

Professional and Ethical Challenges in Determinations of Causality of Psychological Disability

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Abstract Psychologists serving as Qualified Medical Examiners (QMEs) in settings where mental and emotional damage claims (i.e., psychological disability stemming from psychological injury) are involved typically must comment not only upon the impact of the injury on the individual's functioning and quality of life, but also on the causality of the psychological disability. This is a highly specialized endeavor for which little guidance exists. The disparate conceptualizations of causality in the fields of psychology and law and the unavoidable complexities associated with determining causality, especially the apportionment of causality across industrial and non-industrial factors, are discussed. The questions at the core of the present paper are: 1) What are the ethical challenges facing psychologists working as QMEs who are tasked with determining causality of psychological disability in the ways currently required by the law, and 2) What considerations should guide ethically-minded psychologists in such settings? The authors argue that, although some level of subjectivity is unavoidable, psychologists working within the legal system can take the lead in bringing an evidence-based approach and greater scientific rigor to the high-stakes causal evaluations required as a basis for determining compensation for injured workers.

Keywords Ethics · Workers' compensation · Causality · Apportionment · Psychological injury · Psychological disability

Psychologists serving as Qualified Medical Examiners (QMEs)¹ in settings where mental and emotional damage claims (i.e., psychological disability stemming from psychological injury²) are involved typically must comment upon the impact of the injury on the individual's functioning, quality of life, ability to work, and emotional well-being (Iezzi, Duckworth, & Schenke, 2013). However, in certain types of legal settings (e.g., workers' compensation), psychologists traverse beyond the boundaries within which they would typically be expected to have competence and engage in a highly specialized legal endeavor, for which exists little guidance, by way of also determining causality of psychological injury and apportioning psychological disability. While injury is a broad term encompassing harm done to a person, disability is defined by the American Medical Association Guides to the Evaluation of Permanent Impairment as, "an alteration of an individual's capacity to meet personal, social, or occupational demands because of an impairment...", where impairment is defined as, "an alteration of an individual's health status; a deviation from normal..."

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¹ Although there are distinctions among different types of evaluative experts and different names used (e.g., Agreed Medical Examiners, Independent Medical Examiners, evaluator, expert, treating physician) depending on the various selection processes used to identify the expert, for the purposes of the present analysis, the term QME will be throughout. Further, while psychologists and psychiatrists can serve as QMEs for psychological injury cases, the focus of the present paper is on the role of psychologists in such settings.

² The terms "psychiatric injury" and "psychological injury" are often used interchangeably in the academic literature and in the law; however, to be consistent with the terminology used in this journal and other prominent works on the topic, the authors will refer to psychological injury and disability.

(Cocchiarella & Anderson, 2001). Lasting disability from the work injury that limits one's ability to earn a living is called permanent disability [see labor and workforce development agency, department of industrial relations, division of workers' compensation, schedule for rating permanent disabilities under the provisions of the labor code of the state of california (2005)].

Thus, a psychological injury (also called injury to the psyche) can lead to impairment that then contributes to some level of disability and ultimately can lead to permanent disability. Although this simplification of the relationships among injury and impairment and disability is sufficient for the purposes of the present paper, it is important to note that these relationships are fraught with controversy and that there has been much written about their role in psychological injury (see Schultz, 2008; Schultz & Stewart, 2008). Further, different models of psychological injury conceptualize the relationship between impairment and disability differently. For example, in the biopsychosocial model, a main tenet is that medical impairment does not directly predict disability, and psychosocial factors may mediate this relationship (Schultz & Stewart, 2008). In the social constructionist model, disability is "understood as a social construction that involves contextualized impairment" (Schultz, 2008, p. 95). Thus, as we discuss cases involving alleged injury to the psyche (hereafter, psychological injury claims) and associated disability, the complex and at times mutually constituted relationships among injury, impairment, and disability should be kept in mind. Further, that different theoretical models and the goals of different stakeholders (e.g., employers, insurance companies, workers, mental health providers) will impact how disability is conceptualized and assessed should be underscored (Schultz, 2008).

Although it is beyond the scope of the present article to provide a description of each nation's and state/province's laws and guidelines, the present paper will consider workers' compensation issues via California laws. The use of California as a reference state is not new (Reville, Seabury, Neuhauser, Burton, & Greenberg, 2005; Schwartz, 1993) given that, "The disability rating process [for permanent disability in workers' compensation] sparks controversy in every state, but nowhere has it been more controversial than in California" (Reville et al., 2005, p. xix). However, as also emphasized in Reville et al. (2005), the ethical challenges described and recommendations proposed will be of relevance to those working in evaluative contexts where psychological disability is at issue across legal settings and jurisdictions.

Across legal settings, the presence of psychologists has increased in acceptability in recent years (Groth-Marnat, 2009; Otto & Heilburn, 2002). However, as evidenced by Grisso's (1987) seminal piece on the complexities involved in conducting evaluative work in forensic settings, these evaluations can pose unique complications for psychologists. Psychological injury claims in particular have developed a reputation for often being frivolous add-ons rather than legitimate injuries (Matsumoto, 1994). The current landscape for the compensation of psychological injury has undergone marked upheavals; it was only in

the 1970s that the courts began to allow individuals to be compensated for psychological injuries that were not a result of physical injuries (Reville et al., 2005). However, the zeitgeist has again shifted such that, for example, in California, the 2013 enactment of Senate Bill 863 (SB863; S. 863, 2012) limited permanent disability compensation of psychiatric injuries such that, "...there shall be no increases in impairment ratings for sleep dysfunction, sexual dysfunction, or psychiatric disorder, or any combination thereof, arising out of a compensable physical injury" (Labor Code 4660.1(c)(1)). Many interpreted this limitation as an attempt to curb the perceived abuses in the realm of psychological injury claims (e.g., Markham, 2014).

Workers' compensation is a system developed as a trade-off such that, in theory, employees are afforded protection from "financial ruin" via timely compensation following work-related injuries and employers are offered a "no-fault" system wherein the system is the sole compensatory mechanism (i.e., there is no liability for general damage or further litigation to determine negligence of the employer; Schatman, 2012, p. 341). The system is dynamic and laws continue to evolve. At the most broad level, two important considerations are whether the injury is (1) industrial (i.e., work-related) and (2) compensable (i.e., requires treatment or impacts ability to work). Although there are several categories of benefits (e.g., temporary disability, death benefits), the focus of the present paper will be on permanent disability benefits. When compensation systems offer partial permanent disability such that benefits increase in relation to the severity of the injury, a metric is required to rate severity of disability numerically (Reville et al., 2005). In terms of compensating disability, courts have increasingly moved away from requiring that employers take the worker "as is" (Iezzi et al., 2013, p. 156) and toward only assigning liability for the specific percentage of permanent disability directly caused by the industry-related injury or event(s). This is a departure from the eggshell psyche and crumbling skull rules (described in detail below) that previously guided the courts, which hold that even if an individual was vulnerable to psychological injury because of a preexisting condition or history but not previously manifesting symptomatology, the defendant would still be responsible for compensating for all injuries (Iezzi et al., 2013).

In order for a QME report to hold weight as evidence in the courts, a history and cause of the injury, apportionment of disability and "a determination of the percent of the total causation resulting from actual events of employment, if the injury is alleged to be a psychological injury" should be provided where applicable [see CAL. LAB. CODE § 4628]. Although it is sufficient for the QME to state whether predominant (i.e., 51 % or greater) industrial causation was probable (i.e., determining causality), QMEs can state specific percentages. For the purposes of the present paper, the general process of determining causality of psychological injury and apportioning causality of psychiatric permanent disability will be referred to as determining causality. When the issue is

specifically dealing with either identifying predominant cause of psychological injury or apportionment of psychiatric permanent disability; however, the language will reflect that.

Thus, QMEs who write evaluative reports for workers' compensation settings involving psychological injury must not only provide a diagnosis, but they must also determine causality. As part of this determination, they must apportion causality to industrial (i.e., work-related) and nonindustrial (not arising out of and occurring in the course of employment) factors. In Black's Law Dictionary, causality is defined as the "...producing of an effect" (Garner, 2004, p. 233). Apportionment refers to the division or partitioning of a "subject-matter into its proportionate parts" (Garner, 2004, p. 109). The psychologist must not only generally comment on causality—a difficult endeavor—but must also apportion causality to industrial and nonindustrial factors, often providing very specific percentages, an arguably nearly impossible endeavor in many psychological injury cases. The difficulty of the task is further exacerbated by the fact that there is not a standardized assessment prescribed in such settings and nonindustrial apportionment can include myriad "preexisting conditions" (Joseph, 1983).

The central and underexamined ethical challenge for psychologists working as QMEs in evaluative legal settings is that there exists little by way of guidance in terms of determining causality, and yet, psychologists serving as QMEs are required to determine and apportion causality underlying psychological disability. These determinations then have profound individual and societal impacts (e.g., for the individual in cases of noncompensated or under-compensated disability; for society in the cases of fraud). As Joseph (1983) cautioned, "Another source of the complexity in workers' compensation mental disability cases lies in the potentially far-reaching social and economic consequences of any resolution of the causation issue" (p. 267). The questions at the core of the present paper are the following: (1) What are the ethical challenges facing psychologists working as QMEs who are tasked with determining causality of psychological disability in the ways currently required by the law, and (2) what considerations should guide ethically-minded psychologists in such settings?

The Role of the Qualified Medical Examiner

Before delving into the ethical complexities associated with causality determinations, a general summary of the activities expected of the QME in a workers' compensation setting will be presented. While it is out of the scope of the present paper to describe in detail all possible scenarios and rules that may arise when evaluating the individual and writing the report, the general procedures and some of the more common considerations will be presented.

The QME is tasked with meeting with the individual in order to complete an evaluative report. Psychologists who

act as QMEs do not provide treatment for the individual but rather are responsible specifically for evaluating the individual. The evaluative report must consider certain elements to be admissible as evidence, including a diagnosis, cause of disability, apportionment of disability (if any), "a determination of the percent of the total causation resulting from actual events of employment, if the injury is alleged to be a psychological injury," and reasons for the opinion (see CAL. LAB. CODE § 4628). While a psychologist's report may simply state that the events of employment constituted less/greater than 51 % (i.e., predominant cause) of the observed psychiatric disorder and the injury is thus nonindustrial/industrial, more often than not, the many potential causal factors require that psychologists provide specific percentages for all the various potential causal factors (see CAL. LAB. CODE § 3208.3).³

The QME may evaluate the individual once, if after the evaluation, it is determined that the individual is "permanent and stationery" (i.e., that the condition has become stable), or several times until "permanent and stationery" status has been reached. The QME must write a report that is considered "substantial evidence."⁴ A key case for experts writing medical legal reports is *Escobedo v. Marshalls* (hereafter *Escobedo*) which clarifies that *substantial evidence* must be (1) "predicated on reasonable medical probability", (2) "not be based on facts no longer germane, on inadequate medical histories or examinations, on incorrect legal theories, or on surmise, speculation, conjecture or guess", and (3) must provide the "underlying basis" (i.e., the "how and why") behind the clinician's opinion and not simply his or her conclusions [see *Escobedo v. Marshalls* (2005) 70 Cal. Comp. Cases 604 [70 CCC 604] (Appeals Board en banc decision)]. Far from a straightforward aspiration, properly providing substantial evidence in medical legal reports has been described as, "...like the yeti, sought after, largely unseen" (Harris, 2012).

There are several categories of compensation benefits, including medical treatment and permanent disability with causality determinations playing a different role for each (Reville et al., 2005). For example, although workers are eligible for compensable treatment even if it is determined that the injury is 1 % industrial, compensability for permanent disability is far more complicated and derived from calculations that take into consideration and subtract nonindustrial apportionment.

³ Note that in cases involving violent acts, the phrasing is modified to read, "actual events of employment were a substantial cause of the injury." Substantial cause is defined as, "at least 35 to 40 % of the causation from all sources combined (see CAL. LAB. CODE § 3208.3).

⁴ The Supreme Court has defined substantial, as that, "which, if true, has probative force on the issues. It is more than a mere scintilla, and means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion. It must be reasonable in nature, credible, and of solid value." *Braewood Convalescent Hospital v. Workers' Comp. Appeals Bd.* (1983) 34 Cal.3d 159, 164.

Apportionment is used to “assign responsibility for a permanent disability among two or more causes” (Reville et al., 2005, p. 6); for example, if the worker has suffered successive industrial injuries or has nonindustrial condition(s) that result “in a disability greater than the occupational injury alone would produce” (p. 6), the QME must consider such scenarios when apportioning psychological disability. Thus, it is left to the discretion of the QME to apportion disability among all the potential causes (i.e., industrial, nonindustrial).

Unfortunately, there has been little done to provide guidance to psychologists operating in the role of QME on how to make such determinations. Further, there is little guidance relating what constitutes “within reasonable medical probability.” There have been suggestions for more scientific or objective manners of apportioning disability; however, none have been widely adopted. For example, one suggestion has been to turn again to the GAF as “the existing legally sanctioned method for assessing permanent psychological disability” (Leckart, 2009, p. 1). The recommendation is to consider the worker’s current GAF and then, using “their [the QME’s] comprehensive history of the patient” (p. 1) gathered from the intake, compare this to the GAF score on the day prior to the industrial injury. The GAF score on the day prior to the industrial injury is estimated by using the history of the individual to get a retrospective estimate of how the individual was functioning immediately before the injury, keeping in mind that GAF scores of 70 and greater are associated with 0 % disability (see Leckart, 2009, for a further discussion). However, this implies that the leap from history/record review to GAF score is an objective one, and as argued in Gholizadeh, Malcarne, and Schatman (2015), the use of the GAF to rate disability is also arguably subjective and psychometrically precarious.⁵

Joseph (1983) argued that the unavoidable complexities associated with determining causality, especially the apportionment of causality across industrial and nonindustrial factors, warrant a structural overhaul of the workers’ compensation system such that inquiries into causative mechanisms are avoided altogether and the worker is compensated from a national fund purely based on his/her disability. Joseph argued, “The structural advantage of this system is obvious: it simply would eliminate the complex, interrelated, and often competing technical, policy, and systemic problems that the causation issue creates in cases concerning mental disabilities and disabilities that result from other diseases of unknown etiology” (p. 318). However, Joseph also recognized the potential problems with such a system, namely inflated insurance costs to support such an endeavor.

Policy issues aside, however, psychologists conducting evaluations in the present system are faced with important

ethical challenges. There is an assumption that a QME should be able, with the information garnered from the intake, medical record review, and other corroborating evidence, to competently determine causality in order to provide a legally useful evaluation. However, statements about causality of psychological injury and apportionment (via percentages) of causal factors for psychological disability can be ethically precarious given the subjective nature of such determinations. While such subjectivity is inherent in many evaluative processes, especially for psychological constructs, these causal descriptions and percentages represent a “high-stakes” assessment in that they directly inform outcomes (i.e., determination of compensation) for injured workers. The etiology of psychiatric disorders is typically complex and multicausal and does not lend well to the requirement to provide specific percentages. As described below, philosophical differences in how causality is conceptualized in law and psychology exacerbate the challenge.

Causality in the Law and Etiology of Psychiatric Illness in Psychology

Young (2007a) traced concerns around causality from the Biblical story of original sin to Aristotle’s description of the four types of causes (i.e., material, formal, efficient, and final). In a series of elegant experiments on infants and toddlers using an anticipatory eye gaze study design to bypass linguistic and motor demands not yet present, Sobel and Kirkham (2006) demonstrated that infants as young as 8 months old demonstrate the ability to make causal inferences about the worlds they inhabit. However, despite the pervasiveness of the human desire to understand and make attributions about causality, such determinations can often be complex and controversial. There are vastly different conceptualizations of causality in different disciplines, such as in medicine or philosophy, and a rich literature in this area that can inform forensic work. When two fields with completely different philosophical conceptualizations of causality—law and psychology—attempt to forge a tenuous marriage of opinions, complexities abound. Indeed, acknowledging the often chaotic discordance that is at the core of causality in psychological injury and the law can be said to be prerequisite for being an ethically-minded psychologist in forensic settings.

Young and Shore (2007) argued that the word “causality,” and associated terms, “cause/*causa*/causation,” have legal meanings that are often at odds with how the terms are used in other disciplines (e.g., medicine, psychology). Young (2007a) noted that psychology is more concerned with multi-causal models that are dynamic and purposefully complex because of the recognition that psychopathology is complex. He stated that psychologists are thus rightfully wary of the kinds of questions regarding causality present in legal settings,

⁵ Despite being removed from the DSM-5, the GAF is still used to rate disability of psychological injury in workers’ compensation settings.

“such as whether a single index event can induce a purported psychological condition” (p. 60).

A seminal text for psychologists working in evaluative, forensic settings (and the legal professionals with whom they work) is *Causality of Psychological Injury* (Young, Kane, & Nicholson, 2007). At its outset, the text stated, “Despite its pervasiveness, there is little agreement in psychology and law about causality’s definition, underlying conceptual basis, and implications for legal actions in which psychology is at issue” (Young & Kane, 2007). Young (2008) described the inherent tension present between psychology and law in describing causality. In law, causality is not a scientific phenomenon but rather a practical endeavor involving general principles such as “contribution” to injury and the “but-for” test (i.e., the individual would have been healthy “but-for” the event in question). Young and Shore (2007) pointed to Cardozo (1928) as an important reference in understanding that, in law, the driving question for determining causality is “what was the ‘dominant’ cause of the legal consequences related to an event in dispute?” (p. 89). They further highlighted that the most important type of causality in legal settings is “proximate causality,” or the “dominant and responsible” cause. Faieta (2005) noted that “Causation need not be determined by scientific precision. It is essentially a practical question of fact which can be answered by ordinary common sense” (p. 34 qtd. in Young, 2007a, p. 55). In contrast, in psychology, causality involves a scientific analysis of the multiple underlying mechanisms in an effort to describe a phenomenon rather than to assign specific responsibility. There is also unique terminology in psychology to describe causality that is not commonly used in the law, for example “triggering” cause, defined by Haynes (1992) as “...a subset of maintaining causes...associated with the immediate onset of a behavior disorder” (p. 92). Other terms to describe nuances of causality in psychology can include catalytic, latent, maintaining, and original, among others (Young & Shore, 2007). Underwager and Wakefield (1995) argued that the philosophical differences between the fields create a tension in that while psychology as a science is concerned with what is nomothetic about the behavior of humans in order to develop general theories that apply to populations, law has what can be termed an “idiographic responsibility of the justice system” to demonstrate specifics about an individual person (p. 2).

Regarding the determination of causality, a core tension arises because psychologists consider the etiology of psychiatric disorders to be complex and typically best understood from a biopsychosocial perspective, but legal settings often demand eschewing this model for a reductionist one. Engel (1978), often credited for proposing and pioneering the biopsychosocial model, offered the model as an antidote to the “scientifically archaic principles of dualism and reductionism...[that] replace the simple cause-and-effect explanations of linear causality with reciprocal causal models”

(p. 175). Taking the diagnosis of PTSD as an example, the value of the biopsychosocial model is underscored by epidemiological findings such as the disparate rates of development of PTSD and exposure to trauma at 6.8 and 75 %, respectively (Breslau & Kessler, 2001; Kessler et al., 2005). In fact, there is a growing literature devoted to the study of resilience in the face of trauma (Bonanno, 2004). Thus, it cannot be said that exposure to certain types of trauma will undeniably produce symptomatology consistent with PTSD in an individual. Clearly, there are other factors to be taken into consideration. For example, on the biological front, Gilbertson and colleagues (2002) found that smaller hippocampal volume is a “pre-existing condition that renders the brain more vulnerable to the development of pathological stress responses” (p. 1242). As a social example, a meta-analysis found that gender differences in development of PTSD persisted even after controlling for type of traumatic event (Tolin & Foa, 2006).

Young (2007b) also advocated for a biopsychosocial approach to causality and provided compelling evidence for the superiority of this approach when conducting evaluations for three of the more common areas of psychological injury: post-traumatic stress disorder (PTSD), chronic pain, and mild traumatic brain injury (mTBI). Of importance, Young (2007b) called for an empirically grounded evaluative approach that takes a dynamic and multicausal approach to causality. For example, he noted the importance of maintaining a scientific lens when determining causality, such as knowledge of prevalence estimates [e.g., Koch, O’Neill, and Douglas’ (2005) finding that only 10 % of individuals with PTSD continue to present with PTSD symptomatology one year after the trauma]. Young (2007b) posited that this evidence can be important in informing decisions about permanent disability, and even, malingering or exaggeration of symptoms. As with many psychiatric disorders, the great variability in symptoms, etiology, and theoretical understanding poses important challenges in forensic settings. Young (2007a) argued that, “Despite attorneys’ goals of finding simplified theories of their cases, of finding isolated, unique causes that can be readily litigated or defended against, closer inspection reveals that the law has adopted a model of causality that is implicitly multicausal and, therefore, similar to the psychological approach. In any one individual case, the law may seek to isolate the primary or singular legal cause but, when necessary, the law distills it out of a nexus of causal factors” (p. 62).

Keeping the biopsychosocial model in mind, it is arguably reasonable to ask a psychologist acting as a QME to comment upon causality in general terms backed by medical probability grounded in scientific evidence (e.g., etiology of PTSD following a traumatic incident). However, in certain settings, such as workers’ compensation courts in California, psychologists acting as QMEs choose to or may feel obligated to provide exact percentage for each potential mechanism (e.g., work stress, financial stress, medical issues) causing the

observed psychological disability and then must apportion the disability among various factors and dates. These endeavors are complicated in situations where lines between risk factors and causes blur. Presumably, could not a QME take, for example, gender or brain structure (e.g., hippocampal size) into consideration when determining percentages for causality, referencing scientific findings? Returning to the idea of substantial medical evidence, such a determination would, arguably, be grounded in more tenable evidence that looser determinations based on “medical opinion” without such references to literature.

As previously mentioned, an additional complicating factor is that of the previous mental condition of the applicant, referred to as eggshell psyche and crumbling skull considerations. Eggshell psyche refers to a consideration that the defendant must “take” the individual as he or she is, follows a seminal English criminal law case [see *R v Blaue* (1975) [61 Cr App R 271]. In *R v Blaue*, the victim, after being stabbed by the defendant, refused on religious grounds a blood transfusion that physicians believed would have saved her life. While the defense argued that this act severed the causality chain between the defendant’s violent act and the victim’s death, the court ruled that defendants must take their victims as they find them. The eggshell psyche rule holds in some form in various courts such that a vulnerability or previously established medical condition does not limit the liability of the tortfeasor. The crumbling skull rule, in turn, holds that a preexisting condition or status that predates the injury should be considered in order to apportion damages such that the defendant is not liable for returning the applicant to a state better than he or she was in prior to the injury. However, several important cases have shifted the landscape from one where the employer takes the employees as he or she finds them into one where previous condition(s) is/are taken into consideration. In the aforementioned 2005 *Escobedo*, it was determined that even asymptomatic, preexisting conditions could be taken into consideration for apportionment. While the specifics of that case involved apportioning a knee injury to an asymptomatic, preexisting arthritic condition of the injured worker, the implications for psychological injury are arguably far more complex.

A final consideration is that of the role of risk factors and pathology in apportionment. Rassp (2010) attempted to differentiate between risk factors and pathology and described that there is a common belief that, “We know that a risk factor is not a ‘pathology’ because risk factors for anything are based on statistical probabilities and epidemiological data...a risk factor such as obesity, old age, gender, smoking, sedentary lifestyle, etc. has nothing to do with predicting whether any given individual will develop a medical condition, disease process or impairment of function (p. 1). However, the lines are not always clearly demarcated and risk factors *are* often taken into consideration when predicting future disability; in

fact, health actuaries devote their careers to such analyses. Rassp (2010) did raise concerns about the lack of guidance relating to determining causality of physical injuries considering the intermingling of risk factors, pathology, and injury. He further argued that there is an acute need for QMEs to have further guidance from the courts given the hazy distinction between risk factor and pathology. At present, no such guidance exists.”

The Assessment Process

The challenges associated with determining and apportioning causality can be considered in the context of the actual assessment process associated with a California workers’ compensation case. The QME is tasked with completing an evaluative report, using information from record review, face-to-face interview with the (allegedly) injured worker, assessments, and other corroborating sources of information (e.g., interviews with family members and/or other employees). The QME must provide both a diagnosis (if a psychiatric disorder is present) and an opinion on causality and apportionment. By virtue of the environment and potential for secondary gain, the QME must also take issues such as effort and malingering into consideration. Thus, the QME will ultimately provide a diagnosis of a psychological injury (or multiple/no diagnoses; e.g., major depressive disorder [MDD]) and a GAF rating that serves as proxy for psychological disability (e.g., a score of 56 given moderate psychiatric symptoms and functioning difficulties). The QME will also comment on causality and apportionment, for example noting,

The evaluator opines with reasonable medical probability that the predominant cause of the applicant’s psychological injury is industrial in nature and 70 % of the applicant’s permanent psychological disability occurred as a result of the actual events of employment...10 % of the applicant’s permanent disability is apportioned to the applicant’s preexisting MDD...10 % of the applicant’s permanent disability is apportioned to the applicant’s chronic pain...5 % of the applicant’s permanent disability is apportioned to the applicant’s relationship problems...5 % of the applicant’s permanent disability is apportioned to the applicant’s reported financial stress.⁶

Thus, the QME must take into consideration the applicant’s history, social/work environment, previous accidents and injuries, and a host of other factors in order to provide

⁶ Note that the QME would also consider dates of injury and apportion based on date of injury pursuant to the decision *Benson vs. WCAB* (2009) 170 Cal. App.4th 1535, 74 Cal. Comp. Cases 113; *Benson vs. The Permanente Medical Group* (2007) 72 Cal. Comp. Cases 1620 (WCAB en banc decision).

percentages to apportion disability across various industrial and nonindustrial causes (the QME may, of course, apportion disability as 0 % industrial or 100 % industrial as well). Because the old adage of the employee “*as is*” (Iezzi et al., 2013, p. 156) no longer applies in the post-Escobedo landscape, preexisting conditions and history may very well impact the causality determination. The QME should have an adequate knowledge of the specific field of law for which the evaluation is being provided and familiarity with key cases in order to provide a report that constitutes substantial medical evidence (see Table 1 for examples in workers’ compensation). However, there is no clear benchmark for what constitutes adequate knowledge.

Leckart (2012) described other complexities that may arise in the course of determining apportionment. He provided the hypothetical case of an individual whose permanent psychological disability is a result of orthopedic problems (e.g., spinal injury), but not necessarily all stemming from the industrial injury; for example, considering a patient who has had a traumatic back injury in 2004 who suffers another back injury in 2010, the QME must somehow parse out the disability

relating to each injury in order to describe industrial apportionment. Although many QMEs will simply copy the same apportionment determinations from the orthopedist report, Leckart cautioned that this may be inappropriate as physical apportionment is not necessarily directly proportional to the psychological disability apportionment. Finally, even in cases seemingly straightforward as nonindustrial, such as relationship problems, the QME may decide that the relationship problem-related stress stemmed primarily from work-related stress and thus *is* industrial. In sum, the determinations are incredibly complex and can be highly subjective.

Underwager and Wakefield (1993) argued that, despite the philosophical differences in how causality is understood and explained in the fields of law and psychology, every person involved in a legal context (e.g., accuser, victim, lawyer, expert evaluators, judges, attorneys) in which psychological injury is a factor benefits from a rigorous attention to assessment to improve the legal decision-making. The pivotal ethical requirement for clinical psychologists serving as forensic evaluators is the ability to provide an *impartial* evaluation that notes the strengths and weaknesses of the arrived upon conclusions, regardless of which party has retained and is paying for (if applicable) the evaluation (Kane, 2007). That there is no standardized interview for QMEs or gold standard assessment guidelines allows the flexibility to tailor the assessment (i.e., the assessment interview and any associated psychological tests) to the needs of each particular case; however, such amorphousness also more readily allows for missteps (Groth-Marnat, 2009; Jensen & Weisz, 2002).

If determination of causality was a straightforward, objective, and clearly understood phenomenon, there would be no need for subjectivity. For example, if the worker, an otherwise healthy young individual, had fallen while stacking chairs, and broken his/her arm, it would be relatively straightforward to attribute and apportion causality. However, even in physical injury, determinations of causality can sometimes be murky. For example, returning to the very case that spurred much of the current legal landscape, *Escobedo*, the worker’s physical injury was seemingly straightforward; she fell from a chair and injured her knee. However, the existence of a preexisting, asymptomatic arthritis condition spurred an appeal that culminated in the apportionment of the permanent disability to both the industrial event and a nonindustrial, preexisting condition. Thus, issues of causality and apportionment are present for physical diagnoses as well. Hadler (2013) described the workers’ compensation setting for rheumatologists evaluating pain as Kafkaesque and argued, “...quantifying the degree of distress is an exercise in listening to and interpreting the appellant’s idioms. There is no reason to assume that an ‘expert’ rheumatologist, or even the treating rheumatologist, is uniquely qualified for this task” (p. 217).

Harris (2012) unpacked the complexities associated with presenting “substantial evidence” and commented upon the

Table 1 Examples of key legal references in psychiatric reports in workers’ compensation

Legal reference	Relevant considerations for QMEs
Cal. Lab. Code §4663	<ul style="list-style-type: none"> • Apportionment of disability should be based on causation • Causation of permanent disability must be addressed in evaluative reports concerning permanent disability • Apportionment determinations will consider what approximate percentage of disability was caused by injury arising out of and occurring in the course of employment (AOE/COE) and what approximate percentage was by “other factors” (including previous industrial injuries)
Cal. Lab. Code §4664	<ul style="list-style-type: none"> • The employer is only liable for the percentage of permanent disability AOE/COE (i.e., not “other factors”) • Prior awards of permanent disability will be taken into consideration as proof of prior permanent disability
Escobedo decision	<ul style="list-style-type: none"> • Preexisting, asymptomatic conditions can be taken into consideration when determining apportionment relating to an industrial injury (i.e., workers are no longer taken “<i>as is</i>”)
Gatten decision ^a	<ul style="list-style-type: none"> • For opinions on causality to be considered “substantial medical evidence,” in addition to a percentage, the “how and why” the injury or condition is contributing to permanent disability must be explained
Senate Bill 863	<ul style="list-style-type: none"> • For physical-mental conditions (i.e., mental injury is deemed to be a result of physical injury), there is to be no increase in impairment rating for sleep dysfunction, sexual dysfunction, or psychiatric disorders (except if resulting from a “violent act” or “catastrophic injury”)

^a See *E. L. Yeager Construction v. WCAB (Gatten)*. (2006)

“slippery slope” with which QMEs are now faced in relation to preexisting conditions and vulnerabilities. Giving the example of an outdoor worker with red hair and freckles who develops melanoma, Harris gave the extreme example of a QME apportioning the cancer to the genetic predisposition. She cautioned that the phrase, “any other [nonindustrial] factor,” in *Escobedo* opens the door to permanent disability apportionment to “‘genetic heredity,’ ‘propensity,’ and indeed, red hair and freckles” (p. 1). To adapt an example, Harris (2012) provided in her analysis that if we consider a worker with a preexisting diagnosis of schizophrenia who is alleging MDD resulting from working in a hostile work environment, key questions that would need to be answered in the evaluative report would be, “Are you comparing the worker to someone who had the same experiences and treatment but did not have schizophrenia? If so, are there actual cases you have treated or read about in the scientific literature? What would the individual’s work restrictions be had she not had schizophrenia?” Given a broader latitude for apportionment, other biological, psychological, and social data gathered from the assessment may be taken into consideration.

A distinguishable attribute of the assessment interview is the extent of structure. There are loose, unstructured, assessment interviews on one end of the spectrum that flow like conversations and standardized, highly structured, formulaic, script-based interviews on the other end. The decision to use a standardized or nonstandardized assessment interview speaks to the tensions between research and clinical settings and the different demands of each. Structured clinical interviews were developed to decrease the role of clinical judgment and standardize the stimuli (i.e., questions) that the individual receives (Groth-Marnat, 2009). The most frequently used structured interview is the Structured Clinical Interview for the DSM (SCID-IV-TR; First, Spitzer, Gibbon, & Williams, 2002). Because there are at present no standardized interview guides to aid psychologists in determining and apportioning causality, psychologists typically select and/or create their own interview guides and assessment batteries for the evaluation.

For illustrative purposes, consider how the theoretical orientation of a psychologist acting as a QME might influence the questions that are asked in the evaluation. A psychologist from a psychodynamic orientation may spend more time asking about early childhood experiences. The psychologist could choose to highlight somatization as a potential defense mechanism and describe of a hypothetical client, “... Somatization can lead to an overuse of medical care; the individual’s inability to use more effective coping strategies and frequent trips to the emergency room while employed suggest difficulty with impulse control and poor management of emotions. There appears to be a preoccupation with physical pain.” Contrastingly, a psychologist QME working from a cognitive-behavioral orientation might explore potential maladaptive schemas in the interview. The psychologist could

describe of a hypothetical client, “...a long-standing chaotic relationship with the individual’s father contributed to the development of negative cognitive self-schemas (i.e., ineffective and helpless). Such schemas cause the individual to act unassertively in situations, such as not asking for a back brace (which the individual noted had been worn by co-workers) when the back pain was first noticed.” In the absence of guidelines, theoretical orientation and training can influence how psychologists conduct the assessment, in particular the interview. This leads to less standardization in information collecting and can cause greater variability in apportioning causality to industrial and nonindustrial factors.

While nowhere stated in the law, it is a reasonable expectation that the individual would receive the same diagnosis and same causality determination, regardless of the theoretical orientation of the psychologist acting as QME. Thus, there is an inherent expectation of high interrater reliability, yet this is not explicitly mentioned in the law and there are no legal procedures to formally evaluate this in the legal setting. Because diagnoses are made via diagnostic manuals, the expectation for interrater reliability in diagnoses is reasonable.⁷ Whether a psychologist conceptualizes depression as a result of “anger turned inward,” maladaptive schemas, fusion with one’s thoughts, struggle for control, or remnants of an insecure attachment, if an individual presents with the requisite type and number of symptoms, the diagnosis will be made. However, the same cannot be said for determinations of causality. Ethical challenges in determining causality arising from a lack of guidance and standardization are further explored below with direct reference to the American Psychological Association (APA) Ethical Principles of Psychologists and Code of Conduct (subsequently referred to as the Ethics Code; American Psychological Association, 2010).

Ethical Challenges

The ethical challenges with providing an evaluation for the purposes of determining and apportioning causality of a psychological injury will be discussed in the context of the Ethics Code (APA, 2010). Of note, Division 41 of the APA, the American Psychology-Law Society, offers Specialty Guidelines for Forensic Psychologists (hereafter, Specialty Guidelines; American Psychological Association, 2013).

⁷ Although, of note, the law simply requires that psychologists evaluate the individual to assess the presence of a “mental disorder which causes disability or need for medical treatment...diagnosed using the terminology and criteria of the American Psychiatric Association’s Diagnostic and Statistical Manual of Mental Disorders, Third Edition-Revised, or the terminology and diagnostic criteria of other psychiatric diagnostic manuals generally approved and accepted nationally by practitioners in the field of psychiatric medicine.” See CAL. LAB. CODE § 3208.3—thus, given the different diagnostic thresholds in different diagnostic manuals, there may be also be cause for concern in terms of heterogeneity of diagnosis.

The present discussion will focus on APA's Ethics Code because its ethical standards are prescriptive, while the Specialty Guidelines provided by Division 41 are described as, "aspirational in intent...not intended to be mandatory..." (APA, 2013, p. 8). However, the Specialty Guidelines provide a useful resource that relates aspects of the APA Ethics Code to considerations that are important in forensic settings. When applicable, the Specialty Guidelines parallel to the Ethics Code will be presented. Also, the APA Guidelines for Assessment of and Intervention with Persons with Disabilities have five guidelines specific to assessment that can inform psychological disability evaluations, such as recommendations to consider the appropriateness of testing accommodations and to strive to maximize fairness and relevance of the interpretations of assessments by including data from multiple sources when possible (APA, 2012).

The Ethics Code (APA, 2010) is structured such that there are five General Principles and ten Ethical Standards. While the General Principles are "aspirational in nature," (i.e., meant to promote ethical excellence but not stipulatory), the Ethical Standards are mandatory and enforceable, and violations can be the cause for professional sanction. Adding to the complexity is that psychologists can be acting in accordance with the law and still be acting unethically per the profession's own Ethics Code. Thus, psychologists cannot turn a blind eye to their own ethical responsibilities by simply asserting that they are fulfilling their legal duties. Although the ethical challenges that psychologists in evaluative settings face can span the entirety of the Ethics Code (e.g., issues with privacy and confidentiality, record keeping and fees), several of the Standards especially relevant to psychologists working in evaluative forensic settings that require determinations of causality will be discussed.

Ethics Code *Standard 2: Competence* is concerned with how psychologists define and maintain their own competencies and directs that psychologists make referrals to others when the scope of work falls outside of their areas of competence. The spirit of the content of Specialty Guidelines *Standard 2: Competence* largely mirrors that of the *Standard 2* in the Ethics Code. Ethics Code *Standard 2.01: Boundaries of Competence* is very specific in detailing that psychologists should only provide services with populations and in areas within their competence, "based on their education, training, supervised experience, consultation, study or professional experience." Regarding the determination of causality, the issue of competence is, interestingly, not whether psychologists acting as QMEs are competent to determine and apportion causality of psychological injury, but whether *anyone* would be, given the aforementioned complexities of the etiology of many psychiatric conditions. Ethics Code *Standard 2.01* also details that when the field has demonstrated that an understanding of a particular cultural context (e.g., race, gender, socioeconomic status) "is essential for effective implementation of their

services," psychologists obtain the necessary training, experience, or consultation necessary (note that there is an exception to this standard in the case of emergencies, such as a natural disaster). Further, Ethics Code *Standard 2.01* specifically addresses competence of psychologists working in legal settings, "When assuming forensic roles, psychologists are or become reasonably familiar with the judicial or administrative rules governing their roles." Thus, arguably, the QME should possess competencies beyond those typical of the profession to include a strong working knowledge of relevant aspects workers' compensation law. The QME should be familiar with relevant cases and understand what is required to provide a report with "substantial evidence." The QME should understand the assessment technology being used and feel proficient in interpreting the findings within the context of determining causality.

Another key consideration arises from Ethics Code *Standard 2.04: Bases for Scientific and Professional Judgments*. This standard mandates that, "Psychologists' work is based upon established scientific and professional knowledge of the discipline." Specialty Guidelines *Guideline 2.04: Knowledge of the Legal System and the Legal Rights of Individuals* specifies that "forensic psychologists seek to provide opinions and testimony that are sufficiently based upon adequate scientific foundation, and reliable and valid principles and methods that have been applied appropriately to the facts of the case" (p. 9). Thus, psychologists acting as QMEs must ensure that their work—in this case, specifically the determination of causality of psychological injury and the apportionment of psychiatric permanent disability into industrial and nonindustrial factors—is empirically grounded and supported. The difficulty for QMEs is that there does not exist a science base to support such determinations, and what does exist in the literature regarding causality of psychiatric disorders largely advocates for a multicausal, complex, biopsychosocial approach. And yet, what is being requested in determinations of causality is grounded in a more simplistic understanding of causality that science does not support. While causality of psychiatric disorders is complex and often not fully understood, QMEs are being asked to determine causality "within reasonable medical probability" after the several hours and one or more evaluative sessions that they spend with the individual. The lack of a standardized causality and apportionment rating scheme with examples, however, begs the question of how these determinations are being anchored. In essence, a psychologist may have to create a metric based on his or her past evaluations and make a comparison (e.g., "Client A's childhood was more difficult than Client B's...both were diagnosed with MDD...I apportioned 20 % of Client A's psychological disability to nonindustrial early childhood history, so I will apportion 15 % for Client B."). The foundation for the opinion is less of a science and more of an art in calibration that can vary greatly from one QME to another.

Ethics Code *Standard 9: Assessments* is also of relevance for QMEs determining causality. *Standard 9.01: Bases for Assessments* dictates that, “Psychologists base the opinions contained in their recommendations, reports and diagnostic or evaluative statements, including forensic testimony, on information and techniques sufficient to substantiate their findings.” Relatedly, Ethics Code *Standard 9.02: Use of Assessments* mandates that psychologists use assessments (1) “...in a manner and for purposes that are appropriate in light of the research on or evidence of the usefulness and proper application of the techniques”, and (2) “...whose validity and reliability have been established for use with members of the population tested.” The Standard clarifies that in cases in which the psychometric rigor of the assessment has not been established, this should clearly be noted. The field of psychology, of course, has well-validated instruments that are considered “gold standards” for measuring symptoms or disorders. However, there are no reliable and valid measures available to aid in determining causality. Considering MDD as an example, there are certainly assessments available to aid in the diagnosis of MDD, categorize it (e.g., mild, moderate, severe), and capture its specific symptomatology (e.g., suicidal ideation). However, there is no standardized, psychometrically valid instrument to assess the causality of MDD. In the absence of measures available to determine causality, the important role of the assessment interview is underscored, as are the potential problems with a lack of standardization in the questions being asked to determine causality of various disorders. Further, returning to the biopsychosocial model of psychiatric disorders, the extent of biological or social assessment is arguably especially variable without a more standardized assessment or records review process. This dearth also leaves an important gap in how preexisting conditions are being retrospectively measured. The records review is an important component of the assessment process, and at minimum, the QME should take an effort to avoid “cherry-picking” of records and make efforts to obtain all potentially relevant information prior to writing the assessment report (Schatman & Thoman, 2014). In the absence of well-detailed records, the types of questions asked, the order in which they are asked, and the questions *not* asked can all influence the responses garnered from the individual being evaluated and thus influence apportionment to industrial or nonindustrial factors. This is because what QMEs consider relevant or worth probing may be markedly different. Specialty Guidelines *Guideline 10.01: Focus on Legally Relevant Factors* suggests that forensic examiners provide “information that is most relevant to the psycholegal issue” (p. 15). However, because QMEs must consider other factors that may have contributed to the psychiatric permanent disability, given that the employer is only responsible for the percentage of permanent disability directly caused by injury arising out of and occurring in the course of employment, the issue of what is relevant becomes a rather complex determination.

As noted above, per Ethics Code *Standard 9.02*, psychologists should only be using assessment instruments that have demonstrated reliability and validity in the population in which they are being used—or, if such information is not available, the lack of psychometric support should be clearly stated. This Standard draws attention to the importance of ensuring that assessment instruments are reliable and valid across different cultural groups and contexts; in other words, that instruments are unbiased, or, when this is not possible, of noting concerns and limitations of instruments and conclusions drawn from assessments. Similarly, Ethics Code *Standard 9.06: Interpreting Assessment Results* and Specialty Guidelines *Guideline 10.03: Appreciation of Individual Differences* both include language that emphasizes the importance of taking cultural context into consideration when conducting and interpreting assessment results. Such cultural considerations can have important implications for determinations of causality. Lonner (1994) argued that, although there are over 200 definitions of culture, there is not a single definition of culture that has been embraced on a large scale. For the present purposes, cultural context will be understood as a dynamic framework that underpins beliefs, emotions, interactions, behaviors, group values, and experiences (Bravo, 2003). The injured worker’s cultural context may not be a salient issue in the evaluation, or it may very well have implications for causality determinations. For example, what is perceived as a hostile work environment may be related to perceptions of discrimination or intolerance because of an individual’s membership in a particular group (e.g., race, sexual orientation). Perceptions of discrimination can then have a significant adverse impact on not only mental health but also physical health (Pascoe & Smart Richman, 2009). Thus, psychologists should be sensitive to the fact that there are many potential types of discriminatory environments to which an individual may have been subject.

Finally, the very context of being engaged in the workers’ compensation setting and being an injured worker can constitute a cultural context with which QMEs should be familiar. Being engaged in a workers’ compensation case can be quite distressing to an individual. As was identified in a qualitative research study, injured workers often describe extremely antagonistic and hostile encounters and find the experience “demeaning and dehumanizing” and far from efficient (Strunin & Boden, 2004, p. 338). Thus, QMEs should keep in mind the ways that the context of being an injured worker can impact the assessment process and scores on various instruments. For example, cultural context, including ethnicity and being an injured worker, can impact scores on the Minnesota Multiphasic Personality Inventory-2 (Butcher, Graham, Ben-Porath, Tellegen, & Dahlstrom, 2003; MMPI-2), the most commonly used personality assessment in forensic settings (Steffan, Clopton, & Morgan, 2003). Consider a worker with an elevation on the F scale, measuring atypicality

in responses to test items; high scores can lead to a determination that the profile is invalid. However, elevations can also reflect, “unusual feelings caused by some specific life circumstance to which the person is reacting...[such as] job loss” (Groth-Marnat, 2009). As another example, although individuals who score an elevation on Scale 2 (depression) of the MMPI-2 can be highly depressed, helpless, hopeless, and sensitive to criticism, there are other factors that can cause an elevation. For example, Latino individuals involved in workers’ compensation cases have been found to be at greater likelihood of somatizing their psychological stressors, causing elevations in scales such as 1 (hypochondriasis) and 3 (hysteria) (DuAlba & Scott, 1993). Further, there are problems with the MMPI-2 over-pathologizing individuals with physical medical complaints, given that many of the symptoms can mirror somatization or depression (Arbisi & Butcher, 2004). Because MMPI-2 scores be used to inform apportionment decisions such that disability is apportioned to nonindustrial, preexisting personality tendencies (e.g., sensitivity to criticism), culturally informed assessment practices are important.

The issues raised above do not constitute an exhaustive list of all the potential ethical challenges facing psychologists tasked with determining causality. The complexity of balancing the legal role requirements of a QME with the ethical requirements of professional psychology should be evident.

Recommendations

Psychologists have an important role to play and substantial contributions to make in the workers’ compensation system. Psychologists acting as QMEs help unravel the complexities of psychiatric symptoms in order to make diagnoses and treatment recommendations for psychiatric injuries, and they are well trained for many of the tasks that they perform in the workers’ compensation setting. However, what is currently required by workers’ compensation settings in terms of determining causes of psychological injury and apportioning causes for psychological disability across all possible industrial and nonindustrial factors is sufficiently complex, controversial, and poorly understood that psychologists are left to make decisions that cannot be supported with the scientific rigor and evidence basis appropriate to the profession. Psychologists in such settings thus must contribute in the best way they can, even though they are asked to provide determinations of causality beyond what can reasonably be expected or supported by evidence.

In fact, however, *no one* is capable of providing an exact estimate of apportionment of psychological disability other than, perhaps, for those cases that are a very straightforward 0 % (no cause) or 100 % (full cause). One of the few attempts to guide psychologists in making determinations of causality

is presented by Young (2008) in response to a call from Schultz (2003) that, “to date, no standards or even guidelines for answering causality questions have been developed” (p. 102; qtd in Young & Kane, 2007, p. 19). Young offers 25 possible causality factors that psychologists can consider in making determinations of causality, such as “Had there been a preexisting psychopathology or overwhelming history of psychological vulnerabilities, or too many prior psychological and other vulnerabilities/ disorders/psychopathology, which may prevent attributing the alleged event or stressors having causal responsibility for a complainant’s psychological presentation?” (p. 73). Note that this complex consideration is only one of the recommended 25 considerations, underscoring the complexity of such determinations.

One possibility is for psychologists to limit the report to something similar to a typical psychological evaluation and avoid questions of causality altogether. Psychologists can invoke the ethics code and state that while they would be adhering to the requirements of the law in providing determinations of causality, they would be violating their ethical standards by traveling outside the boundaries of their profession’s evidence base and thus their professional competence. However, this raises the unsavory scenario of a cottage industry of causality evaluators arising, all of whom lack access to a scientific evidence base for determining causality. Thus, rather than psychologists removing themselves from the system, what is needed is a change in how causal evaluations are performed and determinations are made, ideally informed and spearheaded by psychologists.

While the Ethics Code (APA, 2010) and Specialty Guidelines (APA, 2013) include important ethical stipulations and guidelines to inform the work of psychologists, the specialty tasks required of QMEs by way of determinations of causality beg for more clear guidelines. The development of culturally informed guidelines to aid in making decisions of causality, in the way that diagnostic manuals exist to aid in diagnoses, is needed. Once such guidelines are created, mastery of the guidelines should be a core component of the certification of QMEs. Such guidelines should include a reconsideration of how determinations of disability are presented. In psychology, confidence intervals, or the range of values that is plausible around the parameter of interest (e.g., the mean), are preferable to point estimates. Currently, workers’ compensation settings allow psychologists to provide very specific point estimates (e.g., “5 % of the applicant’s permanent disability is apportioned to the applicant’s relationship problems”), implying a level of precision that is misleading, and scientifically unsupportable. It is arguably such practices that have prompted proposals to abolish the workers’ compensation system altogether (see Ladou, 2005). For example, Ladou (2005) noted that, “Many formulas for determining disability that not require physician participation have been used by government agencies in other countries...physicians are not

the appropriate arbiters of ‘causality’ when their patients are injured or become ill at work. They assume this role because it is required by workers’ compensation law, but they have no particular skill, training, background, or information to perform the task better than many other individuals” (p. 161).

If the workers’ compensation system is to be maintained, but improved, greater standardization of requirements for describing causality and apportionment would be a step in the right direction. The requirement of, or preference for, specific percentages should be replaced with confidence interval-like ranges representing causality and apportionment. For example, consider a five-point grid for the various potential causes of psychological disability:

- No cause [0 %]: The event in question (e.g., wrongful termination, hostile work environment, abusive childhood) had no role at all in the psychological injury.
- Low cause [1–33 %]: The event in question played a role, one-third or less, in the psychological injury.
- Moderate cause [34–67 %]: The event in question played a moderate role in the psychological injury.
- High cause [67–100 %]: The event in question is largely, but not fully, responsible for the psychological injury.
- 100 %: The event in question is the entire cause of the psychological injury.

Such a grid should include clear examples and case studies, developed with input from mental health providers, to help in making such determinations. For example, different types of hostile work environments or traumatic early life experiences should be described in order to facilitate choosing among the levels. While subjectivity is still highly present in this approach, it is arguably far less subjective than choosing a number based on one’s own, nonregulated ideas of causality. Also, choosing from among five levels of degree of causal apportionment, rather than attempting to assign exact point estimates, better reflects the psychologist’s greater ability to make general rather than specific estimates of causal contribution.

Grisso (1987) forewarned that the practice of forensic psychological assessment is thwarted by the dearth of scientific research specific to legal settings. Although psychologists have been engaged in determinations of causality in legal settings, there is still a need for the development and evaluation of instruments specific to this setting. Such instruments would be just one component of an improved assessment process. Evidence-based assessment (EBA) is defined as, “an approach to clinical evaluation...[that uses] research and theory to inform the selection of assessment targets, the methods and measures to be used, and the manner in which the assessment process unfolds and is, itself, evaluated” (Hunsley & Mash, 2007 p. 30). The use of evidence-based instruments is considered necessary but not sufficient to achieve EBA, which is a comprehensive approach that includes such considerations

as incremental validity, defined as, “the extent to which additional data contribute to the prediction of a variable beyond what is possible with other sources of data” (p. 31). EBA is an approach that calls for empirically derived algorithms for combining multiple sources of data to reach determinations and conclusions because, as Hunsley and Meyer (2003) argued, “in comparison with statistically derived prediction rules, people are less accurate in consistently combining test data” (p. 453). The many sources of information that QMEs can use in their determinations of causality lend well to an EBA approach. The assessment interview is one such source of data for QMEs, and its lack of standardization limits the types of empirical studies that can be undertaken to add greater psychometric rigor to the evaluation process. Some standardization of the types of questions asked and instruments employed in the evaluation should be considered, especially as relating to causality determinations.

Finally, psychologists can choose to take a greater role in the development of guidelines and policy that involve their own profession in the forensic realm. For example, a panel of psychologists working in consultation with other professionals (e.g., lawyers, judges, psychiatrists) to develop guidelines to aid in determining causality, keeping the biopsychosocial model of psychological injury and disability in mind, could prove a great asset to the field.

Conclusion

A longstanding argument is that, although the workers’ compensation system is subjective, such subjectivity is largely unavoidable (Reville et al., 2005). It is important to contextualize this argument within the genesis of US workers’ compensation. The system arose in the early twentieth century as a compromise that was supposed to allow workers to garner compensation from work-related injuries in a reasonably timely fashion in exchange for giving up the right to sue the employer—a veritable win-win for both parties. There is arguably a desire for all parties involved in the system to find a fair, efficient means of assessing and compensating disability. Psychologists acting as QMEs may feel pressured to simply adhere to the requirements of the system because it is the best (and only) option available, and the current landscape is one that can leave psychologists at odds with their professional ethical obligations. Rassp (2010) described “apportionment of permanent disability” in workers’ compensation as “a non-scientific albatross” that can frustrate the professionals who provide such evaluations (p. 1). However, psychologists working within the legal system can take the lead in bringing an evidence-based approach and greater scientific rigor to the high-stakes causal evaluations required as a basis for determining compensation for injured workers.

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