient. Construct validation is an ongoing process in which both the validity of the postulated causal structure in the conceptual scheme and the self-efficacy measures are being assessed.

Conclusion

Scientific advances are greatly accelerated by methodological development of assessment tools for key determinants of human functioning. Quality of assessment provides the basis for stringent empirical tests of theory. Given the centrality of efficacy beliefs in people's lives, sound assessment of this factor is crucial to understanding and predicting human behavior. Human behavior is richly contextualized and conditionally manifested. Self-efficacy assessment tailored to domains of functioning and task demands identify patterns of strengths and limitations in perceived capability. This type of refined assessment not only increases predictiveness, but provides guidelines for tailoring programs to individual needs.

The value of a psychological theory is judged not only by its explanatory and predictive power, but by its operational power to effect change. Perceived self-efficacy is embedded in a broader theory of human agency that specifies the sources of self-efficacy beliefs and identifies the processes through which they produce their diverse effects (Bandura, 1997, 2001). Knowing how to build a sense of efficacy and how it works provides further guidelines for structuring experiences that enable people to realize desired personal and social changes.

APPENDIX

Practice Rating

To familiarize yourself with the rating form, please complete this practice item first.

If you were asked to lift objects of different weights **right now**, how certain are you that you can lift each of the weights described below?

Rate your degree of confidence by recording a number from 0 to 100 using the scale given below:

0	10	20	30	40	50	60	70	80	90	100
Cannot do at all					Moderately can do				Highly certain can do	

Physical Strength	Confidence (0-100)
Lift a 10 pound object	_____
" 20 " "	_____
" 50 " "	_____
" 80 " "	_____
" 100 " "	_____
" 150 " "	_____
" 200 " "	_____
" 300 " "	_____

Self-Efficacy to Regulate Exercise

A number of situations are described below that can make it hard to stick to an exercise routine. Please rate in each of the blanks in the column how certain you are that you can get yourself to perform your exercise routine regularly (three or more times a week).

Rate your degree of confidence by recording a number from 0 to 100 using the scale given below:

0	10	20	30	40	50	60	70	80	90	100
Cannot do at all					Moderately can do					Highly certain can do

	Confidence (0-100)
When I am feeling tired	_____
When I am feeling under pressure from work	_____
During bad weather	_____
After recovering from an injury that caused me to stop exercising	_____
During or after experiencing personal problems	_____
When I am feeling depressed	_____
When I am feeling anxious	_____
After recovering from an illness that caused me to stop exercising	_____
When I feel physical discomfort when I exercise	_____
After a vacation	_____
When I have too much work to do at home	_____
When visitors are present	_____
When there are other interesting things to do	_____
If I don't reach my exercise goals	_____
Without support from my family or friends	_____
During a vacation	_____
When I have other time commitments	_____
After experiencing family problems	_____

Self-Efficacy to Regulate Eating Habits

A number of situations are described below that can make it hard to stick to a diet that is low in fat. Please rate in each of the blanks on the column how certain you are that you can stick to a healthy diet on a **regular basis**.

Rate your degree of confidence by recording a number from 0 to 100 using the scale given below:

0	10	20	30	40	50	60	70	80	90	100
Cannot do at all				Moderately can do			Highly certain can do			

**Confidence
(0-100)**

- While watching television _____
- Feeling restless or bored _____
- During holiday times _____
- Feeling upset or tense over job-related matters _____
- Eating at a friend's house for dinner _____
- Preparing meals for others _____
- Eating at a restaurant alone _____
- When angry or annoyed _____
- When very hungry _____
- When depressed _____
- When you want to sit back and enjoy food _____
- When lots of high fat food is available in the house _____
- Feel like celebrating with others _____
- Someone offers you high fat foods _____
- Feel a strong urge to eat foods high in fat that you like _____
- When you are entertaining visitors _____
- During vacations _____
- Eating out with others when they are ordering high fat meals _____
- Parties where a lot of appetizing high fat food is served _____
- At recreational and sport events where high fat fast foods are served _____
- When visiting a city and needing a quick meal _____
- Airplane meals with high fat items _____
- When visiting a city and wanting to experience the local food and restaurants _____
- Holidays and celebrations where high fat foods are served _____
- When upset over family matters _____
- When you want some variety in your diet _____
- When eating breakfast in a restaurant _____
- Others bring or serve high fat foods _____
- When you have to prepare your own meals _____
- When faced with appealing high fat foods in the supermarket _____

Driving Self-Efficacy

Please rate how certain you are that you can drive in the situations described below.

Rate your degree of confidence by recording a number from 0 to 100 using the scale given below:

0	10	20	30	40	50	60	70	80	90	100
Cannot do at all					Moderately can do					Highly certain can do

**Confidence
(0-100)**

- | | |
|--|-------|
| Drive a few blocks in the neighborhood | _____ |
| Drive around in residential areas | _____ |
| Drive on a downtown suburban business street | _____ |
| Drive on a main arterial road | _____ |
| Drive on a freeway | _____ |
| Drive into the city | _____ |
| Drive on narrow mountain roads | _____ |

Problem-Solving Self-Efficacy

Please rate how certain you are that you can solve the academic problems at each of the levels described below.

Rate your degree of confidence by recording a number from 0 to 100 using the scale given below:

0	10	20	30	40	50	60	70	80	90	100
Cannot do at all					Moderately can do					Highly certain can do

				Confidence (0-100)
Can solve	10%	of the	problems	_____
"	20%	"	"	_____
"	30%	"	"	_____
"	40%	"	"	_____
"	50%	"	"	_____
"	60%	"	"	_____
"	70%	"	"	_____
"	80%	"	"	_____
"	90%	"	"	_____
"	100%	"	"	_____

Pain Management Self-Efficacy

People sometimes do things to reduce their pain without taking medication. Please rate how certain you are that you can **reduce** the different levels of pain described below?

Rate your degree of confidence by recording a number from 0 to 100 using the scale given below:

0	10	20	30	40	50	60	70	80	90	100
Cannot do at all					Moderately can do				Highly certain can do	

	Confidence (0-100)
Reduce a DULL PAIN	
A small reduction	_____
A moderate reduction	_____
A large reduction	_____
Reduce an ACHING PAIN	
A small reduction	_____
A moderate reduction	_____
A large reduction	_____
Reduce a PENETRATING PAIN	
A small reduction	_____
A moderate reduction	_____
A large reduction	_____
Reduce an EXCRUCIATING PAIN	
A small reduction	_____
A moderate reduction	_____
A large reduction	_____

Children's Self-Efficacy Scale

This questionnaire is designed to help us get a better understanding of the kinds of things that are difficult for students. Please rate how certain you are that you can do each of the things described below by writing the appropriate number. Your answers will be kept strictly confidential and will not be identified by name.

Rate your degree of confidence by recording a number from 0 to 100 using the scale given below:

0	10	20	30	40	50	60	70	80	90	100
Cannot do at all					Moderately can do					Highly certain can do
										Confidence (0-100)

Self-Efficacy in Enlisting Social Resources

- Get teachers to help me when I get stuck on schoolwork _____
- Get another student to help me when I get stuck on schoolwork _____
- Get adults to help me when I have social problems _____
- Get a friend to help me when I have social problems _____

Self-Efficacy for Academic Achievement

- Learn general mathematics _____
- Learn algebra _____
- Learn science _____
- Learn biology _____
- Learn reading, writing, and language skills _____
- Learn to use computers _____
- Learn a foreign language _____
- Learn social studies _____
- Learn English grammar _____

Self-Efficacy for Self-Regulated Learning

- Finish my homework assignments by deadlines _____
- Get myself to study when there are other interesting things to do _____
- Always concentrate on school subjects during class _____
- Take good notes during class instruction _____
- Use the library to get information for class assignments _____
- Plan my schoolwork for the day _____
- Organize my schoolwork _____
- Remember well information presented in class and textbooks _____
- Arrange a place to study without distractions _____
- Get myself to do school work _____

Self-Efficacy for Leisure Time Skills and Extracurricular Activities

- Learn sports skills well _____
- Learn dance skills well _____
- Learn music skills well _____
- Do the kinds of things needed to work on the school newspaper _____
- Do the things needed to serve in school government _____
- Do the kinds of things needed to take part in school plays _____
- Do regular physical education activities _____
- Learn the skills needed for team sports (for example, basketball, volleyball, swimming, football, soccer) _____

Self-Regulatory Efficacy

- Resist peer pressure to do things in school that can get me into trouble _____
- Stop myself from skipping school when I feel bored or upset _____
- Resist peer pressure to smoke cigarettes _____
- Resist peer pressure to drink beer, wine, or liquor _____
- Resist peer pressure to smoke marijuana _____
- Resist peer pressure to use pills (uppers, downers) _____
- Resist peer pressure to have sexual intercourse _____
- Control my temper _____

Self-Efficacy to Meet Others' Expectations

- Live up to what my parents expect of me _____
- Live up to what my teachers expect of me _____
- Live up to what my peers expect of me _____
- Live up to what I expect of myself _____

Social Self-Efficacy

- Make and keep friends of the opposite sex _____
- Make and keep friends of the same sex _____
- Carry on conversations with others _____
- Work well in a group _____

Self-Assertive Efficacy

- Express my opinions when other classmates disagree with me _____
- Stand up for myself when I feel I am being treated unfairly _____
- Get others to stop annoying me or hurting my feelings _____
- Stand firm to someone who is asking me to do something unreasonable or inconvenient _____

Self-Efficacy for Enlisting Parental and Community Support

- Get my parents to help me with a problem _____
- Get my brother(s) and sister(s) to help me with a problem _____
- Get my parents to take part in school activities _____
- Get people outside the school to take an interest in my school (for example, community groups, churches) _____

Teacher Self-Efficacy Scale

This questionnaire is designed to help us gain a better understanding of the kinds of things that create difficulties for teachers in their school activities. Please rate how certain you are that you can do the things discussed below by writing the appropriate number. Your answers will be kept strictly confidential and will not be identified by name.

Rate your degree of confidence by recording a number from 0 to 100 using the scale given below:

0	10	20	30	40	50	60	70	80	90	100
Cannot do at all				Moderately can do			Highly certain can do			

**Confidence
(0-100)**

Efficacy to Influence Decision Making

- Influence the decisions that are made in the school _____
- Express my views freely on important school matters _____
- Get the instructional materials and equipment I need _____

Instructional Self-Efficacy

- Get through to the most difficult students _____
- Get students to learn when there is a lack of support from the home _____
- Keep students on task on difficult assignments _____
- Increase students' memory of what they have been taught in previous lessons _____
- Motivate students who show low interest in schoolwork _____
- Get students to work well together _____
- Overcome the influence of adverse community conditions on students' learning _____
- Get children to do their homework _____

Disciplinary Self-Efficacy

- Get children to follow classroom rules _____
- Control disruptive behavior in the classroom _____
- Prevent problem behavior on the school grounds _____

Efficacy to Enlist Parental Involvement

- Get parents to become involved in school activities _____
- Assist parents in helping their children do well in school _____
- Make parents feel comfortable coming to school _____

Efficacy to Enlist Community Involvement

- Get community groups involved in working with the school _____
- Get businesses involved in working with the school _____
- Get local colleges and universities involved in working with the school _____

Efficacy to Create a Positive School Climate

- Make the school a safe place _____
- Make students enjoy coming to school _____
- Get students to trust teachers _____
- Help other teachers with their teaching skills _____
- Increase collaboration between teachers and the administration to make the school run effectively _____
- Reduce school dropout _____
- Reduce school absenteeism _____
- Get students to believe they can do well in school work _____

Parental Self-Efficacy

This questionnaire is designed to help us gain better understanding of the kinds of things that create difficulties for parents to affect their children’s academic development. Please rate how certain you are that you can do the things discussed below by writing the appropriate number. Your answers will be kept strictly confidential and will not be identified by name.

Rate your degree of confidence by recording a number from 0 to 100 using the scale given below:

0	10	20	30	40	50	60	70	80	90	100
Cannot do at all					Moderately can do					Highly certain can do

**Confidence
(0-100)**

Efficacy to Influence School-Related Performance

- Get your children to see school as valuable _____
- Get your children to work hard at their schoolwork _____
- Get your children to stay out of trouble at school _____
- Help your children get good grades at school _____
- Get your children to enjoy school _____
- Show your children that working hard at school influences later success _____

Efficacy to Influence Leisure-Time Activities

- Get your children into activities outside of school (e.g., music, art, dance lessons, sports) _____
- Get your children to keep physically fit _____
- Find time for leisure activities with your children _____

Efficacy in Setting Limits, Monitoring Activities, and Influencing Peer Affiliations

- Keep track of what your children are doing when they are outside the home _____
- Prevent your children from getting in with the wrong crowd of friends _____
- Get your children to associate with friends who are good for them _____
- Get your children to do things you want at home _____
- Manage when your children go out and when they have to be in _____
- Instill your values in your children _____
- Spend time with your children and their friends _____
- Work with other parents to keep the neighborhood safe for your children _____
- Keep your children from going to dangerous areas, corners, or playgrounds _____

Efficacy to Exercise Control over High-Risk Behavior

- Prevent your children from doing things you do not want them to do outside the home _____
- Prevent your children from becoming involved in drugs or alcohol _____
- Prevent your children from becoming involved in premature sexual activity _____
- Get your children to quit drugs or alcohol if you found them using it _____
- Manage the situation if you found that your children were sexually active _____

Efficacy to Influence the School System

- Affect what teachers expect your children to be able to do in school _____
- Have a say in what is taught in your children's school _____
- Make your children's school a better place for them to learn _____
- Influence the social activities in your children's school _____
- Get parents involved in the activities of your children's school _____
- Make your children's school a friendly and caring place _____
- Make parents feel welcome in your children's school _____
- Have a say in what is taught in your children's school _____
- Affect what your children do after school _____

Efficacy to Enlist Community Resources for School Development

- Get neighborhood groups involved in working with schools _____
- Get businesses involved in working with schools _____
- Get local colleges and universities involved in working with schools _____
- Get public funds for specific programs in the school _____

Efficacy to Influence School Resources

- Help your children's school get the educational materials and equipment they need _____

Self-Efficacy to Control Distressing Rumination

- Stop yourself from worrying about things _____
- Take your mind off upsetting experiences _____
- Stop yourself from being upset by everyday problems _____
- Keep your mind on the things you are doing after you have had an upsetting experience _____

Resiliency of Self-Efficacy

- Keep tough problems from getting you down _____
- Bounce back after you tried your best and failed _____
- Get yourself to keep trying when things are going really badly _____
- Keep up your spirits when you suffer hardships _____
- Get rid of self-doubts after you have had tough setbacks _____
- Keep from being easily rattled _____
- Overcome discouragement when nothing you try seems to work _____

Teacher Self-Efficacy to Promote Reading

Ratings for Your Class Only

Listed below are eight different levels of achievement scores on the criterion referenced test (CRT). Please rate how certain you are that **your class** can attain the different average levels of CRT scores by the end of the school year. Record the appropriate number to the right of **each** of the eight levels of school average levels of CRT scores.

Rate your degree of confidence by recording a number from 0 to 100 using the scale given below:

0	10	20	30	40	50	60	70	80	90	100
Cannot do at all					Moderately can do					Highly certain can do

CRT class average by end of school year:	Confidence (0-100)
30% correct	_____
40% correct	_____
50% correct	_____
60% correct	_____
70% correct	_____
80% correct	_____
90% correct	_____
100% correct	_____

Teacher Self-Efficacy to Promote Mathematics

Listed below are eight different levels of achievement scores on the criterion referenced test (CRT). Please rate how certain you are that **your class** can attain the different average levels of CRT scores by the end of the school year. Record the appropriate number to the right of **each** of the eight levels of school average levels of CRT scores.

Rate your degree of confidence by recording a number from 0 to 100 using the scale given below:

0	10	20	30	40	50	60	70	80	90	100
Cannot do at all					Moderately can do					Highly certain can do

CRT class average by end of school year:	Confidence (0-100)
30% correct	_____
40% correct	_____
50% correct	_____
60% correct	_____
70% correct	_____
80% correct	_____
90% correct	_____
100% correct	_____

Collective Efficacy to Promote Reading

Rating for Your School as a Whole

Listed below are eight different levels of achievement scores on the criterion referenced test (CRT). Please rate how certain you are that **your school as a whole** can attain the different average levels of CRT scores by the end of the school year. Record the appropriate number to the right of **each** of the eight levels of school average levels of CRT scores.

Rate your degree of confidence by recording a number from 0 to 100 using the scale given below:

0	10	20	30	40	50	60	70	80	90	100	
Cannot do at all				Moderately can do				Highly certain can do			

CRT school average by end of school year:	Confidence (0-100)
30% correct	_____
40% correct	_____
50% correct	_____
60% correct	_____
70% correct	_____
80% correct	_____
90% correct	_____
100% correct	_____

Collective Efficacy to Promote Mathematics

Rating for Your School as a Whole

Listed below are eight different levels of achievement scores on the criterion referenced test (CRT). Please rate how certain you are that **your school as a whole** can attain the different average levels of CRT scores by the end of the school year. Record the appropriate number to the right of **each** of the eight levels of school average levels of CRT scores.

Rate your degree of confidence by recording a number from 0 to 100 using the scale given below:

0	10	20	30	40	50	60	70	80	90	100
Cannot do at all					Moderately can do					Highly certain can do

CRT school average by end of school year:	Confidence (0-100)
30% correct	_____
40% correct	_____
50% correct	_____
60% correct	_____
70% correct	_____
80% correct	_____
90% correct	_____
100% correct	_____

Perceived Collective Family Efficacy

The statements below describe situations that commonly arise in families. For each situation please rate how certain you are that your family, working together as a whole, can manage them effectively. Your answers will be kept strictly confidential and will not be identified by name.

Rate your degree of confidence by recording a number from 0 to 100 using the scale given below:

0	10	20	30	40	50	60	70	80	90	100
Cannot do at all				Moderately can do			Highly certain can do			

**Confidence
(0-100)**

How well, working together as a whole, can your family:

- Set aside leisure time with each other when other things press for attention _____
- Agree to decisions that require giving up personal interests _____
- Resolve conflicts when family members feel they are not being treated fairly _____
- Prevent family disagreements from turning into heated arguments _____
- Get family members to share household responsibilities _____
- Support each other in times of stress _____
- Bounce back quickly from adverse experiences _____
- Help each other to achieve their personal goals _____
- Build respect for each other's particular interests _____
- Help each other with work demands _____
- Get family members to carry out their responsibilities when they neglect them _____
- Build trust in each other _____
- Figure out what choices to make when the family faces important decisions _____
- Find community resources and make good use of them for the family _____
- Get the family to keep close ties to their larger family _____
- Celebrate family traditions even in difficult times _____
- Serve as a good example for the community _____
- Remain confident during difficult times _____
- Accept each member's need for independence _____
- Cooperate with schools to improve their educational practices _____

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